UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

NORTH AMERICAN	**)**	**Docket Nos.**	**RM05-17-000**
ELECTRIC RELIABILITY CORPORATION	**)**		**RM05-25-000**
	)		**RM06-16-000**

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION RELIABILITY STANDARDS DEVELOPMENT PLAN 2012-2014 INFORMATIONAL FILING PURSUANT TO SECTION 310 OF THE NERC RULES OF PROCEDURE

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December 13, 2011

TABLE OF CONTENTS

I. INTRODUCTION 1

II. NOTICES AND COMMUNICATIONS 2

III. BACKGROUND 2

A. Summary of 2012 Development Plan 4

B. NERC Stakeholders Input 13

IV. CONCLUSION 13

ATTACHMENTS

EXHIBIT A: *Reliability Standards Development Plan: 2012–2014*

EXHIBIT B: Industry Comments on the Draft *Reliability Standards Development Plan: 2012–2014*

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I. INTRODUCTION

The North American Electric Reliability Corporation ("NERC") hereby submits to the Federal Energy Regulatory Commission ("FERC") for informational purposes its revised Reliability Standards Development Plan in accordance with Section 310 of the NERC Rules of Procedure. The *Reliability Standards Development Plan: 2012–2014* ("2012 Development Plan"), is included as **Exhibit A**. Stakeholder[1] comments received regarding the draft 2012 Development Plan during the open comment period, as well as summaries of those comments, are included as **Exhibit B.** The NERC Board of Trustees approved the 2012 Development Plan on November 3, 2011.

[1] The NERC stakeholders comprise representatives of small and large end-use customers and governmental authorities as well as representatives such as Transmission Owners; Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs); Load-Serving Entities (LSEs); Transmission Dependent Utilities (TDUs); Electric Generators; Electricity Brokers, Aggregators, and Marketers; Large Electricity End Users; Small Electricity Users; Federal, State, and Provincial Regulatory or other Government Entities; and Regional Entities.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the following:

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III. BACKGROUND

In 2006, NERC developed an initial version of the plan for Reliability Standards development entitled the *Reliability Standards Development Plan: 2007–2009*. NERC has since updated the plan annually, and the 2012–2014 version of the plan is presented in this filing. The 2012 Development Plan serves as a management tool to guide and coordinate the development of Reliability Standards and provide benchmarks for assessing progress. The 2012 Development Plan also serves as a communications tool for coordinating standards development work with applicable governmental agencies in the United States and Canada and for engaging stakeholders in standards development activities. The 2012 Development Plan further provides a base for developing annual plans and budgets for the NERC standards program. Consistent with the four previous versions of the plan, the 2012 Development Plan is filed for informational purposes. No specific FERC action is requested at this time. The 2012 Development Plan builds upon the foundation established by the previous plans and identifies the current plans and priorities for

development and modification of NERC Reliability Standards in the immediate three-year time horizon.

Similar to the 2011 Development Plan, the 2012 Development Plan has benefited from a prioritization process developed through NERC's Standard Committee. The Standards Committee used a prioritization tool to assist in the determination of the relative priorities of projects within the NERC Standards Development portfolio. This tool considered various factors, including reliability impact, time-sensitivity, and practicality, as well as project logistics. Assisted by that prioritization tool, the Standards Committee identified a set of projects to which the majority of NERC and industry resources are expected to be assigned over the next three years.

NERC anticipates this prioritization of projects and resultant standards development work will be dynamic, and will be updated periodically as projects are completed or as new needs are identified and projects considered. NERC also recognizes that new priorities may be created as our experience grows and as new risks are identified that will require flexibility in work planning to ensure the activities most in the interest of bulk power system reliability are given appropriate resources and priority. The 2012 Development Plan is included as **Exhibit A**. A summary of Stakeholder comments received and the comments received on the draft 2012 Development Plan during the open comment period are included as **Exhibit B.**

By this filing, NERC informs FERC and other interested parties of the significant changes to the content of the *Reliability Standards Development Plan: 2011–2013* ("2011 Development Plan") that led to the creation of the 2012 Development Plan. NERC identifies changes in project timelines and completion dates that are reflected in the 2012 Development Plan and presents a summary of stakeholder comments that were considered during the development of the final 2012 Development Plan.

A. Summary of 2012 Development Plan

i. Project Prioritization and Work Plan

The 2012 Development Plan was developed in part in reliance on a prioritization tool created by the NERC's Standards Committee and its subcommittees. The prioritization tool was modified from the version used in the development of the 2011 Development Plan in response to comments received from stakeholders. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the *NERC President's Top Priority Issues for Bulk Power System Reliability*,[2] and trial testing of a new metric that accounts for "cost considerations." In addition, the Tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the Standards Committee to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources. Additional details regarding the prioritization tool can be found in Attachment 1 of the 2012 Development Plan.

The tool calculates rankings for a project based on the following criteria:

- The project's alignment with issues identified in the *NERC President's Top Priority Issues for Bulk Power System Reliability;*
- Whether the project's deliverables will fill an identified gap in reliability;
- The subjective magnitude of the improvements to existing standards expected from the project's completion;
- The time-sensitivity of the project (if any) relative to regulatory deadlines or other similar delivery commitments;

[2] Available at: http://www.nerc.com/news_pr.php?npr=723.

- Stakeholder and staff compliance experiences with the subject standards;
- Interpretations related to the subject standards; and
- Other factors, as deemed to be necessary by the Standards Committee.

NERC and the Standards Committee used the prioritization tool to assist in the prioritization of the projects identified in the 2012 Development Plan. The 2012 Development Plan assumed an overall throughput capacity of thirteen projects in concurrent development, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.
- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, reducing the cost or burden of demonstrating compliance, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The following projects from 2011 are expected to continue in 2012:[3]

- 2006-06 Reliability Coordination
- 2007-02 Operating Personnel Communication Protocols
- 2007-03 Real-time Transmission Operations

[3] 2007-07 Vegetation Management is included in the 2012 Plan as a project continuing in 2012. At the time of the 2012 Plan's submission to the NERC Board of Trustees for approval, it was not clear if 2007-07 would be moving forward in 2011 or continuing into 2012. However, it has subsequently been determined that the project will complete in 2011.

- 2007-06 Protection System Coordination
- 2007-09 Generator Verification
- 2007-12 Frequency Response
- 2007-17 Protection System Maintenance and Testing
- 2008-06 Cyber Security – Order 706
- 2009-01 Disturbance and Sabotage Reporting
- 2010-05.1 Phase 1 of Protection Systems: Misoperations
- 2010-07 Generator Requirements at the Transmission Interface
- 2010-14.1 Phase 1 of Balancing Authority Reliability- based Controls: Reserves
- 2010-17 Definition of Bulk Electric System

NERC intends to initiate development of the following additional projects in 2012.

- 2008-02 Undervoltage Load Shedding
- 2009-02 Real-time Monitoring and Analysis Capabilities
- 2009-03 Emergency Operations
- 2010-01 Support Personnel Training
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS
- 2010-13.2 Phase 2 of Relay Loadability: Generation

These projects have been assigned based on priority, but constrained by the need to have a limited number of projects under active development at any given time. Additionally, Project 2010-05.2 is not scheduled to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. Project 2012-04 is not scheduled to start until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

Additional detail regarding subsequent years is included in the 2012 Development Plan, as well as general updates on the ERO overall. The 2012 Development Plan also includes updates on regional standards development.

While the 2012 Development Plan presents a reasonable approach to Standards development, it cannot account for unforeseen events. The 2012 Development Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and other factors, such as new or emerging reliability risks to the Bulk Electric System. Changes to the 2012 Development Plan during its execution are not only possible, but likely, and should be expected. Additionally, such changes must be developed following the steps outlined in the NERC *Standard Processes Manual*,[4] which ensures an open and inclusive process through adherence to ANSI standards development principles.

ii. General Revisions

This section provides a summary of significant revisions to the 2012 Development Plan as compared to the 2011 Development Plan. The number of projects proposed in this plan (48) is more than the 35 projects listed in the 2011 Development Plan. The difference was created due to several factors:

The following seven projects identified in the 2011 Development Plan were completed and removed from this revised plan:

- 2006-02 Assess Transmission and Future Needs
- 2007-04 Certifying System Operators
- 2008-06 Cyber Security Order 706 Version 4
- 2009-06 Facility Ratings

[4] Available at: http://www.nerc.com/files/Appendix_3A_Standard_Processes_Manual_20110825.pdf.

- 2010-10 FAC 729
- 2010-11 TPL Table 1 Footnote B
- 2010-13 Relay Loadability Order Phase 1

Twelve new projects were added based on stakeholder suggestions:

- 2012-03 PRC-004 VSLs
- 2012-04 Protection System Commissioning Testing
- 2012-05 ATC Revisions – Order 729
- 2012-06 Generator Capabilities
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review
- 2012-12 PER Review
- 2012-13 NUC Review
- 2012-14 Risk Analysis
- 2012-15 Flow Limited Paths

Four projects were separated into multiple phases, which were treated as individual projects in order to provide the Standards Committee with more flexibility during prioritization. In general, projects with multiple phases will have a numerical suffix indicating the phase appended to their project number.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2010.05.1 Phase 1 of Protection Systems: Misoperations
- 2010.05.1 Phase 2 of Protection Systems: SPS and RAS
- 2010-14.1 Phase 1 of Balancing Authority Reliability Based Controls - Reserves

- 2010-14.1 Phase 2 of Balancing Authority Reliability Based Controls – Time Error, AGC, and Inadvertent
- 2010-13.3 Phase 3 of Relay Loadability: Generation
- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

The 2012 Development Plan identifies the standards development projects that are currently expected to be worked on in the immediate three-year time horizon. NERC will make every attempt to bring as many projects to completion as possible; however, NERC will not complete all of the projects identified in this plan in the immediate three-year time horizon.

iii. Project Schedule and Timeline Updates

This section summarizes the progress made on the active projects identified in the 2011 Development Plan, changes in project timelines, and factors contributing to those changes.

2006-02 Assess Transmission and Future Needs

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the second quarter of 2012. However, the project was completed in the fourth quarter of 2011, and will not be worked on in 2012.

2006-06 Reliability Coordination

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the fourth quarter of 2011. Scheduling conflicts and the quantity of work to be completed have led to delays in the project. At this time, NERC expects this project to complete in the second quarter of 2012.

2007-02 Operating Personnel Communications Protocols

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the fourth quarter of 2012. Scheduling conflicts and the quantity of work to be completed have led to a modest delay in the project. Additionally, focus on a related interpretation has led to delay as well. At this time, NERC expects this project to complete in the first quarter of 2013.

2007-03 Real-time Transmission Operations

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the third quarter of 2012. Potential modifications to the scope of the project and associated discussion and debate have led to delays in the project. At this time, NERC expects this project to complete in Q1 of 2013.

2007-06 System Protection Coordination

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in 2013. Consistent with this, a review of the project estimates this project will complete in the first quarter of 2013.

2007-07 Vegetation Management

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the second quarter of 2011. However, as part of the project prioritization, resources were withdrawn from the project, and the drafting team was asked to work independently to continue their efforts. This added additional time as the team continued its work without formal facilitation. However, the project was completed in the fourth quarter of 2011, and will not be worked on in 2012.

2007-09 Generator Verification

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the fourth quarter of 2011. Scheduling conflicts and the quantity of work to be completed have led to delays in the project. At this time, NERC expects this project to complete in the fourth quarter of 2012.

2007-12 Frequency Response

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the second quarter of 2012. NERC is not anticipating any change in the delivery date of this project.

2007-17 Protection System Maintenance & Testing

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the first quarter of 2012. However, it has been difficult to build consensus around the associated standard. A failed recirculation ballot has led to delays. It is estimated this project will complete in the second quarter of 2012.

2008-06 Cyber Security - Order 706

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the second quarter of 2012. Working to ensure consensus through outreach and other initiatives has led to a modest delay in this project. It is estimated this project will complete in the third quarter of 2012.

2009-01 Disturbance and Sabotage Reporting

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the first quarter of 2012. Scheduling conflicts and the quantity of work to be completed have led to delays in the project. At this time, NERC expects this project to complete in the third quarter of 2012.

2010-05 Protection Systems

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in 2013, but noted that options were being considered for accelerating this delivery. This project was split into two phases (as discussed previously), the first of which is now expected to complete in the third quarter of 2012. Additional work is underway to determine if this project can be delivered sooner.

2010-07 Generator Requirements at the Transmission Interface

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in 2013. Consistent with this, a review of the project estimates this project will complete in the first quarter of 2013.

2010-15 Remote Access Urgent Action

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the third quarter of 2011, but noted that the project might be absorbed into Project 2008-06 Cyber Security Order 706. In fact, this was the approach taken, and the project is no longer active, as it has been absorbed by Project 2008-06 Cyber Security Order 706.

2010-17 Definition of Bulk Electric System

When the 2011 Development Plan was drafted, NERC anticipated this project to be completed in the first quarter of 2012. However, the drafting team identified additional issues that it felt needed to be addressed. As a result, the project has two delivery dates. The first part of this project, which is expected to be responsive to Commission directives, is expected to complete in the first quarter of 2012 and filed by January 25, 2012. The remainder of this project, which will address the expanded scope, is estimated to complete in the second quarter of 2013.

B. NERC Stakeholders Input

To support the development of the 2012 Development Plan, NERC sought stakeholder input during an open comment period, which took place from September 12 through September 26, 2011. In addition, NERC solicited input from the NERC technical committees and from subject matter experts on the NERC staff. NERC received a total of 15 sets of comments during the open stakeholder comment periods. Comments were received from 63 different people from 38 companies representing all 10 of the 10 Industry Segments.

Stakeholder comments received on the draft 2012 Development Plan during the open comment period, as well as summaries of those comments, are included as **Exhibit B.** Changes to the prioritization and scores used in that effort were suggested in some of comments, resulting in minor modifications to the prioritization, but without any significant modification to the 2012 Development Plan itself.

IV. CONCLUSION

NERC respectfully requests that FERC accept this informational filing in compliance with Section 310 of the NERC Rules of Procedure.

Respectfully submitted,

/s/ Holly A. Hawkins

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 13th day of December, 2011.

/s/ Holly A. Hawkins
Holly A. Hawkins
Attorney for the North American Electric Reliability Corporation

EXHIBIT A

Reliability Standards Development Plan: 2012–2014

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Standards Development Plan

2012-2014

Approved by Board of Trustees
November 3, 2011

RELIABILITY | ACCOUNTABILITY

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Table of Contents

Chapter 1 – Executive Summary 1

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training 2

Chapter 3 - General 5

Status Updates 6

2011 Reorganization and Hiring 6

Completed Standards Development Projects 6

Progress on Version Zero Standards 6

Interpretations of Reliability Standards 7

Progress on Regulatory Directives 7

Regional Standards Development 8

Rapid Development and Rapid Revision Projects 8

Challenges facing Standards 9

Five-Year Review Obligation 9

Product Quality 9

Standards Program Throughput 9

Conclusion 10

Chapter 4 – Project Development Overview 11

Project Prioritization and Plan Development 11

Project Implementation 12

Chapter 5 – Project Work Plan Summary 14

Projects for 2012-2014 14

Projects for 2015 and Beyond 17
Appendix 1 - Prioritization 18
Appendix 2 – Work Plan 38
Appendix 3 – Regional Work Plan 38
Appendix 4 – Project Summaries 40
Project 2006-06 Reliability Coordination 41
Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003 42
Project 2007-02 Operating Personnel Communication Protocols 43
Project 2007-03 Real-time Transmission Operations 44
Project 2007-06 System Protection Coordination 45
Project 2007-07 Vegetation Management 46
Project 2007-09 Generator Verification 47
Project 2007-11 Disturbance Monitoring 48
Project 2007-12 Frequency Response 49
Project 2007-17 Protection System Maintenance and Testing 50
Project 2008-01 Voltage and Reactive Planning and Control 51
Project 2008-02 Undervoltage Load Shedding 52
Project 2008-06 Cyber Security – Order 706 53
Project 2008-12 Coordinate Interchange Standards 54
Project 2009-01 Disturbance and Sabotage Reporting 55
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities 56
Project 2009-03 Emergency Operations 57
Project 2009-04 Phasor Measurements 58
Project 2009-05 Resource Adequacy Assessments 59
Project 2009-07 Reliability of Protection Systems 60

Project 2010-01 Support Personnel Training 61

Project 2010-02 Connecting New Facilities to the Grid..... 62

Project 2010-03 Modeling Data..... 63

Project 2010-04 Demand Data 64

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations 65

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS..... 66

Project 2010-07 Generator Requirements at the Transmission Interface 67

Project 2010-08 Functional Glossary Model Revisions 68

Project 2010-13.2 Phase 2 of Relay Loadability: Generation 69

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings 70

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves 71

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent 72

Project 2010-16 Definition of System Operator 73

Project 2010-17 Definition of Bulk Electric System 74

Project 2012-01 Equipment Monitoring and Diagnostic Devices..... 75

Project 2012-02 Physical Protection..... 76

Project 2012-03 PRC-004 VSLs..... 77

Project 2012-04 Protection System Commissioning Testing..... 78

Project 2012-05 ATC Revisions - Order 729..... 79

Project 2012-06 Generator Capabilities 80

Project 2012-07 Obsolescence Review..... 81

Project 2012-08 Glossary Updates 82

Project 2012-09 IRO Review 83

Project 2012-11 FAC Review..... 84

Project 2012-12 PER Review..... 85

Project 2012-13 NUC Review 86

Project 2012-14 Risk Analysis 87

Project 2012-15 Flow Limited Paths 88

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements 89

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems 90

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program..... 91

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions 92

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program 93

PRC-012-NPCC-1 — Special Protection Systems 94

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability 95

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability 96

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements 97

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements 98

PRC-012-RFC-1 — Special Protection System Requirements 99

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements 100

PRC-006-SPP-1 — Under Frequency Load Shedding 101

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection 102

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region..... 103

BAL-002-WECC-1 — Contingency Reserves..... 104

BAL-004-WECC-1 — Automatic Time Error Correction 105

VAR-001-WECC-1 — Voltage and Reactive Control..... 106

Chapter 1 – Executive Summary

This document provides an update on the status of Standards Development work at NERC, as well as a forecast of work being planned for 2012-2014. The document has several sections:

- Chapter 1 contains this Executive Summary
- Chapter 2 contains introductory remarks from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards
- Chapter 3 provides a general update on Standards Activities in 2011
- Chapter 4 provides a summary of the development of this document and the implementation of projects in general
- Chapter 5 provides a summary of the Work Plan
- Appendix 1 shows the prioritization scores used in the development of the Work Plan
- Appendix 2 shows the Work Plan in Gantt chart form
- Appendix 3 shows the Regional Work Plan in Gantt chart form
- Appendix 4 provides brief summaries of all the projects proposed within the Work Plan

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training

To: NERC's Board of Trustees, Stakeholders, Regulatory Authorities, and other interested parties

NERC is committed to the development of clear, technically excellent standards for the reliable planning and operation of the North American bulk power system. NERC's industry-based standard development process strives to leverage the knowledge and experience of subject-matter experts to develop stakeholder consensus in support of standards that achieve reliability objectives and are responsive to regulatory directives, balanced against the burdens and costs of compliance imposed upon the more than 1,900 entities that are now subject to these standards. No single standard can ensure this outcome. Rather, NERC strives to develop and enhance a portfolio of performance, risk-mitigation, and competency-based reliability standards that achieve a consistent defense in depth against credible events that may lead to cascading, uncontrolled separation, or instability and ensure prompt system restoration when extreme events occur.

Achieving this balance is intrinsically difficult. Just as the management of the reliability "bar" through enforceable standards is an ongoing and evolving process, the process for developing standards needs to evolve as well, in response to the learning that has occurred in the period since passage of the Energy Policy Act of 2005 and the initial enforcement of NERC standards in June 2007. We would like to use this message to highlight current achievements in the standards arena and our plans for 2012-2014, as well as certain emerging factors and concerns.

NERC's Reliability Standards Development Plan delivered the following results in 2011:

- As of November 1, 2011, 20 new or revised standards have been approved by the Board of Trustees, and are either filed or in the process of being filed with the FERC.
- Results Based Standard development principles were used for all new standards projects.
- The Standards Committee worked with NERC staff to prioritize standards development resources on twelve high priority projects. There has been no specific redirection of this effort relative to the selected priorities by regulatory authorities.
- Stakeholder-driven Quality Review has been integrated into the standards development process to assure the best quality standards from a compliance and implementation perspective.
- NERC undertook a first effort to develop a standard on a Rapid Development basis utilizing the new Standard Processes Manual.

- To balance the resources committed to the development of new standards versus the interpretation of existing standards, the Standards Committee has limited the number of interpretations under active development to three projects at any one time, while pursuing new procedural options such as "rapid revision" to correct deficiencies in the underlying standard.

The 2012-14 Reliability Standards Development Plan described in this report builds on recent experience by proposing an achievable yet ambitious plan of standards development. The 2012-14 Plan provides for:

- Continuation of ongoing standards projects with sufficient resources to ensure timely completion.
- Project priorities were established using a more comprehensive model with scores and explanatory inputs from the Standards Committee, NERC staff and industry stakeholders.
- Projects have been ranked for development priority along three tracks, based on consideration of Reliability Benefits, Time Sensitivity, and Practicality.
- As ongoing projects are completed, we are scheduling follow-on projects based on the availability of subject-matter experts and the completion of technical input, research, and industry outreach conducted by NERC's standing committees and subcommittees.
- Finally, the 2012-14 Plan incorporates a more comprehensive integration of the regional standards effort into this process. For the first time a complete project management process is being applied to regional standards development.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, a wide variety of electric system events and emerging risks to bulk power system reliability may necessitate deviations from this plan. In order to respond to such threats and initiate development of new or revised standards, the actual deployment of resources to staff this plan may shift. Additionally, the estimated times listed for project completion may change as more is learned about a given project.

NERC currently is investigating the following "emerging issues," each of which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Not every issue is addressable or best addressed through development of a new industry standard; the issues outlined above illustrate that truism. But where a standards related response is indicated, we will be ready to reprioritize and adjust.

The Standards Committee and NERC staff also recognize that major standards process efficiencies are still necessary if we are to make efficient use of NERC and industry resources, while meeting external expectations for the timely development and approval of technically excellent reliability standards. In 2012, we need to ask ourselves once again, "is there a better way to develop reliability standards?"

We achieve the past results and plan for the future results only with your support, and greatly appreciate that the industry has accepted the evolving prioritization process. Our efforts to effectively manage and balance the many conflicting demands placed upon both the industry and NERC staff resources has provided this next plan, which we hope you will endorse.

Each of us, day in and day out, is driven to do the "right" thing, and your ERO's reputation will be enhanced through your active support for completion of NERC's 2012-14 Reliability Standards Development Plan.

Sincerely,

Allen Mosher
Senior Director of Policy Analysis and Reliability, American Public Power Association
Chair, NERC Standards Committee

Herb Schrayshuen
Vice President of Standards and Training, NERC

Chapter 3 - General

This is the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The Plan provides several items of interest to its readers:

- Information regarding the state of Standards at NERC, changes in Standards, and challenges facing Standards in the years to come;
- Status updates regarding standards and related projects currently in development;
- A forecast of Standards Development work scheduled for the next three years; and
- An overview of the process used to prioritize work and assign resources to Standards development projects.

NERC Standards staff endeavors to maintain a complete, updated set of Standards information on the NERC website, which can be found at www.nerc.com.

The Standards Program continues to manage its ongoing load of work in order to move toward the target work load levels initially identified in early 2011. Progress is being made in this area; however, some projects expected to be completed in 2011 are still in active development. This is largely due to unforeseen complications regarding achieving consensus and managing overall product quality.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, other priorities may necessitate deviations from this plan. As new technologies are discovered or new threats to reliability identified, the actual deployment of resources to staff this plan may shift. Similarly, the estimated times listed for project completion may change as more is learned about a given project.

NERC is currently investigating the following "emerging issues," which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Status Updates

2011 Reorganization and Hiring

In early 2011, NERC performed a minor reorganization of the Standards staff in order to ensure appropriate focus on key areas. A new position, Director of Regulatory Initiatives, was established to ensure overall coordination between NERC and its various regulators. NERC also established a Manager of Standards Information, with the primary focus of ensuring that information posted on the NERC website accurately reflects the current body of Standards and associated compliance information. Additional staff was hired into the Standards Process, Standards Development, and Regional Standards teams to better support the volume of work ongoing within the Standards Program.

Completed Standards Development Projects

In 2011, NERC completed development of the following projects.

- 2006-02 Assess Transmission and Future Needs (BOT approved, awaiting filing)
- 2007-04 Certifying System Operators (filed with regulators)
- 2008-06 Cyber Security Order 706 Version 4 (filed with regulators)
- 2009-06 Facility Ratings (filed with regulators)
- 2010-10 FAC 729 (filed with regulators)
- 2010-11 TPL Table 1 Footnote B (filed with regulators)
- 2010-13 Relay Loadability Order Phase 1 (filed with regulators)

Progress on Version Zero Standards

The set of Version 0 standards included 110 standards. Of the 110 standards, NERC withdrew three, and the Federal Energy Regulatory Commission (FERC) ruled on the remaining 107 as follows:

- 27 were approved without any directives to modify the associated standard
- 56 were approved with directives to modify the associated standard
- 24 were not approved, pending provision of additional information

Of the 56 that were approved with directives, progress in revising those standards includes:

- 7 have been approved by FERC
- 9 have been submitted and are pending FERC approval
- 18 are associated with projects under active development

- 22 are associated with projects that are either inactive or not started

Of the 24 that were not approved pending submittal of additional information, progress in revising those standards includes:

- 8 have been approved by FERC
- 4 have been submitted and are pending FERC approval
- 2 are associated with projects under active development
- 10 are associated with projects that are either inactive or not started

As of September 1, 2011, there are 103 continent-wide Reliability Standards with 1220 requirements that are mandatory and enforceable in the United States.[1]

Interpretations of Reliability Standards

Entities required to comply with a reliability standard have the right to request a formal interpretation of a requirement in a standard. Interpretation projects generally are narrower in scope than other standards projects, but like standards, interpretations are drafted by a drafting team and posted for industry review and ballot. From 2006 to 2011, NERC processed 43 interpretation requests. In addition, NERC received a number of requests for interpretation that were absorbed into standards development projects because drafting teams could not prepare the interpretations without expanding the requirements of the approved standard.

Progress on Regulatory Directives

Since NERC became the Electric Reliability organization (ERO), FERC has issued 44 Orders containing approximately 655 directives related to NERC Reliability Standards. Of the approximately 655 directives issued since 2007, NERC has completed projects associated with approximately 44% of these directives and continues to make substantial progress in addressing the remaining directives focusing first on those that have the greatest impact on reliability.

A significant number of the directives ordered by FERC for implementation by NERC (as the FERC-approved ERO) specify that NERC submit or modify a Reliability Standard that addresses a specific matter, as permitted under Section 215(d)(5) of the Federal Power Act. Other directives order NERC to make changes in its procedural rules. Still other directives order NERC to consider the views of various commenters when NERC next revises a particular Reliability Standard.

[1] The data included in this paragraph does not include Regional Reliability Standards.

NERC processes these various types of directives consistent with its Rules of Procedure (including Appendices 3A- Standard Processes Manual and 3C Procedure for Coordinating Reliability Standards). Specifically, when a regulatory order or rule is issued, that order is reviewed and any directives within the order related to standards development are added to the NERC Standards Issues Database and categorized. NERC then seeks to associate each directive with a specific standard. Projects and the associated Standards, along with the associated regulatory directives, are then prioritized for revision using the prioritization process described elsewhere in this document.

In 2011, NERC developed and filed the first NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. This report is to be filed annually with FERC on or before March 31 of each year in accordance with Section 321.6 of the NERC Rules of Procedure ("Rule 321") that was approved by the FERC on March 17, 2011. The progress against the directives issued is outlined in the aforementioned report.

Regional Standards Development

Regional standards work within NERC and the Regions has seen a great deal of development and implementation of new initiatives since the beginning of 2011. First, the Regional Reliability Standards Working Group (RRSWG) transitioned into the Regional Standards Group (RSG). Comprised of the NERC Vice President of Standards and Training and the Standards Managers from each of the eight Regional Entities, the RSG reports to the ERO Executive Management Group (EMG). Its purpose is to provide process and policy recommendations in the execution of the Regional Entity delegation agreements and the NERC Rules of Procedure. An overarching objective is to coordinate the development of Regional and continent-wide standards to support and continually enhance reliability across North America for the benefit of all bulk electric system users, owners and operators.

In support of this purpose and this objective, a primary initiative of the RSG is to create and sustain viable standards development coordination processes to obtain consistency and uniformity, where appropriate, across the ERO enterprise – NERC and the Regional Entities – while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO as the reliability standards development authority. To that end, the RSG developed a combined list of all regional standards and variances in the development process in order to prioritize these projects continent-wide. This will allow NERC to coordinate the necessary resources through the development and ultimate filing of these standards and variances with applicable regulatory authorities. Project information for each of those regional standards and variances in the development process is provided in this Plan, along with a high-level overview of the project timeline.

Rapid Development and Rapid Revision Projects

NERC's Standards Committee (SC) tentatively has identified two ways to accelerate project development while staying within the boundaries established in the Standard Processes Manual. Both approaches are consistent with the original vision of standards development when the ERO was being developed.

The first, called "Rapid Development," utilizes a small team of professionals to draft a standard over a short, but intensive period of time. The standard is then submitted with its associated SAR and the project moves directly into the first formal comment phase. Under this model, it may be possible to develop and ballot a standard within a period less than a year. The SC is evaluating the approach as part of Project 2010-05.1 Phase 1 of Protection Systems: Misoperations. Initial results have provided useful lessons learned, including the need to carefully select members of the small team to ensure not just subject matter expertise, but balance of interests as well.

The second approach, called "Rapid Revision," takes a similar approach, but is focused on dealing with concerns identified during the Interpretation process. If an interpretation drafting team identifies simple modifications to a standard that can address an interpretation request more effectively than an interpretation can alone, the team may propose to the requester that the team instead make such changes and submit them with an associated SAR. If agreed to by the requester, and following SC review, the changes may move directly to comment and ballot. This approach is being tested with project 2011-INT-01 Interpretation of MOD-028-1 R3.1 for Florida Power and Light.

Challenges facing Standards

Five-Year Review Obligation

As part of its Rules of Procedure, NERC has committed to review each of its standards for modification once every five years. 2012 marks the fifth year since NERC's first set of standards became mandatory and enforceable in the United States; many of those standards are now due for that five-year review. While not giving the appearance of being onerous, this obligation has proved challenging to meet. The work load of the ERO remains high, and maintaining focus on those projects that are most beneficial to reliability has resulted in a delay of the work required for these five-year reviews (except when already associated with a project of significant reliability value). Using current assumptions, the five-year review obligation will not be met for a number of standards. NERC and the SC are working together with the NERC Board of Trustees to evaluate options for addressing this issue.

Product Quality

As NERC's and the industry's experience with standards has evolved, it has become increasingly clear that minor problems with the quality of standards can have significant repercussions when it comes to clarity and compliance. NERC has undertaken efforts to improve the quality of its work products, and will continue to do so in 2012. Steps being taken include creating technical writer positions, enhanced training for staff, and developing additional internal quality assurance processes.

Standards Program Throughput

One continuing challenge is the ability to not only produce quality products, but to do so consistently and efficiently. While in some cases limited by necessity due to the scarcity of industry resources available in the workforce, the Standards Program continues to look for ways to improve the efficiency of its processes and its ability to demonstrate tangible progress

in standards development on a regular basis. In 2012, Standards staff will be implementing enhanced document management capabilities, as well as portfolio-level project controls to ensure optimal use of resources and overall consistency of throughput. This more global "portfolio view" was used to in part to develop this Plan, but additional improvements are expected in 2012 as well. As such, it should be noted that this, in addition to the normal variables associated with consensus-based product development, may lead to changes in the schedules used to develop the forecasts within this document

Conclusion

The Standards Program continues to make changes to improve its overall effectiveness, and looks forward to additional improvements in 2012. The SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity. Additionally, the plan was developed with the use of a subjective review of the implications of cost. NERC believes this approach correctly balances the needs of the industry with the public interest, and will continue to work with the industry to ensure the continued protection of reliability in North America.

Chapter 4 – Project Development Overview

Project Prioritization and Plan Development

This year, NERC continued use of the Prioritization Tool (the Tool) developed by the Standards Committee (SC) in late 2010 and early 2011 to help determine how best to assign resources and perform work. Following the finalization of the 2011-2013 Plan, the Standards Committee's Process Subcommittee (SCPS) began to work on improving the Tool for use in the development of the 2012-2014 Plan.

Similar to last year, the Tool utilizes a simple scoring mechanism to identify key considerations for use in determining project priority. Revisions were made to the tool in response to comments received during the development of the 2011-2013 Plan. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (as there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability, and trial testing of a new metric that accounts for "cost considerations." In addition, the Tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the SC to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources.

During the month of July 2011, NERC solicited the industry at-large for additional projects for consideration in the 2012-2014 Plan. NERC received nine submissions, resulting in the creation of six new projects. NERC created one project to account for the remaining Order 729 directives yet to be resolved, and one project to account for issues with the MOD-029-01 standard that will need to be addressed at some point in the future. NERC created four additional projects to account for projects to modify standards based on NERC's five-year review obligation, as identified in its Rules of Procedure.

In August, the SC began reviewing each of these projects, assigning them various scores based on input from constituents within their respective segments. NERC staff assembled the results in September, and an initial Prioritization and Work Plan was approved for posting at the September meeting of the SC. This Work Plan assumed an overall throughput capacity of thirteen projects in development concurrently, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.

- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The Work Plan identified each project and the amount of work associated with it, then allocated projects in their respective areas in order or priority as resources came available. Some projects were identified that needed additional research and were scheduled for initiation with sufficient time to allow such work to be completed. Additionally, some projects require specific expertise. To the extent such needs were identified, that expertise was managed to ensure the volume of work did not exceed the resource capacity. For example, projects related to protection systems generally were not started until another project related to protection systems was completed.

This Work Plan, along with the prioritization itself and this document in draft form, were posted for industry comment in September. Comments were received and considered at the October 2011 SCPS meeting; the final prioritization and Plan was approved by the SC at its October meeting. The Plan was presented to NERC' Board of Trustees and was approved at the Board's November meeting.

Project Implementation

Standards development projects at NERC proceed through a specific set of steps, identified in NERC's Standard Processes Manual. In general, the process can be summarized as follows:

- Initiation – projects are identified, and simple problem statements are developed. These problem statements are used to assist in the overall project prioritization effort described above.
- Planning – projects are further developed to determine their scope and merits. The drafting of a formal Standards Authorization Request (SAR) occurs in this step, as well as the development of communication plans if deemed to be necessary. In some cases, this step may occur concurrently with the initial steps of Execution and Control.
- Execution and Control – once the SC has approved a project for moving into this phase, standards or other work products are produced and the project begins moving forward in earnest. A detailed project schedule is developed, and standards are drafted, posted for comment, and balloted, culminating in review by NERC's Board of Trustees for adoption.
- Regulatory Submission - Following adoption by NERC's Board of Trustees, the standards are submitted to regulatory authorities.

- Closing – Following action by NERC's Board of Trustees, the project is reviewed and analyzed for "lessons learned." Public information is updated as necessary, and any necessary supplemental regulatory filings are made.

For more information on the specific details of each step in the implementation of projects to develop NERC Reliability Standards, readers are directed to various resources posted at the NERC Standards Resources page:

http://www.nerc.com/commondocs.php?cd=2

Chapter 5 – Project Work Plan Summary

This chapter summarizes the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The following is based on the Standards Committee's Prioritization of Projects (included as Appendix 1) and the associated staff-developed Work Plan (included as Appendix 2). The Regional Work Plan is included as Appendix 3. A detailed summary of projects, including regional projects, is included as Appendix 4.

Projects for 2012-2014

NERC intends to continue development of the following projects in 2012. These are Active Projects, and are expected to continue until completion. Although there are other projects that ranked higher this year than some of these projects, the Standards Committee believes that the industry has committed to completing these projects, and given that the workload is reaching a manageable size, moving any of these projects into informal development would be counterproductive.

The projects below have been color coded, to indicate their focus area (Reliability, Time Sensitivity, or Practicality). While most projects impact all three of these areas in some way, this is intended to illustrate the primary consideration driving each project's development priority.

Existing Active Projects:

- 2006-06 Reliability Coordination.
- 2007-02 Operating Personnel Communication Protocols.
- 2007-03 Real-time Transmission Operations.
- 2007-06 Protection System Coordination.
- 2007-07 Vegetation Management. This project is expected to be completed in early 2012, but at the time of this document's finalization, it has not yet been formally completed.
- 2007-09 Generator Verification.
- 2007-12 Frequency Response.
- 2007-17 Protection System Maintenance and Testing.
- 2008-06 Cyber Security – Order 706.
- 2009-01 Disturbance and Sabotage Reporting.
- 2010-05.1 Phase 1 of Protection Systems: Misoperations.
- 2010-07 Generator Requirements at the Transmission Interface.
- 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves.
- 2010-17 Definition of Bulk Electric System.

NERC intends to initiate development of the following additional projects in 2012. These projects have been assigned based on priority, but constrained by the need to have a limited

number of projects under active development at any given time. Project 2010-05.2 is not schedule to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. 2012-04 is not starting until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

While this Plan is a reasonable approach to Standards development, it cannot account for unforeseen events. The Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and factors such as new or emerging reliability risks to the Bulk Electric System. Changes to the Plan during its execution are not only possible, but likely, and should be expected.

Additional Projects in 2012:

- 2008-02 Undervoltage Load Shedding.
- 2009-02 Real-time Monitoring and Analysis Capabilities. This project is currently in informal development.
- 2009-03 Emergency Operations. This project is currently in informal development.
- 2010-01 Support Personnel Training. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS. This project is expected to be started upon the completion of the first phase of the project, 2010-05.1 Phase 1 of Protection Systems: Misoperations. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-13.2 Phase 2 of Relay Loadability: Generation. This project is currently in informal development. This project has been identified as having a higher priority, as it has a FERC deadline. While this was accounted for in the Prioritization, the SC agreed that this should take precedence over the 5-year review projects considered in the Prioritization.
- 2012-04 Protection System Commissioning Testing. This project is expected to be started upon the completion of 2007-17 Protection System Maintenance and Testing. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.

NERC intends to initiate development of the following projects in 2013. As noted above, these projects generally have been assigned based on priority and constrained by the need to have a limited number of projects under active development at any given time. 2012-06 is not starting until 2013 due to the need for subject matter expertise in reserves and in generator characteristics, which are already committed to projects 2010-14.1 and 2007-09, respectively. 2009-07 is not starting until 2013 due to the need for subject matter expertise in protection systems, which is already committed to project 2007-06.

Additional Projects in 2013:

- 2007-11 Disturbance Monitoring. This project is currently in informal development.
- 2008-01 Voltage and Reactive Planning and Control. This project is currently in informal development.
- 2008-12 Coordinate Interchange Standards. This project is currently in informal development.
- 2009-07 Reliability of Protection Systems. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until after the completion of 2007-06 Protection System Coordination.
- 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent. This project is currently in informal development.
- 2012-01 Equipment Monitoring and Diagnostic Devices. This project requires research prior to initiation, which is expected to be completed in the latter part of 2012.
- 2012-06 Generator Capabilities. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until completion of both 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves and 2007-09 Generator Verification.

NERC intends to initiate development of the following projects in 2014. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. In general, these projects are not projected to be initiated until 2014 due to the need to limit the number of projects active at any given time. 2010-13.3 is not projected to start until 2014 due to the need for subject matter expertise in relay loadability, which is already committed to Phase 2 of the project.

Additional Projects in 2014:

- 2009-04 Phasor Measurements. This project requires research prior to initiation, which is expected to be completed in 2013.
- 2009-05 Resource Adequacy Assessments.
- 2010-03 Modeling Data. This project requires research prior to initiation, which is expected to be completed in the latter part of 2013.
- 2010-04 Demand Data. This project requires research prior to initiation, which is expected to be completed in 2014.
- 2010-08 Functional Glossary Model Revisions.

- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is expected to not start until completion of the previous phase of this project, 2010-13.2 Phase 2 of Relay Loadability: Generation.
- 2010-16 Definition of System Operator.
- 2012-05 ATC Revisions - Order 729.

Projects for 2015 and Beyond

NERC intends to develop the following projects in 2015 or later, which is beyond the scope of this Plan. These projects have been identified as having a lower priority. There also is some question as to whether or not they will provide sufficient value to be cost justified at this time. They have been included for completeness and to ensure that they are recognized as necessary projects.

It should be noted that several of these projects are related to NERC's ongoing obligation to review its standard every five years, as required in the Rules of Procedure. This is discussed in more detail in the General chapter.

- 2010-02 Connecting New Facilities to the Grid
- 2012-02 Physical Protection
- 2012-03 PRC-004 VSLs
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review
- 2012-12 PER Review
- 2012-13 NUC Review
- 2012-14 Risk Analysis

The following two projects were identified as potential projects for consideration, but not included in the prioritization. If necessary, they will be evaluated mid-year on an ad-hoc basis; otherwise, they will be considered in the prioritization process for the 2013-2015 Reliability Standards Development Plan.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2012-15 Flow Limited Paths

Appendix 1 - Prioritization

The following pages show the project rankings in each of the three primary categories: Reliability, Time Sensitivity and Practicality. The assignment of scores was based on the mean of individual scores provide by members of the Standards Committee. Scores highlighted in red indicate areas where the members of the SC were divided regarding how to assign a particular score.

Following the identification of potential projects, this prioritization is the next step in the creation of the Reliability Standards Development Plan, and provides a starting point for further discussion. The prioritization is used to create the Work Plan that follows as Appendix 2.

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	7	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	6	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	2	29
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	3	7
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	14	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	11	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	12	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	9	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	19	32

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	37	41
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	4	3
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	16	12
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	15	25
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	8	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	20	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	22	20
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	41	43
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	10	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001- through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	17	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	18	19
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	36	40

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Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	40	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	42	44
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	13	31
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	38	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	39	24
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	21	33
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

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Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	32
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12

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Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	20
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	30
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Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	19
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	31
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	TIME SENSITIVITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	41
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	43
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	40
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
Project Prioritization Worksheet

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Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative, BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13

NERC Standards Committee
Project Prioritization Worksheet

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Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	19
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	30
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	31
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	32
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	40
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	41
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	42
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	43
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC

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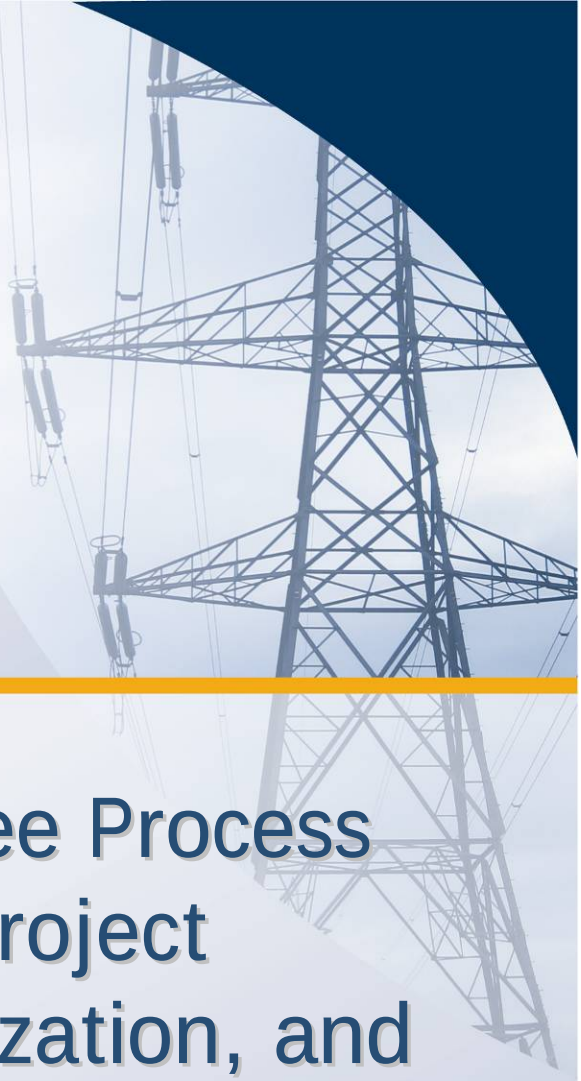

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. **Developing Projects Schedules**

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

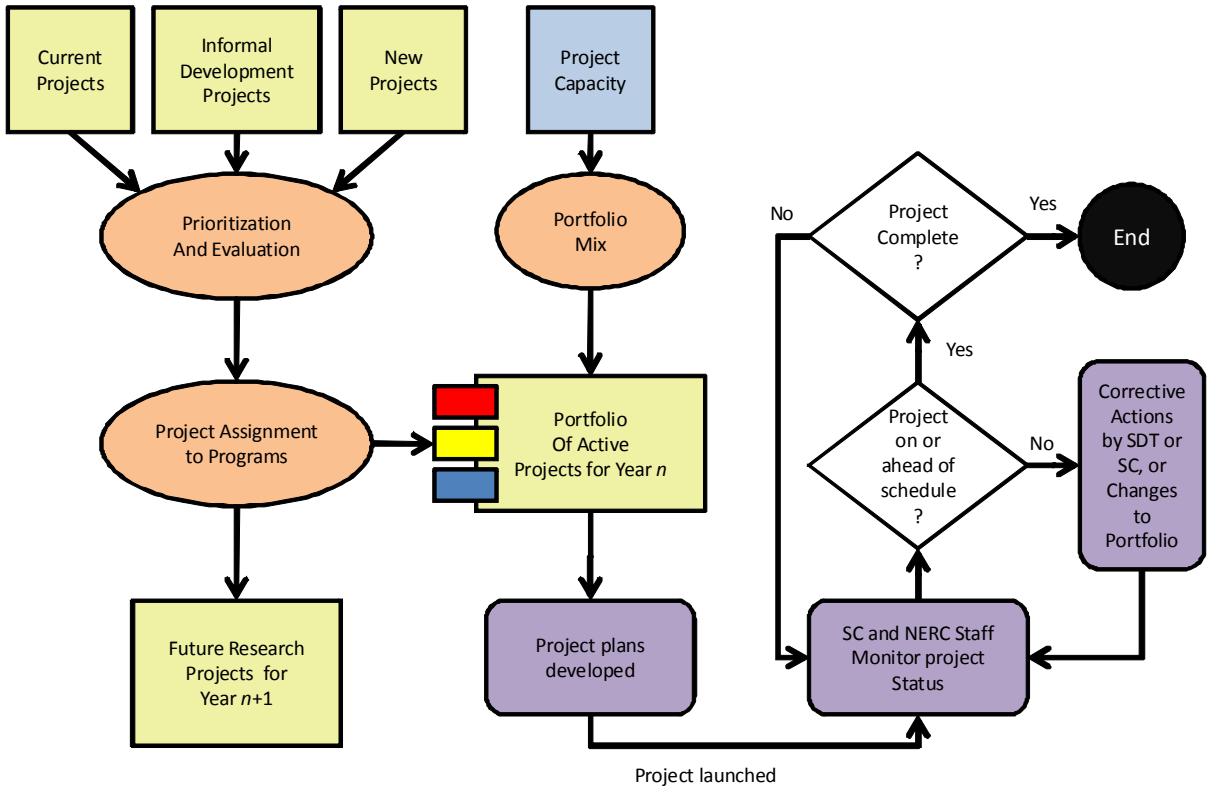
9. **Monitoring Projects**

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
    A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Attachment B: Prioritization Tool

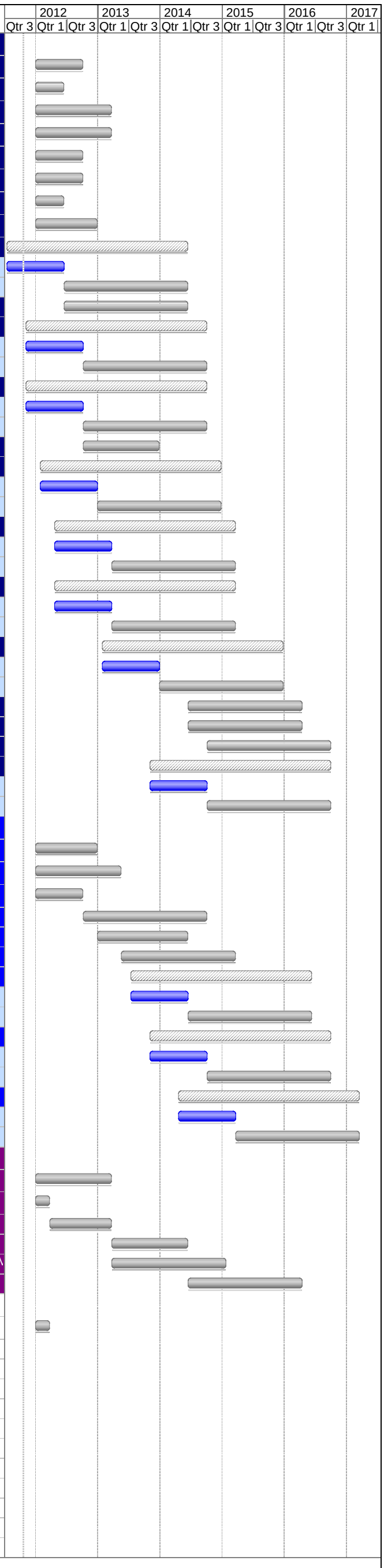
STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	SUMMARY						7	25	3	3
									Cells with this color are blank and need a value entered.				Sort	Sort	Sort	Sort	Sort					
TOTAL RANKING	Project Number and Name	Short Description	Addresses an ERO Strategic Priority (to be completed by NERC Staff) 50 = Yes 0 = No	Addresses a reliability risk not covered by an existing standard 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	Improves one or more existing standards: 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	Cost of Implementation The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Cost of Administration The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Time Sensitivity (to be competed by NERC Staff) Number of months until due date, if any	Addresses compliance issues from NERC Staff or Stakeholders 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	Other Practicality Concern (Explanation for the rating must be indicated in the column to the right) (0 to 50)	Explanation	Reliability Score (0 - 250)	Cost Consideration Score (0 - 100)	Time Sensitivity Score (0 - 100)	Practicality Score (0 - 150)	Total Score (0-600)	TOTAL RANKING	Relaibity Ranking	Cost Consideration Ranking	Time Sensitivity Ranking	Practicality Rnaking
1	Project 2010-13.2 Phase 2 of Relay Loadability: Generation	Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010											0	0	0	0	0	1	1	1	1	1
2	Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings												0	0	0	0	0	2	2	2	2	2
3	Project 2010.05.2 Phase 2 of Protections Systems: SPS and RAS	Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional udpates to PRC-004 as well.											0	0	0	0	0	3	3	3	3	3
4	Project 2010-16 Definition of System Operator												0	0	0	0	0	4	4	4	4	4
5	Project 2007-17 Protection System Maintenance & Testing	Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs; PRC-011-0 — UVLS System Maintenance and Testing; and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn.											0	0	0	0	0	5	5	5	5	5
6	Project 2007-06 System Protection Coordination	Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.											0	0	0	0	0	6	6	6	6	6
7	Project 2007-12 Frequency Response	Requires entities to provide data needed to model each interconnection's frequency response.											0	0	0	0	0	7	7	7	7	7
8	Project 2010-05.1 Phase 1 of Protection Systems: Misoperations	Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not incude SPS and RAS.											0	0	0	0	0	8	8	8	8	8
9	Project 2008-06 Cyber Security - Order 706	This is the second phase (Phase 2) of Project 2008-06 Cyber Security Order 706. The project requires modifications to CIP-002 thru CIP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.											0	0	0	0	0	9	9	9	9	9
10	Project 2010-07 Transmission Requirements at the Generator Interface	This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.											0	0	0	0	0	10	10	10	10	10
11	Project 2009-01 Disturbance and Sabotage Reporting	This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.											0	0	0	0	0	11	11	11	11	11

Appendix 2 – Work Plan

The following page shows the schedule of work in Gantt chart format. Projects for which the Standing Committees will be asked to provide research are identified with blue Gantt chart bars, and have been tentatively allocated a year duration for research (pending feedback from the Standing Committees).

Following the Prioritization, the Work Plan is the next step in the creation of the Reliability Standards Development Plan. It is used primarily to identify project predecessors and ensure resource allocations are consistent and manageable. Once complete, it identifies the estimated start and completion of all projects over the three-year period.

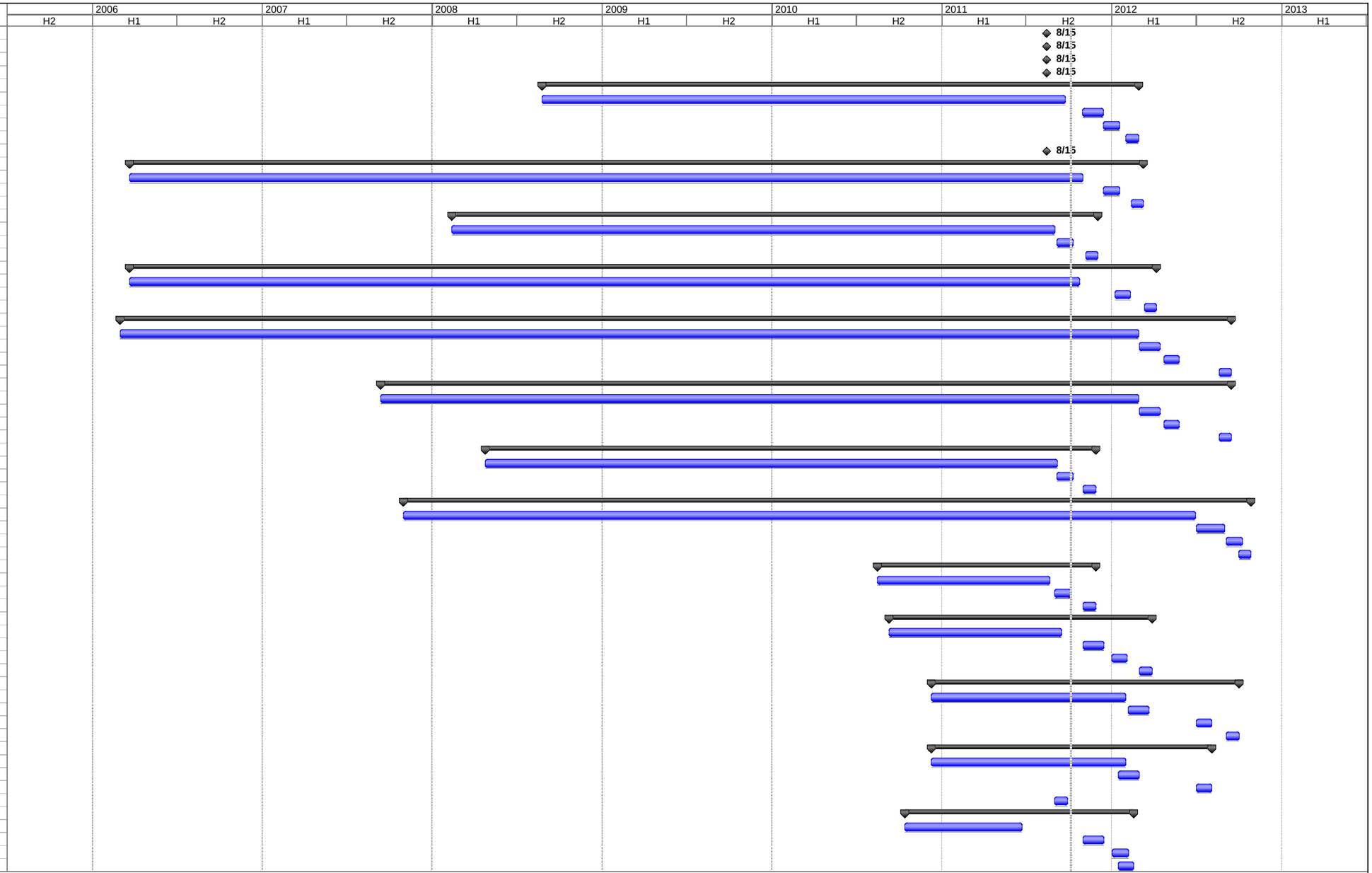
ID	Task Name
1	**Reliability Projects: 8 Slots**
2	**Project 2008-06 Cyber Security - Order 706 (ACTIVE)**
3	**Project 2007-17 Protection System Maintenance & Testing (ACTIVE)**
4	**Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)**
5	**Project 2007-06 System Protection Coordination (ACTIVE)**
6	**Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)**
7	**Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)**
8	**Project 2006-06 Reliability Coordination (ACTIVE)**
9	**Project 2007-09 Generator Verification (ACTIVE)**
10	***Project 2012-04 Protection System Commissioning Testing***
11	Standing Committee Research
12	Standards Development
13	Project 2008-02 Undervoltage Load Shedding
14	**Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS**
15	Standing Committee Research
16	Standards Development
17	**Project 2010-01 Support Personnel Training**
18	Standing Committee Research
19	Standards Development
20	Project 2009-03 Emergency Operations (INFORMAL)
21	**Project 2012-06 Generator Capabilities**
22	Standing Committee Research
23	Standards Development
24	**Project 2009-07 Reliability of Protection Systems**
25	Standing Committee Research
26	Standards Development
27	**Project 2012-01 Equipment Monitoring and Diagnostic Devices**
28	Standing Committee Research
29	Standards Development
30	**Project 2009-04 Phasor Measurements**
31	Standing Committee Research
32	Standards Development
33	Project 2009-05 Resource Adequacy Assessments
34	Project 2010-16 Definition of System Operator
35	Project 2010-08 Functional Model Glossary Revisions
36	**Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings**
37	Standing Committee Research
38	Standards Development
39	**Time-Sensitive Projects - 3 Slots**
40	**Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)**
41	**Project 2010-17 Definition of BES (ACTIVE)**
42	**Project 2007-12 Frequency Response (ACTIVE)**
43	Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)
44	Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)
45	Project 2007-11 Disturbance Monitoring (INFORMAL)
46	**Project 2010-03 Modeling Data**
47	Standing Committee Research
48	Standards Development
49	**Project 2010-04 Demand Data**
50	Standing Committee Research
51	Standards Development
52	**Project 2010-02 Connecting New Facilities to the Grid**
53	Standing Committee Research
54	Standards Development
55	**Practicality Projects - 2 Slots**
56	**Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)**
57	**Project 2007-03 Real-time Transmission Operations (ACTIVE)**
58	Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)
59	Project 2008-12 Coordinate Interchange Standards (INFORMAL)
60	Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORM
61	Project 2012-05 ATC-Revisions - Order 729
62	**Excess Beyond Capacity for 2012-2014**
63	**Project 2007-07 Vegetation Management (ACTIVE)**
64	Project 2012-02 Physical Protection
65	Project 2012-03 PRC-004 VSLs
66	Project 2012-08 Glossary Updates
67	Project 2012-07 Obsolescence Review
68	Project 2012-09 IRO Review
69	Project 2012-11 FAC Review
70	Project 2012-12 PER Review
71	Project 2012-13 NUC Review
72	Project 2012-14 Risk Analysis
73	*2006-06.2 Phase 2 of Reliability Coordination*
74	*2012-15 Flow Limited Paths*



Appendix 3 – Regional Work Plan

The following page shows the schedule of regional work in Gantt chart format. Projects that are actively being pursued are identified with black Gantt chart bars, with blue bars representing various stages of development. Projects that are "on hold" are represented by a black diamond.

ID	Task Name
1	**PRC-002-FRCC-1 (on hold)**
2	**PRC-003-FRCC-1 (on hold)**
3	**PRC-006-FRCC-1 (on hold)**
4	**PRC-024-FRCC-1 (on hold)**
5	**PRC-006-NPCC-1**
6	Regional standard development
7	Posting of Documents for process evaluation at NERC
8	Prepare BOT Material
9	Develop Initial Draft of Regulatory Filings
10	**PRC-012-NPCC-1 (on hold)**
11	**MOD-024-RFC-01**
12	Regional standard development
13	Prepare BOT Material
14	Develop Initial Draft of Regulatory Filings
15	**MOD-025-RFC-01**
16	Regional standard development
17	Prepare BOT Material
18	Develop Initial Draft of Regulatory Filings
19	**PRC-002-RFC-01**
20	Regional standard development
21	Prepare BOT Material
22	Develop Initial Draft of Regulatory Filings
23	**PRC-006-RFC-1**
24	Regional standard development
25	Posting of Documents for process evaluation at NERC
26	Prepare BOT Material
27	Develop Initial Draft of Regulatory Filings
28	**PRC-012-RFC-1**
29	Regional standard development
30	Posting of Documents for process evaluation at NERC
31	Prepare BOT Material
32	Develop Initial Draft of Regulatory Filings
33	**PRC-006-SERC-01**
34	Regional standard development
35	Prepare BOT Material
36	Develop Initial Draft of Regulatory Filings
37	**PRC-006-SPP-01**
38	Regional standard development
39	Posting of Documents for process evaluation at NERC
40	Prepare BOT Material
41	Develop Initial Draft of Regulatory Filings
42	**IRO-006-TRE-1**
43	Regional standard development
44	Prepare BOT Material
45	Develop Initial Draft of Regulatory Filings
46	**BAL-001-TRE-1**
47	Regional standard development
48	Posting of Documents for process evaluation at NERC
49	Prepare BOT Material
50	Develop Initial Draft of Regulatory Filings
51	**BAL-002-WECC-1**
52	Regional standard development
53	Posting of Documents for process evaluation at NERC
54	Prepare BOT Material
55	Develop Initial Draft of Regulatory Filings
56	**BAL-004-WECC-1**
57	Regional standard development
58	Posting of Documents for process evaluation at NERC
59	Prepare BOT Material
60	Develop Initial Draft of Regulatory Filings
61	**VAR-001-WECC-1**
62	Regional standard development
63	Posting of Documents for process evaluation at NERC
64	Prepare BOT Material
65	Develop Initial Draft of Regulatory Filings



Project: Unified Regional Project Sche
Date: Wed 10/5/11

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Appendix 4 – Project Summaries

The following are detailed summaries of the projects discussed earlier within this plan.

DEVELOPMENT 2012

Project 2006-06 Reliability Coordination

Summary:

This project ensures that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable, and that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team is considering comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed. The drafting team is reviewing all of the requirements in this set of standards and making a determination whether to:

- Modify the requirement to improve clarity and measurability while removing ambiguity;
- Move the requirement (into another project or Standard, or to the certification process); or
- Eliminate the requirement (because it is redundant or does not support BPS reliability).

This project ranked #13 in Reliability Priority.

Standards affected:

COM-001, COM-002, IRO-001- IRO-002, IRO-005, IRO-014, IRO-015, IRO-016

Status:

This project's SAR was finalized on May 2, 2007. The draft standards have been posted several times. The NERC Board of Trustees adopted IRO-002-3, IRO-005-4 and IRO-014-2, along with a conforming change to IRO-001-1.1 associated with IRO-014-2 (creating IRO-001-2) on August 4, 2011. The Board also approved the retirement of IRO-015-1 and IRO-016-1. The drafting team is continuing development on COM-001-2, COM-002-3, and additional revisions to IRO-001, which will become IRO-001-3. It is estimated this project will complete in Q2 2012.

FUTURE CONSIDERATION

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003

Summary:

This project will address directives from Order 693 related to the inclusion of measures in IRO-003 and the determination of "critical facilities."

Standards affected:

IRO-003

Status:

A SAR was developed and was finalized on July 14, 2010. However, no additional work has occurred for this project at this time. No estimate for starting the project has been identified.

DEVELOPMENT 2012

Project 2007-02 Operating Personnel Communication Protocols

Summary:

This project is reviewing COM-003 to ensure the standard is complete, appropriately scoped, and enforceable. The project is also considering other general improvements and stakeholder comments received during the initial development of the standards, as well as other comments received from Electric Reliability Organization (ERO) regulatory authorities. This also satisfies the NERC requirement for five-year review of the standard.

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers. Requirements will include protocols for communicating changes to real-time operating states and protocols for issuing and responding to operating directives.

This project ranked #5 in Reliability Priority.

Standards affected:

COM-003

Status:

This project's SAR was finalized on June 8, 2007. A draft standard was posted November 20, 2009 through January 15, 2010. Due to focusing on other priorities, this team was temporarily put on hold. The project was restarted in 2011, and the team is reviewing comments and preparing to post a new version of the standard. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-03 Real-time Transmission Operations

Summary:

This project is clarifying requirements for real-time operations of the Bulk Electric System in several standards, as well as providing other general improvements. It will consider stakeholder comments received during the initial development of the standards, as well as other comments received from ERO regulatory authorities. This also satisfies the NERC requirement for five-year review of the standards.

This project ranked #5 in Practicality Priority.

Standards affected:

PER-001, TOP-001, TOP-002, TOP-003, TOP-004, TOP-004, TOP-005¸ TOP-006, TOP-007, TOP-008

Status:

This project's SAR was finalized November 1, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from May 31, 2011 through June 9, 2011. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-06 System Protection Coordination

Summary:

This project is reviewing PRC-001-1 to assure that Protection System application and performance issues are coordinated among all related entities. It will ensure the applicable entities within the standard correctly reflect the functional responsibilities, as described in the NERC Functional Model. The project will also incorporate other general improvements, address directives received from ERO regulatory authorities, and consider the observations and recommendations developed by the NERC SPCTF. As necessary, the project will coordinate the transfer of monitoring-related requirements to other standards as appropriate through coordination with project 2006-06 Reliability Coordination.

This project ranked #4 in Reliability Priority.

Standards affected:

PRC-001, PRC-027 (New)

Status:

This project's SAR was finalized on July 27, 2007. A draft standard was posted from September 9, 2009 through October 26, 2009. Several interim drafts have been developed since that time. A new results-based version of the standard is in development. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-07 Vegetation Management

Summary:

This project will address some 'fill-in-the-blank' components of the existing standard, which were created in 2006 (prior to mandatory and enforceable standards). The project also will investigate applicability to lower voltage transmission lines, address the issue of clearances for lines on both federal and non-federal lands, consider revising the definition of right of way to encompass required clearance areas, and review the suitability of the IEEE 516-2003 standard for minimum vegetation clearance. This also satisfies the NERC requirement for five-year review of the standard.

Standards affected:

FAC-003

Status:

This project's SAR was finalized June 27, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Successive Ballot from February 18, 2011 through February 28, 2011. The team has drafted a revised standard and has requested it be posted for Recirculation Ballot. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-09 Generator Verification

Summary:

This project will create or modify standards to ensure that generators will not trip off-line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions. It also will ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

Standards affected:

MOD-024, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024

Status:

This project's SAR was finalized June 14, 2007. The standards have been posted several times for public comment. Two of the standards were posted most recently for Initial Ballot from July 22, 2011 through August 1, 2011. Three other standards were posted for comment June 12, 2011 through July 15, 2011. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2007-11 Disturbance Monitoring

Summary:

Purpose
This project establishes and clarifies requirements for the installation of Disturbance Monitoring Equipment (DME) and reporting of disturbance data to facilitate analyses of events and verify system models. The project will review PRC-002 and each of the current regional programs developed in accordance with that standard, including any other associated programs and/or requirements related to or contained within the disturbance monitoring program documentation. The project will then determine which requirements should be continent-wide requirements and which requirements should be included in regional standards.

Standards affected:

PRC-002, PRC-018

Status:

This project's SAR was finalized May 21, 2007. An initial draft standard was posted from February 2, 2009, to March 18, 2009. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

DEVELOPMENT 2012

Project 2007-12 Frequency Response

Summary:

Purpose:
This project will modify the BAL-003 Standard to require sufficient Frequency Response from the Balancing Authority to maintain Interconnection Frequency within predefined bounds. It also will ensure the standard provides consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

This project is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

BAL-003

Status:

This project's SAR was finalized June 30, 2007. The standard has been posted once for public comment, and is expected to be posted for comment in Q4 of 2011. The project is expected to complete in Q2, 2012.

DEVELOPMENT 2012

Project 2007-17 Protection System Maintenance and Testing

Summary:

This project will modify the standards related to ensuring all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The project will respond to various FERC directives contained in Order 693, as well as make general improvements to the standard.

This project ranked #3 in Reliability Priority.

Standards affected:

PRC-005, PRC-008, PRC-011, PRC-017

Status:

This project's SAR was finalized May 7, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from September 19, 2011 through September 28, 2011. It is estimated this project will complete in Q2 2012.

PENDING 2013

Project 2008-01 Voltage and Reactive Planning and Control

Summary:

This project will revise the VAR Standards to require that appropriate functional entities develop and coordinate voltage and reactive planning and operating criteria to ensure that there are sufficient reactive resources, and voltage and reactive margins, to manage the risk of voltage instability. The project will also address the FERC directives in Order 693 associated with these standards. Review and modifications to the existing VAR standards will also consider the Transmission Issues Subcommittee's "Reactive Support & Control Whitepaper" dated 05/18/2009.

This project ranked #3 in practicality.

Standards affected:

VAR-001, VAR-002

Status:

This project's SAR was finalized April of 2011. This project was moved into informal development in 2011, prior to posting any daft of the standard. It is estimated this project will begin in Q1 2013 and complete in Q2 2014.

PENDING 2012

Project 2008-02 Undervoltage Load Shedding

Summary:

This project will improve the existing standards on Under Voltage Load Shedding (UVLS) to ensure that load is shed when needed to prevent voltage collapse and voltage instability in the Bulk Electric System. The existing standards will be consolidated, and specific criteria for UVLS programs and assessments of those UVLS programs should be added. 'Fill-in-the-blank' elements should be eliminated, and concerns related to Fault-Induced Delayed Voltage Recovery will be reviewed and addressed.

This project ranked #14 in Reliability Priority.

Standards affected:

PRC-010, PRC-022

Status:

This standard has a proposed SAR that was posted for comment from January 20, 2010, through February 19, 2010. It is estimated this project will start in Q3 2012 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2008-06 Cyber Security – Order 706

Summary:

This project establishes standards to protect the critical cyber assets (including hardware, software, data, and communications networks) essential to the reliable operations of the bulk power system. Currently the project is focused on Version 5 of the standards, which is focused on addressing the remaining directives in Order 706.

This project ranked #2 in Reliability Priority.

Standards affected:

CIP-002, CIP-003, CIP-004, CIP-005, CIP-006, CIP-007, CIP-008, CIP-009, CIP-010 (New), CIP-011 (New)

Status:

This project's SAR was finalized June 9, 2008. Older versions of the standard have been posted, balloted, and approved several times. Version 5 of the standards has not yet been posted for comment. It is estimated this project will complete in Q3 2012.

PENDING 2013

Project 2008-12 Coordinate Interchange Standards

Summary:

This project will revise the set of Coordinate Interchange standards to ensure that each requirement is assigned to an owner, operator, or user of the bulk power system, and not to a tool used to coordinate interchange; to address the Interchange Subcommittee concerns related to the Dynamic Transfers and Pseudo-ties; and to address previously identified stakeholder comments. The project also will consider adding requirements to have backup capability for use when the interchange transaction tool fails.

Standards affected:

INT-001, INT-003, INT-004, INT-005, INT-006, INT-007, INT-008, INT-009, INT-010

Status:

This project's SAR was finalized December 1, 2008. An initial draft set of standards was developed and posted for comment from November 10, 2009 through December 9, 2009. However, the project was moved into informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2009-01 Disturbance and Sabotage Reporting

Summary:

Purpose:

This project entails revisions to existing standards CIP-001-1 – Sabotage Reporting and EOP-004-1 – Disturbance Reporting. The project will eliminate redundancy and provide clarity on sabotage events. Additionally, EOP-004 will be reviewed to eliminate any 'fill-in-the-blank' components.

This project ranked #8 in Reliability Priority.

Standards affected:

CIP-001, EOP-004

Status:

This project's SAR was finalized August 13, 2009. The standard has been posted for comment twice, and is being prepared for Initial Ballot. It is estimated this project will complete in Q3 2012.

PENDING 2012

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Summary:

This project will create new or revised standards to establish requirements for the monitoring and analysis capabilities provided to System Operators to support Real-time System Operations. The project will address availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management.

This project ranked #1 in Practicality Priority.

Standards affected:

New

Status:

This project's SAR was finalized March 31, 2010. The project team posted a White Paper created to illustrate the concepts it intends to pursue as the project unfolds. This posting solicited comments from February 16, 2011, through April 4, 2011. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2012 and complete in Q1 2013.

PENDING 2012

Project 2009-03 Emergency Operations

Summary:

This project will review the EOP-001, EOP-002, and EOP-003 standards and associated interpretations to ensure the requirements are clear and unambiguous. Many of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process; suggestions for improvement have been submitted by stakeholders, other drafting teams, and FERC staff.

This project ranked #4 in Practicality Priority.

Standards affected:

EOP-001, EOP-002, EOP-003

Status:

This project's SAR was finalized November 5, 2010. Prior to the development of an initial draft standard, this project was moved to informal development. It is estimated this project will start in Q3 2012 and complete in Q4 2013.

2014 PENDING RESEARCH

Project 2009-04 Phasor Measurements

Summary:

This project will review several industry studies to determine if there should be phasor requirements developed for a NERC standard. This project is related to the North-American Synchro-Phasor Initiative, and supports a blackout recommendation.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2014 and complete in Q4 2015.

PENDING 2014

Project 2009-05 Resource Adequacy Assessments

Summary:

This project will implement certain recommendations related to resource adequacy from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report,* approved by the NERC Board on June 15, 2004. The project will create a standard with requirements to perform resource adequacy assessments, using metrics that take into account various factors (including, but not limited to, fuel deliverability). The standard would also make the results of the assessments available to the industry, NERC, and appropriate regulatory agencies.

Standards affected:

New

Status:

This project's SAR was finalized August 17. 2007. Prior to the development of an initial draft standard, this project was moved to informal development in 2011. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2013 PENDING RESEARCH

Project 2009-07 Reliability of Protection Systems

Summary:

This project will ensure Protection Systems are designed and installed with redundancy where appropriate, such that if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards.

This project ranked #1 in Reliability Priority.

Standards affected:

New

Status:

This project has an initial draft of a SAR that was posted for comment January 20, 2009, through February 18, 2009. Comment responses have not been prepared, and the SAR has not been finalized. It is estimated this project will start in Q1 2013 and complete in Q1 2015.

2012 PENDING RESEARCH

Project 2010-01 Support Personnel Training

Summary:

This project will develop a standard that requires the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system.

This project ranked #15 in Reliability Priority.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2012 and complete in Q3 2014.

FUTURE CONSIDERATION, PENDING RESEARCH

Project 2010-02 Connecting New Facilities to the Grid

Summary:

22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.

Standards affected:

FAC-001, FAC-002

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2015 and complete in Q1 2017.

2014 PENDING RESEARCH

Project 2010-03 Modeling Data

Summary:

This project will consider merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. This project is related the Modeling Initiative, and supports a blackout recommendation.

Standards affected:

MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, PRC-013, PRC-015

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2014 PENDING RESEARCH

Project 2010-04 Demand Data

Summary:

This project will consolidate MOD-016 through MOD-020 into a single standard, with MOD-021 remaining as a separate standard. Requirements will be made be more specific to clearly identify the format for providing data, and modifications will made in support if previously received industry comments and regulatory directives.

Standards affected:

MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, MOD-021

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations

Summary:

This project addresses a key element for Bulk Electric System (BES) reliability: the correct performance of Protection Systems. Monitoring BES Protection System events to identify and correct the root causes of Misoperations will improve overall Protection System performance. The project will revise the definition of Misoperation and redraft the standard to be more clear and unambiguous.

This project ranked #7 in Reliability Priority.

Standards affected:

PRC-003, PRC-004

Status:

This project's SAR was finalized June 9, 2011. An initial draft of the standard was posted for comment from June 10, 2011 through July 11, 2011. A second draft is being prepared for posting and initial ballot. It is estimated this project will complete in Q3 2012.

2012 PENDING RESEARCH

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS

Summary:

This project will moodily the current standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and to ensure the reliability of the bulk power system. This project is related to the System Protection Initiative.

This project ranked #11 in Reliability Priority.

Standards affected:

PRC-012, PRC-014, PRC-016.

Status:

This project has a draft SAR, but it has not yet been posted for comment. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

DEVELOPMENT 2012

Project 2010-07 Generator Requirements at the Transmission Interface

Summary:

This project will develop any needed changes to the Reliability Standards to provide clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. The project will review standard for applicability, propose changes as necessary, and ensure that requirements that should apply to all generators, regardless of interconnection configuration, are implemented effectively.

This project ranked #12 in Reliability Priority, #13 in Practicality Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

FAC-001, FAC-003, PRC-004, others as needed

Status:

This project's SAR was finalized November 30, 2010. A draft set of standards was developed and posted from June 17, 2011 through July 17, 2011. Discussion and coordination between NERC, FERC , and the members of the project team are ongoing to ensure adequate coverage of all reliability needs. It is estimated this project will complete in Q1 2013.

FUTURE CONSIDERATION

Project 2010-08 Functional Glossary Model Revisions

Summary:

This project will ensure the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria are consistent.

Standards affected:

TBD

Status:

The Functional Model Working Group (FMWG) is responding to comments received from the first posting of the SAR. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

PENDING 2012

Project 2010-13.2 Phase 2 of Relay Loadability: Generation

Summary:

This project is being created in response to directives included in FERC Order 733. The project will draft a new standard to address generator relay loadability.

Standards affected:

New

Status:

This project's SAR was finalized November 1, 2010. Prior to the development of an initial draft, this project was moved to informal development in 2011. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

2014 PENDING RESEARCH

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

Summary:

This project is being created in response to directives includes in FERC Order 733. The project will draft a new standard to address protective relay operations due to power swings.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves

Summary:

This project will review the standard related to Control Performance and Disturbance control, and propose modifications or new standards as necessary. This project includes the testing and analysis of the new Balancing Authority ACE Limit (BAAL) metric, as well as the development of a continent-wide reserve policy to support BAL-01, BAL-002, and BAL-003.

This project ranked #1 in Time Sensitivity Priority, and #2 in Practicality Priority.

Standards affected:

BAL-001, BAL-002, New

Status:

This project was created by merging two existing teams. As such, there are two SARs associated with the project – one that was finalized on November 7, 2007, and one that was finalized on December 3, 2007. The combined effort was moved into informal development in 2011, but restarted to coordinate with project 2007-12 Frequency Response. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent

Summary:

This project will consider the Time Error Correction standard, AGC, standard, and Inadvertent Accounting standard to determine what changes, if any, are necessary to ensure the standards are clear and unambiguous. In some cases, the standard may no longer be necessary.

Standards affected:

BAL-004, BAL-005, BAL-006

Status:

This project is currently in informal development. Based on its priority, it has been identified in the 2012-2014 Work Plan to begin in Q2 2013 and complete in Q1 2015.

PENDING 2014

Project 2010-16 Definition of System Operator

Summary:

This project will remove the 'Generator Operator' from the current definition of System Operator. This will more accurately establish the responsibilities and expectations of the Generator Operator consistent with the current manner in which the bulk electric system is operated.

Standards affected:

TBD

Status:

A proposed SAR and revision to the definition of System Operator was posted for a 30-day formal comment period from November 3, 2010 through December 3, 2010. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

DEVELOPMENT 2012

Project 2010-17 Definition of Bulk Electric System

Summary:

This project will revise the definition of Bulk Electric System (BES) to address various Federal Energy Regulatory Commissions (FERC) concerns the definition must be modified to encompass all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. These concerns have been identified in FERC Order 693 issued on March 16, 2007 and in Order 743 issued on November 18, 2010 (Order 743). The project will also consider additional modifications (beyond those established in the regulatory directives) to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

This project ranked #10 in Reliability Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

Multiple

Status:

This project's SAR was finalized March 25, 2011. The draft definition has been posted twice, with the most recent posting done concurrently with an initial ballot from September 30, 2011, to October 02 2011. The first part of this project is expected to complete in Q1 of 2012. The remainder of this project is estimated to complete in Q2 2013.

2013 PENDING RESEARCH

Project 2012-01 Equipment Monitoring and Diagnostic Devices

Summary:

This project will consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures, with the intent of identifying potential equipment failures prior to their occurrence. This will provide more time to address failing systems and avoid or minimize long lead times.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

FUTURE CONSIDERATION

Project 2012-02 Physical Protection

Summary:

This project will develop standards for the safety and protection of essential equipment, buildings, and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-03 PRC-004 VSLs

Summary:

This project will address a problem identified in the VSLs of PRC-004. Currently, the VSLs do not address the case where a Corrective Acton Plan was developed or documented, but not fully implemented.

Standards affected:

PRC-004

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

2012 PENDING RESEARCH

Project 2012-04 Protection System Commissioning Testing

Summary:

This project will address a gap in reliability related to protection systems by creating a standard that requires commissioning testing. Improper or inadequate commissioning testing practices are a common cause of protection system Misoperation. However, the current set of approved NERC reliability standards does not address the testing of protection system equipment *before* that equipment is placed into initial service. Creating a commissioning standard would also enhance the effectiveness of the mandatory auditing program.

This project ranked #9 in Reliability Priority,

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2012 and complete in Q2 2014.

PENDING 2014

Project 2012-05 ATC Revisions - Order 729

Summary:

This project will respond to the remaining directives in Order 729.

Standards affected:

MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, MOD-030

Status:

This is a new project, which will require SAR development. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

2013 PENDING RESEARCH

Project 2012-06 Generator Capabilities

Summary:

This project will develop standards to ensure generator performance. The project should consider requirements that specify governor droop, frequency response, and reactive response.

This project ranked #6 in Reliability Priority

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2013 and complete in Q4 2014.

FUTURE CONSIDERATION

Project 2012-07 Obsolescence Review

Summary:

This project will create a standard that requires Generator and Transmission Owners periodically review their control and protection systems to identity and electronic, electrical, or mechanical devices that have become obsolete.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-08 Glossary Updates

Summary:

This project will respond to FERC directives to either create or modify the following definitions: Transmission Operator, Generator Operator, Bulk Power System, Reliable Operation, and Reliability Standard.

Standards affected:

TBD

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-09 IRO Review

Summary:

This project will perform the five-year review of several IRO standards, pursuant to NERC's Rules of Procedure.

Standards affected:

IRO-006, IRO-006-EAST, IRO-008, IRO-009, and IRO-010

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-11 FAC Review

Summary:

This project will perform the five-year review of several FAC standards, pursuant to NERC's Rules of Procedure.

Standards affected:

FAC-010, FAC-011, FAC-014

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-12 PER Review

Summary:

This project will perform the five-year review of several PER standards, pursuant to NERC's Rules of Procedure.

Standards affected:

PER-003, PER-004, PER-005

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-13 NUC Review

Summary:

This project will perform the five-year review of the NUC standard, pursuant to NERC's Rules of Procedure.

Standards affected:

NUC-001

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-14 Risk Analysis

Summary:

This project will develop a standard that requires entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist would include things like GMD, voltage collapse, and other extreme events.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-15 Flow Limited Paths

Summary:

The MOD-029 standard includes a provision that, if left uncorrected, could in certain scenarios result in significantly over-conservative ATC values being calculated. This project will address this problem.

Standards affected:

MOD-029

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE DEVELOPMENT

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements

Summary:

FRCC plans to convert the existing handbook document, "FRCC Requirements for Disturbance Monitoring Equipment" (revision dated June, 2006) into a new Regional Reliability Standard that complies with the requirements of NERC Reliability Standard, PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements.

Standards affected:

PRC-002-1

Status:

This Regional project is currently on "hold." Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-11 Disturbance Monitoring being classified as a "Project in Informal Development," FRCC staff will be re-evaluating the current status of the regional project to determine whether to proceed with the Regional Reliability Standard development or to revise the current FRCC Regional Criteria document "FRCC Requirements for Disturbance Monitoring Equipment."

FUTURE DEVELOPMENT

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems

Summary:

FRCC plans to convert the existing handbook document "FRCC Requirements for Analysis of Protection Misoperations & Corrective Actions Reporting" (revision dated October, 2003) into a new Regional Reliability Standard, that complies with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

Standards affected:

PRC-003-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2010-05.1 Protection Systems: Phase 1 (Misoperations) being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC has revised Regional Criteria documents ("FRCC Requirements for Analysis of Protection Misoperations and Corrective Actions Reporting," revision dateed December 2, 2010) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

FUTURE DEVELOPMENT

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program

Summary:

FRCC is developing a Regional Reliability Standard to provide last resort system preservation measures by implementing an Underfrequency Load Shedding (UFLS) program. Additional requirements may be needed due to FRCC peninsular geography and limited ties to the north. Operating experience and decades of studies by the FRCC and its predecessor reliability organizations have resulted in a well-developed UFLS program that is very resilient to frequency excursion resulting from severe and extreme contingencies. The standard development project will effectively use the proven high performance characteristics of the existing FRCC UFLS program and refine its requirements and coordination procedures to comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

Standards affected:

PRC-006-1

Status:

PRC-006-FRCC-1 FRCC Automatic Underfrequency Load Shedding Program has been approved by the FRCC Registered Ballot Body and the FRCC Board of Directors. Based on concerns identified by NERC standards staff and the pending Commission (FERC) approval of the NERC Continent-Wide Reliability Standard PRC-006-1 Automatic Underfrequency Load Shedding and associated Regional variances, the Regional project has been placed on “hold.” The FRCC has since revised Regional Criteria documents (FRCC Automatic Underfrequency Load Shedding Program, revision date: April 7, 2011) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

FUTURE DEVELOPMENT

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions

Summary:

FRCC is developing a standard to establish "ride through" requirements for generators in the FRCC Region with respect to temporary grid voltage or frequency deviations from their normal range. The Standard should address time duration limits for operation of generator protection for

1) frequencies outside of the 59.5 - 60.5 hertz range,
2) voltages outside of the 95% - 105% range, and
3) generator stator current overloads.

The Standard should address exemption criteria and mitigation measures available for resolving apparent conflicts between generator capabilities and the coordination requirements. Considerable knowledge of grid frequency and voltage excursions and the time limited capabilities of generators to sustain these conditions has been gained through operating experience and previous reliability studies. This standards development project should effectively use this knowledge to define coordination requirements and procedures that comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

Standards affected:

PRC-024-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-09 Generator Verification being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC is actively revising Regional Criteria documents (FRCC Generator Coordination Requirements) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

2012 DEVELOPMENT

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program

Summary:

The purpose of this Standard is to establish the requirements for NPCC and its members to operate and maintain a coordinated Regional Underfrequency load shedding (UFLS) program. The NPCC's UFLS program will meet the requirements contained in NERC standards, and provide those entities to which it is applicable the guidance necessary to implement it. This standard will also mandate that coordination with neighboring Regional Underfrequency load shedding programs be developed when necessary. The unique character, dispersion, sensitivity and density of the NPCC regional loads emphasize the need for this Standard.

The NPCC regional UFLS standard shall apply to all applicable entities within the Region and sub-regional areas that are both synchronous and asynchronous to the Eastern Interconnection. Quebec UFLS has different parameters, and these are included in the standard and fully coordinated within the Region.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. NPCC expects to complete the drafting of this standard in 2011 and conduct a ballot of stakeholders in the first quarter of 2012. Submission to the NERC Board of Trustees and subsequent filing with FERC is expected to occur in 2012.

FUTURE DEVELOPMENT

PRC-012-NPCC-1 — Special Protection Systems

Summary:

To support and enhance bulk power system reliability, this Standard will establish the criteria for the minimum design objectives and practices for special protection systems (the purpose of which are to detect abnormal system conditions, and take corrective actions other than the isolation of faulted elements to maintain the stability and security of the bulk power system). This Standard will also establish the requirements for close coordination between system planning, design, operating, maintenance and protection functions to ensure that the impacts of special protection system operations do not result in a significant adverse impact.

The proposed Standard will describe the requirements for the design and approval of Special Protection Systems and the technical criteria required to support its implementation. The Standard will also identify the need for close coordination among various parties to ensure that the Special Protection Systems are implemented correctly, and triggers and resulting actions are made known and communicated in an on-line database.

Standards affected:

PRC-012-0

Status:

This Regional project is currently on “hold” pending the completion of the NERC Reliability Standard Development Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS, and the outcome of the work by the NERC SPCS on the definition of SPS.

2011 DEVELOPMENT

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Real Power capability to support NERC Reliability Standard MOD-024. The objective of the regional standard is to ensure accurate information on generator gross and net Real (MWs) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-024-1

Status:

This Regional standard has been approved by the Reliability*First* Board. Currently, VRFs and VSLs are in development. Reliability*First* expects to complete the drafting of the VRFs and VSLs in 2011, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2011 DEVELOPMENT

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Reactive Power capability to support NERC Reliability Standard MOD-025. The objective of this standard is to ensure that accurate information on generator gross and net Reactive (MVAR) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-025-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011 and subsequent filing with the FERC is expected to occur in 2012.

2011 DEVELOPMENT

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for Disturbance monitoring and reporting to support NERC Reliability Standard PRC-002.

Standards affected:

PRC-002-1

Status:

Reliability*First* is currently working on the technical justification for the locational requirements for DME equipment. This Regional standard has been approved by the Reliability*First* Board. Reliability*First* expects submission of this standard to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2012 DEVELOPMENT

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency and assist in the recovery of frequency following underfrequency events, providing last resort system preservation measures. The standard goes beyond the NERC PRC-006-1 standard and prescribes with more certainty aspects that the Planning Coordinator's UFLS program must contain, further details on certain procedural matters with respect to how islands are addressed, and assessment of UFLS program implementation as well as program design. This standard also attempts further consolidating requirements of the Reliability*First* legacy underfrequency load shedding programs, permitting retirement of legacy documents to ensure appropriate coordination among the Reliability*First* legacy regional UFLS programs.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur later in 2012.

2012 DEVELOPMENT

PRC-012-RFC-1 — Special Protection System Requirements

Summary:

To purpose of the standard is to establish Reliability*First* requirements for the review, development and application of Special Protection Systems (SPS).

Standards affected:

PRC-012-0

Status:

This Regional project is currently in the initial drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur early in 2013.

2011 DEVELOPMENT

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements

Summary:

The SERC UFLS Standard: PRC-006-SERC-1 ("SERC UFLS Standard") was developed to provide regional UFLS requirements to entities in SERC. UFLS requirements have been in place at a continent-wide level and within SERC for many years prior to implementation of federally mandated reliability compliance standards in 2007.

In 2008, SERC commenced work on PRC-006-SERC-1. NERC also began work on revising PRC-006-0 at a continent-wide level. The SERC standard has been developed to be consistent with the continent-wide UFLS standard.

PRC-006-1 clearly defines the roles and responsibilities of parties to whom the standard applies. The standard identifies the Planning Coordinator ("PC") as the entity responsible for developing UFLS schemes within their PC area. This regional standard PRC-006-SERC-1 adds specificity not contained in the NERC standard for development and implementation of a UFLS scheme in the SERC Region that effectively mitigates the consequences of an underfrequency event.

Standards affected:

PRC-006-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011, and subsequent filing with FERC is expected to occur in 2012.

2012 DEVELOPMENT

PRC-006-SPP-1 — Under Frequency Load Shedding

Summary:

PRC-006 (Development and Documentation of Regional UFLS programs) has been identified by NERC as one of the Regional "Fill-in-the Blank" Standards. At a minimum, the requirements developed in this standard need to meet the requirements for the Regional Program as identified in NERC's PRC-006-0. Operating experience and regional studies have resulted in a well developed UFLS program that is very resilient to frequency excursions resulting from severe and extreme contingencies. This standards development effort intends to effectively use the proven high performance characteristics of the existing SPP UFLS program and refine its requirements and coordination procedures through an open process as described in the SPP Standard Development Process Manual.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. SPP expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection

Summary:

IRO-006-TRE-1 was developed to support bulk power system reliability by providing enforceable requirements associated with certain existing non-routine ERCOT congestion management procedures. This Regional Standard addresses the FERC directive in Paragraph 964 of Order 693, where FERC found that the ERCOT transmission loading relief procedures were superior to the national standard, and directed the ERO to provide Reliability Standards including Requirements, Measures and Levels of Non-Compliance corresponding to the ERCOT procedures for application in the ERCOT Region.

Standards affected:

IRO-006-5 (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of IRO-006-5.)

Status:

This Regional Standard was approved by the Texas RE Board of Directors on June 28, 2011, and it will be submitted to the NERC Board of Trustees in November 2011. Subsequent filing with FERC is expected to occur in 2012.

2011 DEVELOPMENT

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region

Summary:

This Regional Standard is intended to support reliability by ensuring adequate primary frequency response performance in the ERCOT Interconnection. The standard addresses frequency response at the Interconnection level, as well as by individual generating units and facilities. Specific maximum governor droop and deadband settings are provided, along with primary frequency response performance standards (initial and sustained) that allow actual unit-specific performance to be measured.

In 2002, NERC approved a regional difference for ERCOT that made it exempt from Requirement R2 in BAL-001-0 (CPS2), because of ERCOT's lack of synchronous connection to other control areas and the nature of the ERCOT energy market. FERC approved the ERCOT regional difference, finding that ERCOT's practice of (a) determining the minimum frequency response needed for reliability, and (b) requiring generators to have specific governor droop, to be a more stringent practice than Requirement R2 in BAL-001-0. FERC directed NERC to file a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section 5 of the ERCOT protocols. This Regional Standard is responsive to that directive.

Standards affected:

BAL-001-0.1a (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of the continent-wide standard.)

Status:

This project has been approved by the Texas RE Board of Directors, with expected submission to the NERC Board of Trustees in 2011 and subsequent filing with FERC to occur in 2012.

2012 DEVELOPMENT

BAL-002-WECC-1 — Contingency Reserves

Summary:

On Oct. 21, 2010, FERC found that BAL-002-WECC-1 did not meet the statutory criteria for approval and remanded the regional standard to NERC/WECC for further modification (RM09-15-000; Order 740). FERC held that BAL-002-WECC-1's less stringent requirements had not been supported by the technical data provided.

On remand, the Commission instructed WECC to modify the regional reliability standard to include a number of specific items contained in Order 740. This Request is submitted with the specific and narrow purpose of addressing only those issues mandated for modification in the October 2010 Oder 740.

Standards affected:

BAL-002-WECC-1

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2012 DEVELOPMENT

BAL-004-WECC-1 — Automatic Time Error Correction

Summary:

In the order approving BAL-004-WECC-1 the FERC directed WECC to make several clarifying modifications to the standard. FERC directed WECC to use the FERC-approved Process for Developing and Approving WECC standards to make these clarifying modifications

In addition, the WECC staff has identified the opportunity to make additional modifications to the existing standard to clarify the intent without changing the requirements.

There is also confusion regarding the R3 requirement that the ACE used for NERC reports shall be the same ACE as the AGC operating mode in use. This seems to conflict with the NERC response to NOPR comments that entities may use ATEC ACE for control but should use Raw ACE for reporting. WECC is developing a proposed regional variance to BAL-001-0.1a to address this apparent conflict.

Standards affected:

BAL-004-WECC-1
BAL-001-0.1a

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

VAR-001-WECC-1 — Voltage and Reactive Control

Summary:

The current draft has been converted from a Standard into a Regional Variance to the NERC VAR-001-2 Standard. The format incorporates the NERC Standard into the document with minor additions to address the scope of the variance. The regional variance specifics are included as Section E of the proposed document (see hyperlink above), and in this case, are intended to replace NERC VAR-001-2 requirements R3 and R4 as noted at the beginning of Section E.

The purpose of this regional variance to a NERC Reliability Standard is to ensure that voltage levels are within limits in real time to protect equipment and the reliable operation of the Western Interconnection. The "Rules of Procedure of the North American Electric Reliability Corporation" (Appendix 3A, page 31) permits the development of a regional variance to a NERC reliability standard on an Interconnection-wide basis when the Regional Reliability Organization has valid justification and when the variance is not inconsistent with or less stringent than the NERC Reliability Standard. The variance is an alternative method for obtaining the same reliability objective as the continent standard and is typically necessitated by a physical difference. A variance is embodied within a reliability standard and as such, if adopted by NERC and approved by the electric reliability organization governmental authority, shall be enforced within the applicable Regional Entity(ies) pursuant to delegated authority.

Standards affected:

VAR-001-2

Status:

This Regional project has been approved by the WECC Board of Directors. WECC expects to submit the draft for the mandatory NERC 45-day comment period in the near future, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

EXHIBIT B

Industry Comments on the Draft *Reliability Standards Development Plan: 2012–2014*

Current Reliability Standards Development Plan

2011 Project for Updating Reliability Standards Development Plan: 2012-2014 Related Files - In Development

▼ VIEW

Number	Title/Summary	Date	
	2012-2014 Reliability Standards Development Plan Final Draft - BOT Approved November 3, 2011	11.03.2011	pdf(7)
	2012-2014 Reliability Standards Development Plan Final Draft - for BOT Consideration	10.19.2011	pdf(6)
	2012-2014 Reliability Standards Development Plan - Approved by the SC	10.19.2011	pdf(5)
	Comments Received and Responses on the 2012-2014 Reliability Standards Development Plan	10.19.2011	pdf(4)
	2012-2014 Reliability Standards Development Plan Draft - Posted for Comment	09.12.2011	pdf(3)
	2012 Project Prioritization Tool - Approved	08.26.2011	pdf(2)
	2012 Project Prioritization Tool Instructions - Approved	08.26.2011	pdf(1)

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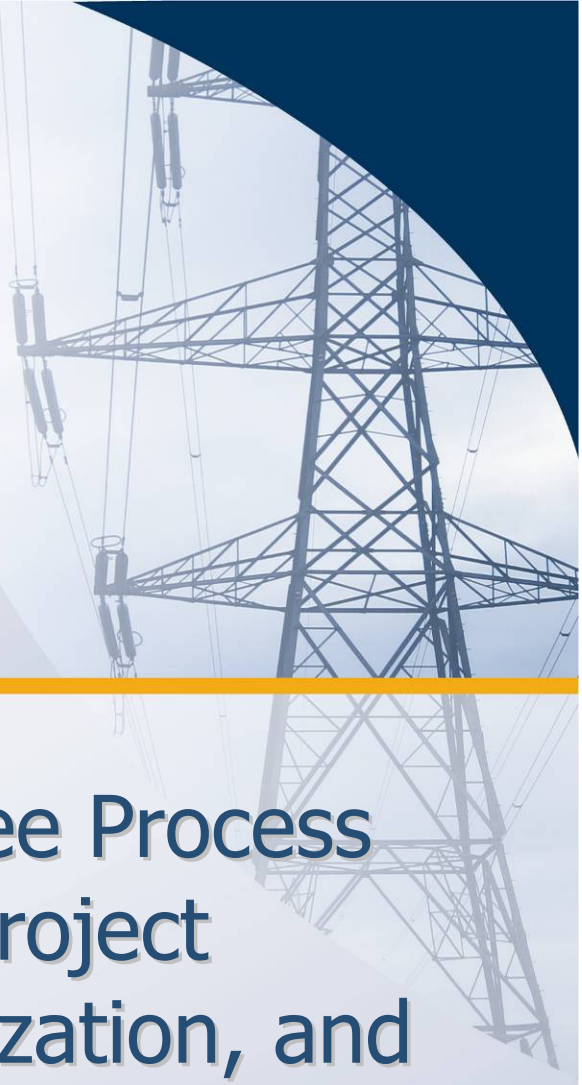

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. Developing Projects Schedules

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

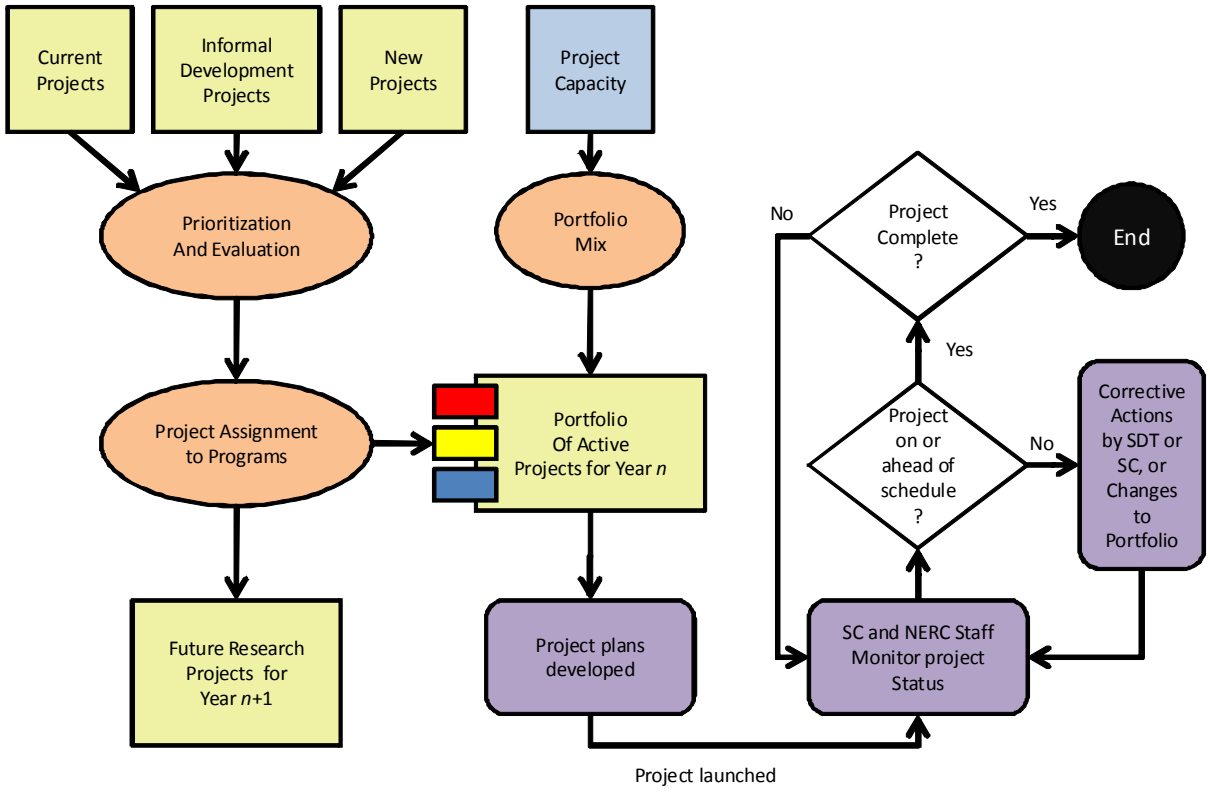
9. Monitoring Projects

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Attachment B: Prioritization Tool

STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	SUMMARY						7	25	3	3
									Cells with this color are blank and need a value entered.				Sort	Sort	Sort	Sort	Sort					
TOTAL RANKING	Project Number and Name	Short Description	Addresses an ERO Strategic Priority (to be completed by NERC Staff) 50 = Yes 0 = No	Addresses a reliability risk not covered by an existing standard 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	Improves one or more existing standards: 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	Cost of Implementation The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Cost of Administration The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Time Sensitivity (to be competed by NERC Staff) Number of months until due date, if any	Addresses compliance issues from NERC Staff or Stakeholders 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	Other Practicality Concern (Explanation for the rating must be indicated in the column to the right) (0 to 50)	Explanation	Reliability Score (0 - 250)	Cost Consideration Score (0 - 100)	Time Sensitivity Score (0 - 100)	Practicality Score (0 - 150)	Total Score (0-600)	TOTAL RANKING	Reliability Ranking	Cost Consideration Ranking	Time Sensitivity Ranking	Practicality Rnaking
1	Project 2010-13.2 Phase 2 of Relay Loadability: Generation	Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010											0	0	0	0	0	1	1	1	1	1
2	Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings												0	0	0	0	0	2	2	2	2	2
3	Project 2010.05.2 Phase 2 of Protections Systems: SPS and RAS	Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional udpates to PRC-004 as well.											0	0	0	0	0	3	3	3	3	3
4	Project 2010-16 Definition of System Operator												0	0	0	0	0	4	4	4	4	4
5	Project 2007-17 Protection System Maintenance & Testing	Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs; PRC-011-0 — UVLS System Maintenance and Testing; and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn.											0	0	0	0	0	5	5	5	5	5
6	Project 2007-06 System Protection Coordination	Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.											0	0	0	0	0	6	6	6	6	6
7	Project 2007-12 Frequency Response	Requires entities to provide data needed to model each interconnection's frequency response.											0	0	0	0	0	7	7	7	7	7
8	Project 2010-05.1 Phase 1 of Protection Systems: Misoperations	Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not incude SPS and RAS.											0	0	0	0	0	8	8	8	8	8
9	Project 2008-06 Cyber Security - Order 706	This is the second phase (Phase 2) of Project 2008-06 Cyber Security Order 706. The project requires modifications to CIP-002 thru CIP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.											0	0	0	0	0	9	9	9	9	9
10	Project 2010-07 Transmission Requirements at the Generator Interface	This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.											0	0	0	0	0	10	10	10	10	10
11	Project 2009-01 Disturbance and Sabotage Reporting	This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.											0	0	0	0	0	11	11	11	11	11

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N) Cells with this color are blank and need a value entered.	SUMMARY Sort	Sort	Sort	Sort	Sort		7	25	3	3
TOTAL RANKING	Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Total Score (0-600)**	TOTAL RANKING	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Rnaking**
1													**0**	**0**	**0**	**0**	**0**	1	2	2	3	4
2													**0**	**0**	**0**	**0**	**0**	2	6	6	6	1
3													**0**	**0**	**0**	**0**	**0**	3	3	3	4	5
4													**0**	**0**	**0**	**0**	**0**	4	1	1	2	23
5													**0**	**0**	**0**	**0**	**0**	5	4	4	29	3
6													**0**	**0**	**0**	**0**	**0**	6	7	7	7	6
7													**0**	**0**	**0**	**0**	**0**	7	15	11	10	7
8													**0**	**0**	**0**	**0**	**0**	8	5	5	5	24
9													**0**	**0**	**0**	**0**	**0**	9	13	19	15	10
10													**0**	**0**	**0**	**0**	**0**	10	16	13	11	8
11													**0**	**0**	**0**	**0**	**0**	11	21	16	13	9
12													**0**	**0**	**0**	**0**	**0**	12	27	25	16	2
13													**0**	**0**	**0**	**0**	**0**	13	10	9	8	25
14													**0**	**0**	**0**	**0**	**0**	14	11	10	9	26
15													**0**	**0**	**0**	**0**	**0**	15	22	17	1	15
16													**0**	**0**	**0**	**0**	**0**	16	12	18	14	28
17													**0**	**0**	**0**	**0**	**0**	17	17	14	23	12
18													**0**	**0**	**0**	**0**	**0**	18	18	15	12	27
19													**0**	**0**	**0**	**0**	**0**	19	25	21	22	11
20													**0**	**0**	**0**	**0**	**0**	20	8	8	33	36
21													**0**	**0**	**0**	**0**	**0**	21	23	28	18	17
22													**0**	**0**	**0**	**0**	**0**	22	19	23	21	30
23													**0**	**0**	**0**	**0**	**0**	23	28	26	17	16
24													**0**	**0**	**0**	**0**	**0**	24	9	12	34	37
25													**0**	**0**	**0**	**0**	**0**	25	20	24	27	32
26													**0**	**0**	**0**	**0**	**0**	26	14	20	35	38
27													**0**	**0**	**0**	**0**	**0**	27	30	30	26	13
28													**0**	**0**	**0**	**0**	**0**	28	24	29	38	14
29													**0**	**0**	**0**	**0**	**0**	29	32	31	19	29
30													**0**	**0**	**0**	**0**	**0**	30	26	22	36	39
31													**0**	**0**	**0**	**0**	**0**	31	29	27	37	40
32													**0**	**0**	**0**	**0**	**0**	32	39	39	20	18
33													**0**	**0**	**0**	**0**	**0**	33	33	32	39	41
34													**0**	**0**	**0**	**0**	**0**	34	34	33	40	42
35													**0**	**0**	**0**	**0**	**0**	35	36	35	41	21
36													**0**	**0**	**0**	**0**	**0**	36	35	34	32	35
37													**0**	**0**	**0**	**0**	**0**	37	43	43	24	19
38													**0**	**0**	**0**	**0**	**0**	38	37	36	42	43
39													**0**	**0**	**0**	**0**	**0**	39	38	37	43	44
40													**0**	**0**	**0**	**0**	**0**	40	44	44	25	31
41													**0**	**0**	**0**	**0**	**0**	41	31	38	44	45
42													**0**	**0**	**0**	**0**	**0**	42	41	41	30	20
43													**0**	**0**	**0**	**0**	**0**	43	46	46	28	33
44													**0**	**0**	**0**	**0**	**0**	44	45	45	31	34
45													**0**	**0**	**0**	**0**	**0**	45	40	40	45	22
46													**0**	**0**	**0**	**0**	**0**	46	42	42	46	46

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Standards Development Plan

2012-2014

DRAFT September 12, 2011

RELIABILITY | ACCOUNTABILITY

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Table of Contents

Table of Contents ii

Chapter 1 – Executive Summary 1

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards 2

Chapter 3 - General 4

Status Updates 4

2011 Reorganization and Hiring 4

Completed Standards Development Projects 4

Progress on Version Zero Standards 5

Interpretations of Reliability Standards 6

Progress on Regulatory Directives 6

Rapid Development and Rapid Revision Projects 6

Challenges facing Standards 7

Five-Year Review Obligation 7

Product Quality 7

Standards Program Throughput 7

Conclusion 8

Chapter 4 – Project Development Overview 9

Project Prioritization and Plan Development 9

Project Implementation 10

Chapter 5 – Project Work Plan Summary 12

Projects for 2012-2014 12

Projects for 2015 and Beyond 15

Appendix 1 - Prioritization 17

Appendix 2 – Work Plan 38

Appendix 3 – Project Summaries 40

Project 2006-06 Reliability Coordination 41

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003 42

Project 2007-02 Operating Personnel Communication Protocols 43

Project 2007-03 Real-time Transmission Operations 44

Project 2007-06 System Protection Coordination 45

Project 2007-07 Vegetation Management 46

Project 2007-09 Generator Verification 47

Project 2007-11 Disturbance Monitoring 48

Project 2007-12 Frequency Response 49

Project 2007-17 Protection System Maintenance and Testing 50

Project 2008-01 Voltage and Reactive Planning and Control 51

Project 2008-02 Undervoltage Load Shedding 52

Project 2008-06 Cyber Security – Order 706 53

Project 2008-12 Coordinate Interchange Standards 54

Project 2009-01 Disturbance and Sabotage Reporting 55

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities 56

Project 2009-03 Emergency Operations 57

Project 2009-04 Phasor Measurements 58

Project 2009-05 Resource Adequacy Assessments 59

Project 2009-07 Reliability of Protection Systems 60

Project 2010-01 Support Personnel Training 61

Project 2010-02 Connecting New Facilities to the Grid 62

Project 2010-03 Modeling Data 63

Project 2010-04 Demand Data 64

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations 65

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS 66

Project 2010-07 Generator Requirements at the Transmission Interface 67

Project 2010-08 Functional Glossary Model Revisions 68

Project 2010-13.2 Phase 2 of Relay Loadability: Generation 69

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings 70

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves 71

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent 72

Project 2010-16 Definition of System Operator 73

Project 2010-17 Definition of Bulk Electric System 74

Project 2012-01 Equipment Monitoring and Diagnostic Devices 75

Project 2012-02 Physical Protection 76

Project 2012-03 PRC-004 VSLs 77

Project 2012-04 Protection System Commissioning Testing 78

Project 2012-05 ATC Revisions - Order 729 79

Project 2012-06 Generator Capabilities 80

Project 2012-07 Obsolescence Review 81

Project 2012-08 Glossary Updates 82

Project 2012-09 IRO Review 83

Project 2012-11 FAC Review 84

Project 2012-12 PER Review 85

Project 2012-13 NUC Review 86

Project 2012-14 Risk Analysis 87

Project 2012-15 Flow Limited Paths 88

Chapter 1 – Executive Summary

This document provides an update on the status of Standards Development work at NERC, as well as a forecast of work being planned for 2012-2014. The document has several sections:

- Chapter 1 contains this Executive Summary
- Chapter 2 contains introductory remarks from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards
- Chapter 3 provides a general update on Standards Activities in 2011
- Chapter 4 provides a summary of the development of this document and he implementation of projects in general.
- Chapter 5 provides a summary of the Work Plan
- Appendix 1 shows the prioritization scores used in the development of the Work Plan
- Appendix 2 shows the Work Plan in Gantt chart form
- Appendix 3 provides brief summaries of all the projects proposed within the Work Plan

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards

<to be added>

Chapter 3 - General

This is the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The Plan provides several items of information to its readers:

- Information regarding the state of Standards at NERC, changes in Standards, and challenges facing Standards in the years to come
- Status updates regarding standards and related projects currently in development
- A forecast of Standards Development work scheduled for the next three years
- An overview of the process used to prioritize work and assign resources to Standards development projects

NERC Standards staff endeavors to maintain a complete, updated set of Standards information on the NERC website, which can be found at www.nerc.com.

The Standards Program continues to manage its ongoing load of work in order to move toward the target work load levels identified in early 2011. Progress is being made in this area; however, some projects expected to be completed in 2011 are still in active development. This is largely due to unforeseen complications regarding achieving consensus and managing overall product quality.

Status Updates

2011 Reorganization and Hiring

In early 2011, NERC performed a minor reorganization of the Standards staff in order to ensure appropriate focus on key areas. A new position, Director of Regulatory Initiatives, was established to ensure overall coordination between NERC and its various regulators. NERC also established a Manager of Standards Information, with the primary focus of ensuring that information posted on the NERC website accurately reflects the current body of Standards and associated compliance information. Additional staff was hired into the Standards Process and Standards Development teams to better support the volume of work ongoing within the Standards Program.

Completed Standards Development Projects

In 2011, NERC completed development of the following projects.

- 2006-02 Assess Transmission and Future Needs (BOT approved, awaiting filing)
- 2007-04 Certifying System Operators (filed with regulators)
- 2007-07 Vegetation Management [**projection as of September 2011**]

- 2008-06 Cyber Security Order 706 Version 4 (filed with regulators)
- 2009-06 Facility Ratings (filed with regulators)
- 2010-10 FAC 729 (filed with regulators)
- 2010-11 TPL Table 1 Footnote B (filed with regulators)
- 2010-13 Relay Loadability Order Phase 1 (filed with regulators)

Progress on Version Zero Standards

The set of Version 0 standards included 110 standards. Of the 110 standards, NERC withdrew three, and the Federal Energy Regulatory Commission (FERC) ruled on the remaining 107 as follows:

- 27 were approved without any directives to modify the associated standard
- 56 were approved with directives to modify the associated standard
- 24 were not approved, pending provision of additional information.

Of the 56 that were approved with directives, progress in revising those standards includes:

- 7 have been approved by FERC
- 9 have been submitted and are pending FERC approval
- 18 are associated with projects under active development
- 22 are associated with projects that are either inactive or not started

Of the 24 that were not approved pending submittal of additional information, progress in revising those standards includes:

- 8 have been approved by FERC
- 4 have been submitted and are pending FERC approval
- 2 are associated with projects under active development
- 10 are associated with projects that are either inactive or not started

As of September 1, 2011, there are 103 Reliability Standards with 1220 requirements that are mandatory and enforceable in the United States.[1]

[1] The data included in this paragraph does not include Regional Reliability Standards.

Interpretations of Reliability Standards

Entities required to comply with a reliability standard have the right to request a formal interpretation of a requirement in a standard. Interpretation projects generally are narrower in scope than other standards projects, but like standards, interpretations are drafted by a drafting team and posted for industry review and ballot. From 2006 to 2011, NERC processed 43 interpretation requests. In addition, NERC received a number of requests for interpretation that were absorbed into standards development projects because drafting teams could not prepare the interpretations without expanding the requirements of the approved standard.

Progress on Regulatory Directives

Since NERC became the Electric Reliability organization (ERO), FERC has issued 44 Orders containing approximately 655 directives related to NERC Reliability Standards. Of the approximately 655 directives issued since 2007, NERC has completed projects associated with approximately 44% of these directives and continues to make substantial progress in addressing the remaining directives focusing first on those that have the greatest impact on reliability.

A significant number of the directives ordered by FERC for implementation by NERC (as the FERC-approved ERO) specify that NERC submit or modify a Reliability Standard that addresses a specific matter, as permitted under Section 215(d)(5) of the Federal Power Act. Other directives order NERC to make changes in its procedural rules. Still other directives order NERC to consider the views of various commenters when NERC next revises a particular Reliability Standard.

NERC processes these various types of directives consistent with its Rules of Procedure (including Appendices 3A- Standard Processes Manual and 3C Procedure for Coordinating Reliability Standards). Specifically, when a regulatory order or rule is issued, that order is reviewed and any directives within the order related to standards development are added to the NERC Standards Issues Database and categorized. NERC then seeks to associate each directive with a specific standard. Projects and the associated Standards, along with the associated regulatory directives, are then prioritized for revision using the prioritization process described elsewhere in this document.

In 2011, NERC developed and filed the first NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. This report is to be filed annually with FERC on or before March 31 of each year consistent with in accordance with Section 321.6 of the NERC Rules of Procedure (“Rule 321”) that was approved by the FERC on March 17, 2011. The progress against the directives issued is outlined in the aforementioned report.

Rapid Development and Rapid Revision Projects

NERC’s Standards Committee (SC) has tentatively identified two ways to accelerate project development while staying within the boundaries established in the Standard Processes Manual. Both approaches are consistent with the original vision of standards development when the ERO was being developed.

The first, called "Rapid Development," utilizes a small team of professionals to draft a standard over a short, but intensive period of time. The standard is then submitted with its associated SAR and the project moves directly into the first formal comment phase. Under this model, it may be possible to develop and ballot a standard within a period less than a year. The SC is evaluating the approach as part of Project 2010.05.1 Phase 1 of Protection Systems: Misoperations. Initial results have provided useful lessons learned, including the need to carefully select members of the small team to ensure not just subject matter expertise, but balance of interests as well.

The second approach, called "Rapid Revision," takes a similar approach, but is focused on dealing with concerns identified during the Interpretation process. If an interpretation drafting team identifies simple modifications to a standard that can more effectively address an interpretation request than an interpretation can alone, the team may elect to make such changes and submit them with an associated SAR. Following SC review, the changes may move directly to comment and ballot. This approach is being tested with project 2011-INT-01 Interpretation of MOD-028-1 R3.1 for Florida Power and Light.

Challenges facing Standards

Five-Year Review Obligation

As part of its ANSI accreditation, NERC has committed to review each of its standards for modification once every five years. While not giving the appearance of being onerous, this obligation has proven challenging to meet. 2012 marks the fifth year since NERC's first set of standards became mandatory and enforceable in the United States; many of those standards are now due for that five-year review. However, the work load of the ERO remains high, and prioritization has resulted in a deferral f the work required for these five-year reviews except when already associated with a project of reliability value.

Product Quality

As NERC's and the industry's experience with standards has continued, it has become increasingly clear that minor problems with the quality of standards can have significant repercussions when it comes to clarity and compliance. NERC has undertaken efforts to improve the quality of its work products, and will continue to do so in 2012. Steps being taken include creating technical writer positions, enhanced training for staff, and developing additional internal quality assurance processes.

Standards Program Throughput

One continuing challenge is the ability to not only produce quality products, but to do so consistently and regularly. While in some cases limited by necessity due to the scarcity of industry resources available in the workforce, the Standards Program continues to look for ways to improve the efficiency of its processes and its ability to demonstrate tangible progress in standards development on a regular basis. In 2012, Standards staff will be implementing enhanced document management capabilities, as well as portfolio-level project controls to ensure optimal use of resources and overall consistency of throughput. This more global

"portfolio view" was used to in part to develop this Plan, but additional improvements are expected in 2012 as well. As such, it should be noted that this, in addition to the normal variables associated with consensus-based product development, may lead to changes in the schedules used to develop the forecasts within this document

Conclusion

The Standards Program continues to make changes to improve its overall effectiveness, and looks forward to additional improvements in 2012. The SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity, all while making sure to consider the implications of cost. NERC believes this approach correctly balances the needs of the industry with the public interest, and will continue to work with the industry to ensure the continued protection of reliability in North America.

Chapter 4 – Project Development Overview

Project Prioritization and Plan Development

This year, NERC continued use of the Prioritization Tool (the Tool) developed by the Standards Committee (SC) in late 2010 and early 2011 to help determine how best to assign resources and perform work. Following the finalization of the 2011-2013 Plan, the Standards Committee's Process Subcommittee (SCPS) began to work on improving the Tool for use in the development of the 2012-2014 Plan.

Similar to last year, the Tool utilizes a simple scoring mechanism to identify key considerations for use in determining project priority. Revisions were made to the tool in response to comments received during the development of the 2011-2013 Plan. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (as there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability, and trial testing of a new metric that accounts for "cost considerations." In addition, the tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the SC to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources.

During the month of July 2011, NERC solicited the industry at-large for additional projects for consideration in the 2012-2014 Plan. NERC received nine submissions, resulting in the creation of six new projects. NERC created one project to account for the remaining Order 729 directives yet to be resolved, and one project to account for issues with the MOD-029-01 standard that will need to be addressed at some point in the future. NERC created four additional projects to account for projects to modify standard based on NERC's five-year review obligation, as identified in its Rules of Procedure.

In August, the SC began reviewing each of these projects, assigning them various scores based on input from constituents within their respective segments. NERC staff assembled the results in September, and an initial Prioritization and Work Plan was approved for posting at the September meeting of the SC. This Work Plan assumed an overall throughput capability of thirteen projects in development concurrently, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.

- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The Work Plan identified each project and the amount of work associated with it, then allocated projects in their respective areas in order or priority as resources came available. Some projects were identified that needed additional research, and were scheduled for initiation with sufficient time to allow such work to be completed. Additionally, some projects require specific expertise. To the extent such needs were identified, that expertise was managed to ensure the volume of work did not exceed the resource capacity. For example, projects related to protection systems were generally not started until another project related to protection systems was completed.

This Work Plan, along with the prioritization itself and this document in draft form, were posted for industry comment in September. Comments were received and considered at the October 2011 SCPS meeting; the final prioritization and Plan was approved by the SC at its October meeting. The Plan was presented to NERC' Board of Trustees and was approved at the Board's November meeting.

Project Implementation

Standards development projects at NERC proceed through a specific set of steps, identified in NERC's Standard Processes Manual. In general, the process can be summarized as follows:

- Initiation – projects are identified, and simple problem statements are developed. These problem statements are used to assist in the overall project prioritization effort described above.
- Planning – projects are further developed to determine their scope and merits. The drafting of a formal Standards Authorization Request (SAR) occurs in this step, as well as the development of communication plans if deemed to be necessary. In some cases, this step may occur concurrently with the initial steps of Execution and Control.
- Execution and Control – once the SC has approved a project for moving into this phase, standards or other work products are produced and the project begins moving forward in earnest. A detailed project schedule is developed, and standards are drafted, posted for comment, and balloted, culminating in review by NERC's Board of Trustees for adoption.
- Closing – Following action by NERC's Board of Trustees, the project is reviewed and analyzed for "lessons learned." Public information is updated as necessary, and any associated regulatory filings are made.

For more information on the specific details of each step in the implementation of projects to develop NERC Reliability Standards, readers are directed to various resources posted at the NERC Standards Resources page:

http://www.nerc.com/commondocs.php?cd=2

Chapter 5 – Project Work Plan Summary

This chapter summarizes the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The following is based on the Standards Committee's Prioritization of Projects (included as Appendix 1) and the associated staff-developed Work Plan (included as Appendix 2). A detailed summary of projects is included as Appendix 3.

Projects for 2012-2014

NERC intends to continue development of the following projects in 2012. These are Active projects, and are expected to continue until completion. Although there are other projects that ranked higher this year than some of these projects, the Standards Committee believes that the industry has committed to completing these projects, and given that the workload is reaching a manageable size, moving any of these projects into informal development would be counterproductive.

The projects below have been color coded, to indicate their focus area (Reliability, Time Sensitivity, or Practicality). While most projects impact al three of these areas in some way, this is intended to illustrate the primary consideration driving its consideration.

Existing Active Projects:

- 2006-06 Reliability Coordination. This project ranked #13 in Reliability Priority.
- 2007-02 Operating Personnel Communication Protocols. This project ranked #5 in Reliability Priority.
- 2007-03 Real-time Transmission Operations. This project ranked #4 in Practicality Priority.
- 2007-06 Protection System Coordination. This project ranked #4 in Reliability Priority.
- 2007-07 Vegetation Management.
- 2007-09 Generator Verification.
- 2007-12 Frequency Response. This project ranked #10 in Reliability Priority, and was tied for #2 in Time Sensitivity Priority.
- 2007-17 Protection System Maintenance and Testing. This project ranked #3 in Reliability Priority.
- 2008-06 Cyber Security – Order 706. This project ranked #1 in Reliability Priority.
- 2009-01 Disturbance and Sabotage Reporting. This project ranked #7 in Reliability Priority.
- 2010-05.1 Phase 1 of Protection Systems: Misoperations. This project ranked #8 in Reliability Priority.
- 2010-07 Generator Requirements at the Transmission Interface. This project ranked #13 in Practicality Priority, and was tied for #2 in Time Sensitivity Priority.
- 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves. This project ranked #1 in Time Sensitivity Priority, and #2 in Practicality Priority.

- 2010-17 Definition of Bulk Electric System. This project ranked #10 in Reliability Priority, and was tied for #2 in Time Sensitivity Priority.

NERC intends to initiate development of the following additional projects in 2012. These projects have been assigned based on priority, but constrained by the need to have a limited number of projects under active development at any given time. Project 2010-05.2 is not schedule to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. 2012-04 is not starting until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

While this Plan is a reasonable approach to Standards development, it cannot account for unforeseen events. The Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and factors such new or emerging reliability risks to the Bulk Electric System. Changes to the Plan during its execution are not only possible, but likely, and should be expected.

Additional Projects in 2012:

- 2008-02 Undervoltage Load Shedding. This project ranked #14 in Reliability Priority, and is expected to be started upon the completion of 2006-06 Reliability Coordination.
- 2009-02 Real-time Monitoring and Analysis Capabilities. This project ranked #1 in Practicality Priority, and is expected to be started upon the completion of 2007-03 Real-time Transmission Operations.
- 2009-03 Emergency Operations. This project ranked #3 in Practicality Priority, and is expected to be started upon the completion of 2008-06 Cyber Security – Order 706.
- 2010-01 Support Personnel Training. This project ranked #15 in Reliability Priority, and is expected to be started upon the completion of 2009-01 Disturbance and Sabotage Reporting.
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS. This project ranked #11 in Reliability Priority, and is expected to be started upon the completion of the first phase of the project, 2010-05.1 Phase 1 of Protection Systems: Misoperations.
- 2010-13.2 Phase 2 of Relay Loadability: Generation. This project has been identified as having a higher priority, as it has a FERC deadline. While this was accounted for in the Prioritization, the SC agreed that this should take precedence over the 5-year review projects considered in the Prioritization. This project is expected to be started upon the completion of 2007-12 Frequency Response.
- 2012-04 Protection System Commissioning Testing. This project ranked #9 in Reliability Priority, and is expected to be started upon the completion of 2007-17 Protection System Maintenance and Testing

NERC intends to initiate development of the following projects in 2013. As noted above, these projects have generally been assigned based on priority and constrained by the need to have a limited number of projects under active development at any given time. 2012-06 is not starting until 2013 due to the need for subject matter expertise in reserves and in generator characteristics, which are already committed to projects 2010-14.1 and 2007-09, respectively. 2009-07 is not starting until 2013 due to the need for subject matter expertise in protection systems, which is already committed to project 2007-06.

Additional Projects in 2013:

- 2007-11 Disturbance Monitoring. This project is expected to start upon completion of 2010-17 Definition of Bulk Electric System.
- 2008-01 Voltage and Reactive Panning and Control. This project ranked #6 in practicality, and is expected to start upon completion of 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves
- 2008-12 Coordinate Interchange Standards. This project is expected to start upon completion of 2010-07 Generator Requirements at the Transmission Interface.
- 2009-07 Reliability of Protection Systems. This project ranked #2 in Reliability Priority, and is expected to start upon completion of 2007-06 Protection System Coordination.
- 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent. This project is expected to start upon completion of 2009-02 Real-time Monitoring and Analysis Capabilities.
- 2012-01 Equipment Monitoring and Diagnostic Devices. This project is expected to start upon completion of 2007-02 Operating Personnel Communication Protocols.
- 2012-06 Generator Capabilities. This project ranked #6 in Reliability Priority, and is expected to start upon completion of both 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves and 2007-09 Generator Verification.

NERC intends to initiate development of the following projects in 2014. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. In general, these projects are not projected to be initiated until 2014 due to the need to limit the number of projects active at any given time. 2010-13.3 is not projected to start until 2014 due to the need for subject matter expertise in relay loadability, which is already committed to Phase 2 of the project.

Additional Projects in 2014:

- 2009-04 Phasor Measurements. This project is expected to start upon completion of 2009-03 Emergency Operations.

- 2009-05 Resource Adequacy Assessments. This project is expected to start upon completion of 2012-04 Protection System Commissioning Testing.
- 2010-03 Modeling Data. This project is expected to start upon completion of 2008-01 Voltage and Reactive Panning and Control.
- 2010-04 Demand Data. This project is expected to start upon completion of 2010-05.2 Phase 2 of Protection Systems: SPS and RAS.
- 2010-08 Functional Glossary Model Revisions. This project is expected to start upon completion of 2010-01 Support Personnel Training.
- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings. This project is expected to start upon completion of the second phase of this project, 2010-13.2 Phase 2 of Relay Loadability: Generation.
- 2010-16 Definition of System Operator. This project is expected to start upon completion of 2012-04 Protection System Commissioning Testing.
- 2012-05 ATC Revisions - Order 729. This project is expected to start upon completion of 2008-12 Coordinate Interchange Standards.

Projects for 2015 and Beyond

NERC intends to develop the following projects in 2015 or later, which is beyond the scope of this Plan. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. There is also some question as to whether or not they will provide sufficient value to be cost justified at this time. They have been included for completeness and to ensure that they are recognized as necessary projects.

It should be noted that several of these projects are related to NERC's ongoing obligation to review its standard every five years, as required in the Rules of Procedure. This is discussed in more detail in the General chapter.

- 2010-02 Connecting New Facilities to the Grid
- 2012-02 Physical Protection
- 2012-03 PRC-004 VSLs
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review
- 2012-12 PER Review
- 2012-13 NUC Review

- 2012-14 Risk Analysis

The following two projects were identified as potential projects for consideration, but not included in the prioritization. If necessary, they will be evaluated mid-year on an ad-hoc basis; otherwise, they will be considered in the prioritization process for the 2013-2015 Reliability Standards Development Plan.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2012-15 Flow Limited Paths

Appendix 1 - Prioritization

The following pages show the project rankings in each of the three primary categories: Reliability, Time Sensitivity, and Practicality. The assignment of scores was based on the mean of individual scores provide by members of the Standards Committee. Scores highlighted in red indicate areas where the members of the SC were divided regarding how to assign a particular score.

Following the identification of potential projects, this prioritization is the next step in the creation of the Reliability Standards Development Plan, and provides a starting point for further discussion. The prioritization is used to create the Work Plan which follows as Appendix 2.

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			**220.8**	**52**	**22**	**91.6**	1	17	29	5
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	87.5	66.7	41.7	0	12.5	25			**220.8**	**66**	**0**	**37.5**	2	3	33	17
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			**200**	**60**	**94**	**70.8**	3	7	2	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			**195.8**	**61**	**94**	**54.2**	4	6	3	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			**195.8**	**74**	**94**	**4.2**	5	1	4	27
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			**191.7**	**60**	**0**	**0**	6	8	34	30
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	58.3	16.7	16.7	5	50	25			**175**	**73**	**94**	**75**	7	2	5	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			**175**	**64**	**94**	**75**	8	4	6	8
Project 2012-04 Protection System Commissioning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	50	70.8	41.7	50	0	0	0			**170.8**	**57**	**0**	**0**	9	9	35	31
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2			**162.5**	**52**	**94**	**66.7**	10	18	7	11
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well Related to System Protection Initiative.	50	45.8	62.5	40	45	5	33.3	12.5			**158.3**	**56**	**94**	**45.8**	11	10	8	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			**150**	**54**	**94**	**58.3**	12	15	9	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			**150**	**56**	**94**	**29.2**	13	11	10	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			**150**	**42**	**94**	**0**	14	24	11	32

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			**145.8**	**42**	**0**	**0**	15	25	36	33
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	75	54.2	30	5	33.3	8.3	50	Addressing Reactive Requirements key to reliability of system. Length of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommittee.	**141.7**	**64**	**94**	**91.6**	16	5	12	6
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be significant cost savings to the industry if the revisions to BAL-001 were to be realized.	**137.5**	**56**	**100**	**94.1**	17	12	1	2
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	**133.4**	**33**	**42**	**67.5**	18	35	27	10
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	**129.2**	**51**	**94**	**63.4**	19	20	13	12
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			**129.2**	**52**	**94**	**10**	20	19	14	24
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			**129.2**	**42**	**82**	**0**	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the development of the tool required.	**125**	**38**	**57**	**97.5**	22	31	25	1
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	**112.5**	**40**	**94**	**50**	23	29	15	15
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	37.5	70.8	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	**108.3**	**55**	**94**	**91.7**	24	13	16	3
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			**95.8**	**36**	**0**	**0**	25	34	37	35
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	70	75	66.7	5	0	0	25	High Regional Priority	**95**	**38**	**94**	**25**	26	32	17	20
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	45.8	33.3	33.3	5	0	0			**87.5**	**55**	**94**	**0**	27	14	18	36
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001- through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			**70.9**	**47**	**94**	**91.7**	28	21	19	4
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			**70.8**	**47**	**94**	**26.7**	29	22	20	19
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			**66.7**	**46**	**0**	**0**	30	23	38	37

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Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			**58.3**	**38**	**0**	**0**	31	33	39	38
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			**54.1**	**20**	**0**	**0**	32	37	40	39
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	50	18.8	18.8	5	0	0			**50**	**53**	**94**	**0**	33	16	21	40
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0			**33.3**	**41**	**0**	**4.2**	34	27	41	28
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	10	Foundational piece of ERO	**29.2**	**41**	**0**	**10**	35	28	42	25
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			**25**	**40**	**94**	**0**	36	30	22	41
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			**25**	**19**	**0**	**0**	37	38	43	42
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			**25**	**13**	**0**	**0**	38	39	44	43
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			**4.2**	**26**	**94**	**25**	39	36	23	21
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			**0**	**0**	**57**	**0**	40	40	26	44
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			**0**	**0**	**17**	**25**	41	43	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			**0**	**0**	**12**	**25**	42	44	32	23
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			**0**	**0**	**37**	**0**	43	41	28	45
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			**0**	**0**	**20**	**0**	44	42	30	46
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			**0**	**0**	**0**	**8.3**	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0			**0**	**0**	**0**	**4.2**	46	46	46	29
2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											**0**	**0**	**0**	**0**	47	47	47	47
2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											**0**	**0**	**0**	**0**	48	48	48	48

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Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be significant cost savings to the industry if the revisions to BAL-001 were to be realized.	**137.5**	**56**	**100**	**94.1**	17	12	1	2
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			**195.8**	**74**	**94**	**4.2**	5	1	2	27
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	58.3	16.7	16.7	5	50	25			**175**	**73**	**94**	**75**	7	2	3	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			**175**	**64**	**94**	**75**	8	4	4	8
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	75	54.2	30	5	33.3	8.3	50	Addressing Reactive Requirements key to reliability of system. Length of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommittee.	**141.7**	**64**	**94**	**91.6**	16	5	5	6
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			**195.8**	**61**	**94**	**54.2**	4	6	6	14
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			**200**	**60**	**94**	**70.8**	3	7	7	9
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	45.8	62.5	40	45	5	33.3	12.5			**158.3**	**56**	**94**	**45.8**	11	10	8	16
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			**150**	**56**	**94**	**29.2**	13	11	9	18
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	37.5	70.8	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	**108.3**	**55**	**94**	**91.7**	24	13	10	3
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	45.8	33.3	33.3	5	0	0			**87.5**	**55**	**94**	**0**	27	14	11	36
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			**150**	**54**	**94**	**58.3**	12	15	12	13
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	50	18.8	18.8	5	0	0			**50**	**53**	**94**	**0**	33	16	13	40

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	TIME SENSITIVITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2			**162.5**	**52**	**94**	**66.7**	10	18	14	11
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			**129.2**	**52**	**94**	**10**	20	19	15	24
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	**129.2**	**51**	**94**	**63.4**	19	20	16	12
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			**70.9**	**47**	**94**	**91.7**	28	21	17	4
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			**70.8**	**47**	**94**	**26.7**	29	22	18	19
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			**150**	**42**	**94**	**0**	14	24	19	32
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	**112.5**	**40**	**94**	**50**	23	29	20	15
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			**25**	**40**	**94**	**0**	36	30	21	41
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	70	75	66.7	5	0	0	25	High Regional Priority	**95**	**38**	**94**	**25**	26	32	22	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			**4.2**	**26**	**94**	**25**	39	36	23	21
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			**129.2**	**42**	**82**	**0**	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the development of the tool required.	**125**	**38**	**57**	**97.5**	22	31	25	1
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			**0**	**0**	**57**	**0**	40	40	26	44
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	**133.4**	**33**	**42**	**67.5**	18	35	27	10
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			**0**	**0**	**37**	**0**	43	43	28	45
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			**220.8**	**52**	**22**	**91.6**	1	17	29	5
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			**0**	**0**	**20**	**0**	44	44	30	46
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			**0**	**0**	**17**	**25**	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			**0**	**0**	**12**	**25**	42	42	32	23

NERC Standards Committee
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Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	87.5	66.7	41.7	0	12.5	25			**220.8**	**66**	**0**	**37.5**	2	3	33	17
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			**191.7**	**60**	**0**	**0**	6	8	34	30
Project 2012-04 Protection System Commissioning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	50	70.8	41.7	50	0	0	0			**170.8**	**57**	**0**	**0**	9	9	35	31
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			**66.7**	**46**	**0**	**0**	30	23	36	37
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			**145.8**	**42**	**0**	**0**	15	25	37	33
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0			**33.3**	**41**	**0**	**4.2**	34	27	38	28
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	10	Foundational piece of ERO	**29.2**	**41**	**0**	**10**	35	28	39	25
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			**58.3**	**38**	**0**	**0**	31	33	40	38
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			**95.8**	**36**	**0**	**0**	25	34	41	35
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			**54.1**	**20**	**0**	**0**	32	37	42	39
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			**25**	**19**	**0**	**0**	37	38	43	42
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			**25**	**13**	**0**	**0**	38	39	44	43
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			**0**	**0**	**0**	**8.3**	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0			**0**	**0**	**0**	**4.2**	46	46	46	29
2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											**0**	**0**	**0**	**0**	47	47	47	47
2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											**0**	**0**	**0**	**0**	48	48	48	48

NERC Standards Committee
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Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the development of the tool required.	**125**	**38**	**57**	**97.5**	22	31	25	1
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be significant cost savings to the industry if the revisions to BAL-001 were to be realized.	**137.5**	**56**	**100**	**94.1**	17	12	1	2
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	37.5	70.8	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	**108.3**	**55**	**94**	**91.7**	24	13	10	3
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			**70.9**	**47**	**94**	**91.7**	28	21	17	4
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	75	54.2	30	5	33.3	8.3	50	Addressing Reactive Requirements key to reliability of system. Length of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommittee.	**141.7**	**64**	**94**	**91.6**	16	5	5	5
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			**220.8**	**52**	**22**	**91.6**	1	17	29	6
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	58.3	16.7	16.7	5	50	25			**175**	**73**	**94**	**75**	7	2	3	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			**175**	**64**	**94**	**75**	8	4	4	8
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			**200**	**60**	**94**	**70.8**	3	7	7	9
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	**133.4**	**33**	**42**	**67.5**	18	35	27	10
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2			**162.5**	**52**	**94**	**66.7**	10	18	14	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	**129.2**	**51**	**94**	**63.4**	19	20	16	12
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			**150**	**54**	**94**	**58.3**	12	15	12	13

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			**195.8**	**61**	**94**	**54.2**	4	6	6	14
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	**112.5**	**40**	**94**	**50**	23	29	20	15
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	45.8	62.5	40	45	5	33.3	12.5			**158.3**	**56**	**94**	**45.8**	11	10	8	16
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	87.5	66.7	41.7	0	12.5	25			**220.8**	**66**	**0**	**37.5**	2	3	33	17
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			**150**	**56**	**94**	**29.2**	13	11	9	18
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			**70.8**	**47**	**94**	**26.7**	29	22	18	19
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	70	75	66.7	5	0	0	25	High Regional Priority	**95**	**38**	**94**	**25**	26	32	22	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			**4.2**	**26**	**94**	**25**	39	36	23	21
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			**0**	**0**	**17**	**25**	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			**0**	**0**	**12**	**25**	42	42	32	23
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			**129.2**	**52**	**94**	**10**	20	19	15	24
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	10	Foundational piece of ERO	**29.2**	**41**	**0**	**10**	35	28	39	25
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			**0**	**0**	**0**	**8.3**	45	45	45	26
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			**195.8**	**74**	**94**	**4.2**	5	1	2	27
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0			**33.3**	**41**	**0**	**4.2**	34	27	38	28
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0			**0**	**0**	**0**	**4.2**	46	46	46	29
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	45.8	33.3	33.3	5	0	0			**87.5**	**55**	**94**	**0**	27	14	11	30

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
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Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	50	18.8	18.8	5	0	0			**50**	**53**	**94**	**0**	33	16	13	31
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			**150**	**42**	**94**	**0**	14	24	19	32
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			**25**	**40**	**94**	**0**	36	30	21	33
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			**129.2**	**42**	**82**	**0**	21	26	24	34
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			**0**	**0**	**57**	**0**	40	40	26	35
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			**0**	**0**	**37**	**0**	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			**0**	**0**	**20**	**0**	44	44	30	37
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			**191.7**	**60**	**0**	**0**	6	8	34	38
Project 2012-04 Protection System Commissioning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	50	70.8	41.7	50	0	0	0			**170.8**	**57**	**0**	**0**	9	9	35	39
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			**66.7**	**46**	**0**	**0**	30	23	36	40
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			**145.8**	**42**	**0**	**0**	15	25	37	41
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			**58.3**	**38**	**0**	**0**	31	33	40	42
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			**95.8**	**36**	**0**	**0**	25	34	41	43
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			**54.1**	**20**	**0**	**0**	32	37	42	44
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			**25**	**19**	**0**	**0**	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			**25**	**13**	**0**	**0**	38	39	44	46
2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											**0**	**0**	**0**	**0**	47	47	47	47
2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											**0**	**0**	**0**	**0**	48	48	48	48

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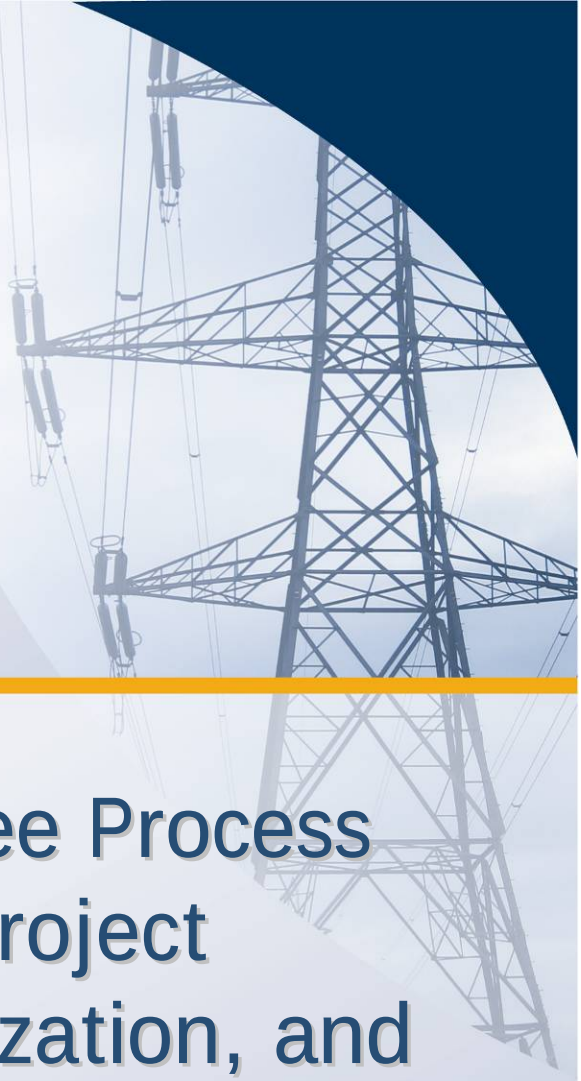

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. **Developing Projects Schedules**

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

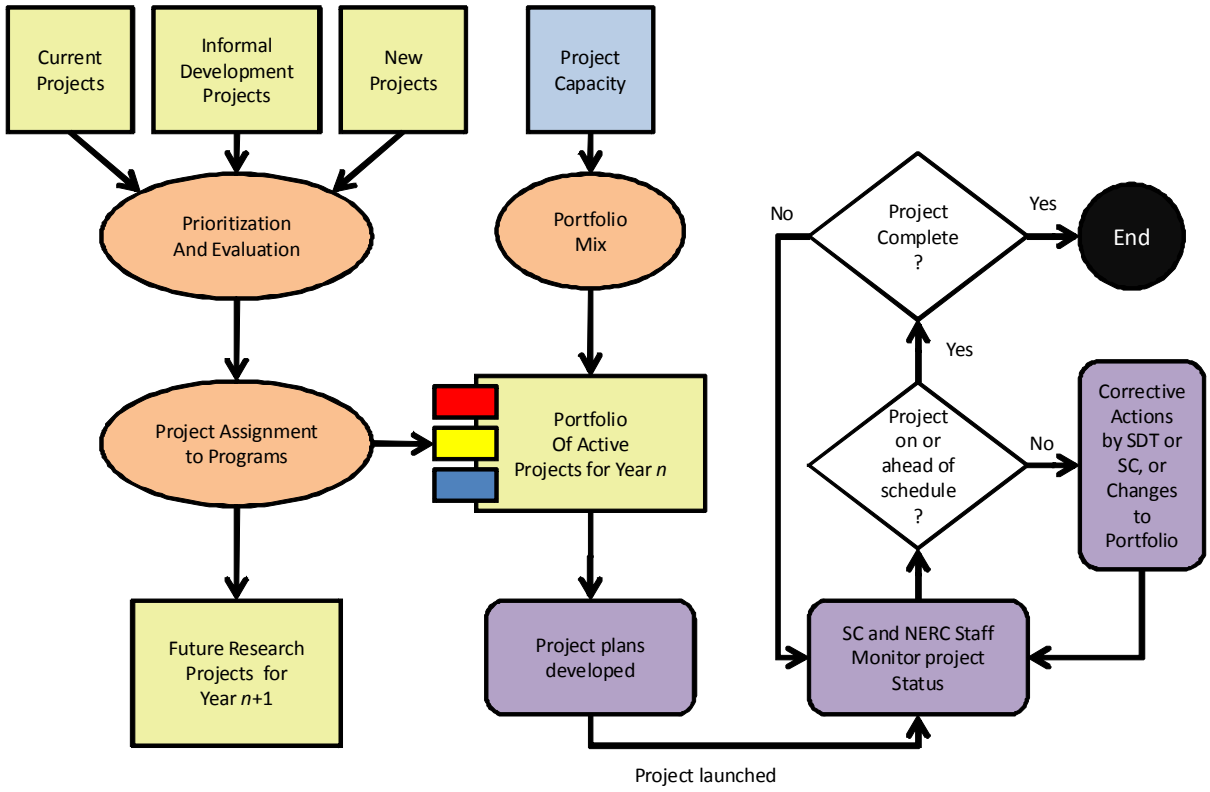
9. **Monitoring Projects**

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
    A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

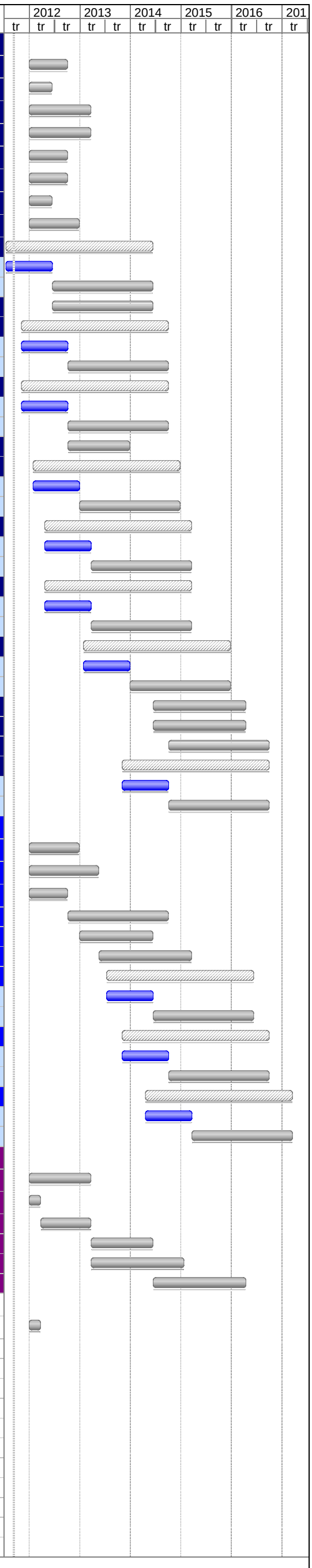
- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Appendix 2 – Work Plan

The following page shows the schedule of work in Gantt chart format. Projects for which the Standing Committees will be asked to provide research are identified with blue Gantt chart bars, and have been tentatively allocated a year duration for research (pending feedback from the Standing Committees).

Following the Prioritization, the Work Plan is the next step in the creation of the Reliability Standards Development Plan. It is used primarily to identify project predecessors and ensure resource allocations are consistent and manageable. Once complete, it identifies the estimated start and completion of all projects over the three-year period.

ID	Task Name
1	**Reliability Projects: 8 Slots**
2	**Project 2008-06 Cyber Security - Order 706 (ACTIVE)**
3	**Project 2007-17 Protection System Maintenance & Testing (ACTIVE)**
4	**Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)**
5	**Project 2007-06 System Protection Coordination (ACTIVE)**
6	**Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)**
7	**Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)**
8	**Project 2006-06 Reliability Coordination (ACTIVE)**
9	**Project 2007-09 Generator Verification (ACTIVE)**
10	***Project 2012-04 Protection System Commissioning Testing***
11	Standing Committee Research
12	Standards Development
13	Project 2008-02 Undervoltage Load Shedding
14	**Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS**
15	Standing Committee Research
16	Standards Development
17	**Project 2010-01 Support Personnel Training**
18	Standing Committee Research
19	Standards Development
20	Project 2009-03 Emergency Operations (INFORMAL)
21	**Project 2012-06 Generator Capabilities**
22	Standing Committee Research
23	Standards Development
24	**Project 2009-07 Reliability of Protection Systems**
25	Standing Committee Research
26	Standards Development
27	**Project 2012-01 Equipment Monitoring and Diagnostic Devices**
28	Standing Committee Research
29	Standards Development
30	**Project 2009-04 Phasor Measurements**
31	Standing Committee Research
32	Standards Development
33	Project 2009-05 Resource Adequacy Assessments
34	Project 2010-16 Definition of System Operator
35	Project 2010-08 Functional Model Glossary Revisions
36	**Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings**
37	Standing Committee Research
38	Standards Development
39	**Time-Sensitive Projects - 3 Slots**
40	**Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)**
41	**Project 2010-17 Definition of BES (ACTIVE)**
42	**Project 2007-12 Frequency Response (ACTIVE)**
43	Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)
44	Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)
45	Project 2007-11 Disturbance Monitoring (INFORMAL)
46	**Project 2010-03 Modeling Data**
47	Standing Committee Research
48	Standards Development
49	**Project 2010-04 Demand Data**
50	Standing Committee Research
51	Standards Development
52	**Project 2010-02 Connecting New Facilities to the Grid**
53	Standing Committee Research
54	Standards Development
55	**Practicality Projects - 2 Slots**
56	**Project 2010-07 Transmission Requirements at the Generator Interface (ACTIVE)**
57	**Project 2007-03 Real-time Transmission Operations (ACTIVE)**
58	Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)
59	Project 2008-12 Coordinate Interchange Standards (INFORMAL)
60	Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)
61	Project 2012-05 ATC-Revisions - Order 729
62	**Excess Beyond Capacity for 2012-2014**
63	**Project 2007-07 Vegetation Management (ACTIVE)**
64	Project 2012-02 Physical Protection
65	Project 2012-03 PRC-004 VSLs
66	Project 2012-08 Glossary Updates
67	Project 2012-07 Obsolescence Review
68	Project 2012-09 IRO Review
69	Project 2012-11 FAC Review
70	Project 2012-12 PER Review
71	Project 2012-13 NUC Review
72	Project 2012-14 Risk Analysis
73	*2006-06.2 Phase 2 of Reliability Coordination*
74	*2012-15 Flow Limited Paths*



Appendix 3 – Project Summaries

The following are detailed summaries of the projects discussed earlier within this plan.

DEVELOPMENT 2012

Project 2006-06 Reliability Coordination

Summary:

This project ensures that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable, and that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team is considering comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed. The drafting team is reviewing all of the requirements in this set of standards and making a determination whether to:

- Modify the requirement to improve clarity and measurability while removing ambiguity
- Move the requirement (into another project or Standard, or to the certification process)
- Eliminate the requirement (because it is redundant or doesn't support BPS reliability).

Standards affected:

COM-001, COM-002, IRO-001- IRO-002, IRO-005, IRO-014, IRO-015, IRO-016

Status:

This project's SAR was finalized on May 2, 2007. The draft standards have been posted several times. The NERC Board of Trustees adopted IRO-002-3, IRO-005-4 and IRO-014-2, along with a conforming change to IRO-001-1.1 associated with IRO-014-2 (creating IRO-001-2) on August 4, 2011. The Board also approved the retirement of IRO-015-1 and IRO-016-1. The drafting team is continuing development on COM-001-2, COM-002-3, and additional revisions to IRO-001, which will become IRO-001-3. It is estimated this project will complete in Q2 2012.

FUTURE CONSIDERATION

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003

Summary:

This project will address directives from Order 693 related to the inclusion of measures in IRO-003 and the determination of "critical facilities."

Standards affected:

IRO-003

Status:

A SAR was developed and was finalized on July 14, 2010. However, no additional work has occurred for this project at this time. At this time, no estimate for starting the project has been identified.

DEVELOPMENT 2012

Project 2007-02 Operating Personnel Communication Protocols

Summary:

This project is reviewing COM-003 to ensure the standard is complete, appropriately scoped, and enforceable. The project is also considering other general improvements and stakeholder comments received during the initial development of the standards, as well as other comments received from Electric Reliability Organization (ERO) regulatory authorities. This also satisfies the NERC requirement for five-year review of the standard.

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers. Requirements will include protocols for communicating changes to realtime operating states and protocols for issuing and responding to operating directives.

Standards affected:

COM-003

Status:

This project's SAR was finalized on June 8, 2007. A draft standard was posted November 20, 2009 through January 15, 2010. Subsequently, this team was put on hold for an extended period of time. The project was restarted in 2011, and the team is reviewing comments and preparing to post a new version of the standard. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-03 Real-time Transmission Operations

Summary:

This project is clarifying requirements for real-time operations of the Bulk Electric System in the several standards, as well as providing other general improvements. It will consider stakeholder comments received during the initial development of the standards, as well as and other comments received from ERO regulatory authorities. This also satisfies the NERC requirement for five-year review of the standards.

Standards affected:

PER-001, TOP-001, TOP-002, TOP-003, TOP-004, TOP-004, TOP-005¸ TOP-006, TOP-007, TOP-008

Status:

This project's SAR was finalized November 1, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Initial Ballot from May 31, 2011 through June 9, 2011. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-06 System Protection Coordination

Summary:

This project is reviewing PRC-001-1 to assure that Protection System application and performance issues are coordinated among all related entities. It will ensure the applicable entities within the standard correctly reflect the functional responsibilities, as described in the NERC Functional Model. The project will also incorporate other general improvements, address directives received from ERO regulatory authorities, and consider the observations and recommendations developed by the NERC SPCTF. As necessary, the project will coordinate the transfer of monitoring-related requirements to appropriate other standards through coordination with project 2006-06 Reliability Coordination.

Standards affected:

PRC-001, PRC-027 (New)

Status:

This project's SAR was finalized on July 27, 2007. A draft standard was posted from September 9, 2009 through October 26, 2009. Several interim drafts have been developed since that time. A new results-based version of the standard is in development. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-07 Vegetation Management

Summary:

This project will address some 'fill-in-the-blank' components of the existing standard, wchih were created in 2006 (prior to mandatory and enforceable standards). The project also will investigate applicability to lower voltae transmission lines, address the issue of clearances for lines on both federal and non-federal lands, consider revising the definition of right of way to encompass required clearance areas, and review the suitability of the IEEE 516-2003 standard for minimum vegetation clearance. This also satisfies the NERC requirement for five-year review of the standard.

Standards affected:

FAC-003

Status:

This project's SAR was finalized June 27, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Successive Ballot from February 18, 2011 through February 28, 2011. The team has drafted a revised standard and has requested it be posted for Recirculation Ballot. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-09 Generator Verification

Summary:

This project will create or modify standards to ensure that generators will not trip off-line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions. It will also ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

Standards affected:

MOD-024, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024

Status:

This project's SAR was finalized June 14, 2007. The standards have been posted several times for public comment. Two of the standards were most recently posted for Initial Ballot from July 22, 2011 through August 1, 2011. Three other standards were posted for comment June 12, 2011 through July 15, 2011. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2007-11 Disturbance Monitoring

Summary:

Purpose
This project establishes and clarifies requirements for the installation of Disturbance Monitoring Equipment (DME) and reporting of disturbance data to facilitate analyses of events and verify system models. The project will review PRC-002 and each of the current regional programs developed in accordance with that standard, including any other associated programs and/or requirements related to or contained with the disturbance monitoring program documentation. The project will then determine which requirements should be continent-wide requirements and which requirements should be included in regional standards.

Standards affected:

PRC-002, PRC-018

Status:

This project's SAR was finalized May 21, 2007. An initial draft standard was posted from February 2, 2009, to March 18, 2009. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

DEVELOPMENT 2012

Project 2007-12 Frequency Response

Summary:

Purpose:
This project will modify the BAL-003 Standard to require sufficient Frequency Response from the Balancing Authority to maintain Interconnection Frequency within predefined bounds. It will also ensure the standard provides consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

Standards affected:

BAL-003

Status:

This project's SAR was finalized June 30, 2007. The standard has been posted once for public comment, and is expected to be posted for comment in Q4 of 2011. The project is expected to complete in Q2, 2012.

DEVELOPMENT 2012

Project 2007-17 Protection System Maintenance and Testing

Summary:

This project will modify the standards related to ensuring all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The project will respond to various FERC directives contained in Order 693, as well as make general improvements to the standard.

Standards affected:

PRC-005, PRC-008, PRC-011, PRC-017

Status:

This project's SAR was finalized May 7, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Initial Ballot from September 19, 2011 through September 28, 2011. It is estimated this project will complete in Q2 2012.

PENDING 2013

Project 2008-01 Voltage and Reactive Planning and Control

Summary:

This project will revise the VAR Standards to require that appropriate functional entities develop and coordinate voltage and reactive planning and operating criteria to ensure that there are sufficient reactive resources, and voltage and reactive margins, to manage the risk of voltage instability. The project will also will address the FERC directives in Order 693 associated with these standards. Review and modifications to the existing VAR standards will also consider the Transmission Issues Subcommittee's "Reactive Support & Control Whitepaper" dated 05/18/2009.

Standards affected:

VAR-001, VAR-002

Status:

This project's SAR was finalized April of 2011. This project was moved into informal development in 2011, prior to posting any daft of the standard. It is estimated this project will begin in Q1 2013 and complete in Q2 2014.

PENDING 2012

Project 2008-02 Undervoltage Load Shedding

Summary:

This project will improve the existing standards on Under Voltage Load Shedding (UVLS) to ensure that load is shed when needed to prevent voltage collapse and voltage instability in the Bulk Electric System. The existing standards will be consolidated, and specific criteria for UVLS programs and assessments of those UVLS programs should be added. 'Fill-in-the-blank' elements should be eliminated, and concerns related to Fault-Induced Delayed Voltage Recovery' will be reviewed and addressed.

Standards affected:

PRC-010, PRC-022

Status:

This standard has a proposed SAR that was posted for comment from January 20, 2010, through February 19, 2010. It is estimated this project will start in Q3 2012 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2008-06 Cyber Security – Order 706

Summary:

This project establishes standards to protect the critical cyber assets (including hardware, software, data, and communications networks) essential to the reliable operations of the bulk power system. Currently the project is focused on Version 5 of the standards, which is focused on addressing the remaining directives in Order 706.

Standards affected:

CIP-002, CIP-003, CIP-004, CIP-005, CIP-006, CIP-007, CIP-008, CIP-009, CIP-010 (New), CIP-011 (New)

Status:

This project's SAR was finalized June 9, 2008. Older versions of the standard have been posted, balloted, and approved several times. Version 5 of the standards has not yet been posted for comment. It is estimated this project will complete in Q3 2012.

PENDING 2013

Project 2008-12 Coordinate Interchange Standards

Summary:

This project will revise the set of Coordinate Interchange standards to ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange; to address the Interchange Subcommittee concerns related to the Dynamic Transfers and Pseudo-ties; and to address previously identified stakeholder comments. The project will also consider adding requirements to have backup capability for use when the interchange transaction tool fails.

Standards affected:

INT-001, INT-003, INT-004, INT-005, INT-006, INT-007, INT-008, INT-009, INT-010

Status:

This project's SAR was finalized December 1, 2008. An initial draft set of standards was developed and posted for comment from November 10, 2009 through December 9, 2009. However, the project was moved into informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2009-01 Disturbance and Sabotage Reporting

Summary:

Purpose:

This project entails revisions to existing standards CIP-001-1 – Sabotage Reporting and EOP-004-1 – Disturbance Reporting. The project will eliminate redundancy and provide clarity on sabotage events. Additionally, EOP-004 will be reviewed to eliminate any 'fill-in-the-blank' components.

Standards affected:

CIP-001, EOP-004

Status:

This project's SAR was finalized August 13, 2009. The standard has been posted for comment twice, and is being prepared for Initial Ballot. It is estimated this project will complete in Q3 2012.

PENDING 2012

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Summary:

This project will create new or revised standards to establish requirements for the monitoring and analysis capabilities provided to System Operators to support Real-time System Operations. The project will address availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management.

Standards affected:

New

Status:

This project's SAR was finalized March 31, 2010. The project team posted a White Paper created to illustrate the concepts it intends to pursue as the project unfolds. This posting solicited comments from February 16, 2011, through April 4, 2011. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2012 and complete in Q1 2013.

PENDING 2012

Project 2009-03 Emergency Operations

Summary:

This project will review the EOP-001, EOP-002, and EOP-003 standards and associated interpretations to ensure the requirements are clear and unambiguous. Many of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process; suggestions for improvement have been submitted by stakeholders, other drafting teams, and FERC staff.

Standards affected:

EOP-001, EOP-002, EOP-003

Status:

This project's SAR was finalized November 5, 2010. Prior to the development of an initial draft standard, this project was moved to informal development. It is estimated this project will start in Q3 2012 and complete in Q4 2013.

2014 PENDING RESEARCH

Project 2009-04 Phasor Measurements

Summary:

This project will review several industry studies to determine if there should be phasor requirements developed for a NERC standard. This project is related to the North-American Synchro-Phasor Initiative, and supports a blackout recommendation.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2014 and complete in Q4 2015.

PENDING 2014

Project 2009-05 Resource Adequacy Assessments

Summary:

This project will implement certain recommendations related to resource adequacy from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report,* approved by the NERC Board on June 15, 2004. The project will create a standard with requirements to perform resource adequacy assessments, using metrics that take into account various factors (including, but not limited to, fuel deliverability). The standard would also make the results of the assessments available to the industry, NERC, and appropriate regulatory agencies.

Standards affected:

New

Status:

This project's SAR was finalized August 17. 2007. Prior to the development of an initial draft standard, this project was moved to informal development in 2011. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2013 PENDING RESEARCH

Project 2009-07 Reliability of Protection Systems

Summary:

This project will ensure Protection Systems are designed and installed with redundancy where appropriate, such that if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards.

Standards affected:

New

Status:

This project has an initial draft of a SAR which was posted for comment January 20, 2009, through February 18, 2009. Comment responses have not been prepared, and the SAR has not been finalized. It is estimated this project will start in Q1 2013 and complete in Q1 2015.

2012 PENDING RESEARCH

Project 2010-01 Support Personnel Training

Summary:

This project will develop a standard that requires the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2012 and complete in Q3 2014.

FUTURE CONSIDERATION, PENDING RESEARCH

Project 2010-02 Connecting New Facilities to the Grid

Summary:

22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.

Standards affected:

FAC-001, FAC-002

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2015 and complete in Q1 2017.

2014 PENDING RESEARCH

Project 2010-03 Modeling Data

Summary:

This project will consider merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. This project is related the Modeling Initiative, and supports a blackout recommendation.

Standards affected:

MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, PRC-013, PRC-015

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2014 PENDING RESEARCH

Project 2010-04 Demand Data

Summary:

This project will consolidate MOD-016 through MOD-020 into a single standard, with MOD-021 remaining as a separate standard. Requirements will be made be more specific to clearly identify the format for providing data, and modifications will made in support if previously received industry comments and regulatory directives.

Standards affected:

MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, MOD-021

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations

Summary:

This project addresses a key element for Bulk Electric System (BES) reliability: the correct performance of Protection Systems. Monitoring BES Protection System events to identify and correct the root causes of Misoperations will improve overall Protection System performance. The project will revise the definition of Misoperation and redraft the standard to be more clear and unambiguous.

Standards affected:

PRC-003, PRC-004

Status:

This project's SAR was finalized June 9, 2011. An initial draft of the standard was posted for comment from June 10, 2011 through July 11, 2011. A second draft is being prepared for posting and initial ballot. It is estimated this project will complete in Q3 2012.

2012 PENDING RESEARCH

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS

Summary:

This project will moodily the current standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and to ensure the reliability of the bulk power system. This project is related to the System Protection Initiative.

Standards affected:

PRC-012, PRC-014, PRC-016.

Status:

This project has a draft SAR, but it has not yet been posted for comment. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

DEVELOPMENT 2012

Project 2010-07 Generator Requirements at the Transmission Interface

Summary:

This project will develop any needed changes to the Reliability Standards to provide clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. The project will review standard for applicability, propose changes as necessary, and ensure that requirements that should apply to all generators, regardless of interconnection configuration, are implemented effectively.

Standards affected:

FAC-001, FAC-003, PRC-004, others as needed

Status:

This project's SAR was finalized November 30, 2010. A draft set of standards was developed and posted from June 17, 2011 through July 17, 2011. Discussion and coordination between NERC, FERC , and the members of the project team are ongoing to ensure adequate coverage of all reliability needs. It is estimated this project will complete in Q1 2013.

FUTURE CONSIDERATION

Project 2010-08 Functional Glossary Model Revisions

Summary:

This project will ensure the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria are consistent.

Standards affected:

TBD

Status:

The Functional Model Working Group (FMWG) is responding to comments received from the first posting of the SAR. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

PENDING 2012

Project 2010-13.2 Phase 2 of Relay Loadability: Generation

Summary:

This project is being created in response to directives included in FERC Order 733. The project will draft a new standard to address generator relay loadability.

Standards affected:

New

Status:

This project's SAR was finalized November 1, 2010. Prior to the development of an initial draft, this project was moved to informal development in 2011. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

2014 PENDING RESEARCH

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

Summary:

This project is being created in response to directives includes in FERC Order 733. The project will draft a new standard to address protective relay operations due to power swings.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves

Summary:

This project will review the standard related to Control Performance and Disturbance control, and propose modifications or new standards as necessary. This project includes the testing and analysis of the new Balancing Authority ACE Limit (BAAL) metric, as well as the development of a continent-wide reserve policy to support BAL-01, BAL-002, and BAL-003.

Standards affected:

BAL-001, BAL-002, New

Status:

This project was created by merging two existing teams. As such, there are two SARS associated with the project – one that was finalized on November 7, 2007, and one that was finalized on December 3, 2007. The combined effort was moved into informal development in 2011, but restarted to coordinate with project 2007-12 Frequency Response. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent

Summary:

This project will consider the Time Error Correction standard, AGC, standard, and Inadvertent Accounting standard to determine what changes, if any, are necessary to ensure the standards are clear and unambiguous. In some cases, the standard may no longer be necessary.

Standards affected:

BAL-004, BAL-005, BAL-006

Status:

This project is currently in informal development. Based on its priority, it has been identified in the 2012-2014 Work Plan to begin in Q2 2013 and complete in Q1 2015.

PENDING 2014

Project 2010-16 Definition of System Operator

Summary:

This project will remove the 'Generator Operator' from the current definition of System Operator. This will more accurately establish the responsibilities and expectations of the Generator Operator consistent with the current manner in which the bulk electric system is operated.

Standards affected:

TBD

Status:

A proposed SAR and revision to the definition of System Operator was posted for a 30-day formal comment period from November 3, 2010 through December 3, 2010. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

DEVELOPMENT 2012

Project 2010-17 Definition of Bulk Electric System

Summary:

This project will revise the definition of Bulk Electric System (BES) to address various Federal Energy Regulatory Commissions (FERC) concerns the definition must be modified to encompass all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. These concerns have been identified in FERC Order 693 issued on March 16, 2007 and in Order 743 issued on November 18, 2010 (Order 743). The project will also consider additional modifications (beyond those established in the regulatory directives) to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

Standards affected:

Multiple

Status:

This project's SAR was finalized March 25, 2011. The draft definition has been posted twice, with the most recent posting done concurrently with an initial ballot from September 30, 2011, to October 02 2011. The first part of this project is expected to complete in Q1 of 2012. The remainder of this project is estimated to complete in Q2 2013.

2013 PENDING RESEARCH

Project 2012-01 Equipment Monitoring and Diagnostic Devices

Summary:

This project will consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures, with the intent of identifying potential equipment failures prior to their occurrence. This will provide more time to address failing systems and avoid or minimize long lead times.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

FUTURE CONSIDERATION

Project 2012-02 Physical Protection

Summary:

This project will develop standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-03 PRC-004 VSLs

Summary:

This project will address a problem identified in the VSLs of PRC-004. Currently, the VSLs do not address the case where a Corrective Acton Plan was developed or documented, but not fully implemented.

Standards affected:

PRC-004

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

2012 PENDING RESEARCH

Project 2012-04 Protection System Commissioning Testing

Summary:

This project will address a gap in reliability related to protection systems by creating a standard that requires commissioning testing. Improper or inadequate commissioning testing practices are a common cause of protection system Misoperation. However, the current set of approved NERC reliability standards does not address the testing of protection system equipment *before* that equipment is placed into initial service. Creating a commissioning standard would also enhance the effectiveness of the mandatory auditing program.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2012 and complete in Q2 2014.

PENDING 2014

Project 2012-05 ATC Revisions - Order 729

Summary:

This project will respond to the remaining directives in Order 729.

Standards affected:

MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, MOD-030

Status:

This is a new project, which will require SAR development. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

2013 PENDING RESEARCH

Project 2012-06 Generator Capabilities

Summary:

This project will develop standards to ensure generator performance. The project should consider requirements that specify governor droop, frequency response, and reactive response.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2013 and complete in Q4 2014.

FUTURE CONSIDERATION

Project 2012-07 Obsolescence Review

Summary:

This project will create a standard that requires Generator and Transmission Owners periodically review their control and protection systems to identity and electronic, electrical, or mechanical devices that have become obsolete.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-08 Glossary Updates

Summary:

This project will respond to FERC directives to either create or modify the following definitions: Transmission Operator, Generator Operator, Bulk Power System, Reliable Operation, and Reliability Standard.

Standards affected:

TBD

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-09 IRO Review

Summary:

This project will perform the five-year review of several IRO standards, pursuant to NERC's Rules of Procedure.

Standards affected:

IRO-006, IRO-006-EAST, IRO-008, IRO-009, and IRO-010

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-11 FAC Review

Summary:

This project will perform the five-year review of several FAC standards, pursuant to NERC's Rules of Procedure.

Standards affected:

FAC-010, FAC-011, FAC-014

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-12 PER Review

Summary:

This project will perform the five-year review of several PER standards, pursuant to NERC's Rules of Procedure.

Standards affected:

PER-003, PER-004, PER-005

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-13 NUC Review

Summary:

This project will perform the five-year review of the NUC standard, pursuant to NERC's Rules of Procedure.

Standards affected:

NUC-001

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-14 Risk Analysis

Summary:

This project will develop a standard that requires entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist would include things like GMD, voltage collapse, and other extreme events.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-15 Flow Limited Paths

Summary:

The MOD-029 standard includes a provision which, if left uncorrected, could in certain scenarios result in significantly over-conservative ATC values being calculated. This project will address this problem.

Standards affected:

MOD-029

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Reliability Standards Development Plan (Draft) 2012-2014

We would like to thank all commenters who submitted comments on the process of developing the 2012-2014 Reliability Standard Development Plan (the Plan). The Plan will be finalized over the coming months, and will provide status updates for projects in development, identify the next projects scheduled for initiation, designate projects for further research, and catalog all proposed projects for future development.

The 2012-2014 Reliability Standard Development Plan was posted for a 15-day public comment period from September 12, 2011 through September 26, 2011. Stakeholders were asked to provide feedback on the 2012-2014 Reliability Standard Development Plan through a special electronic comment form. There were 15 sets of comments received, including comments from approximately 63 different people from approximately 38 companies representing all 10 of the 10 Industry Segments as shown in the table on the following pages.

In general, commenters did not provide specific suggestions to modify the plan, instead usually indicating that a specific project should be "higher" or "lower" in priority. Because of the nature of the prioritization, those suggestions feel into one of three categories: those based the "improves one or more existing standards" score, those based on the "Addresses a reliability risk not covered by an existing standard" score, and those based on the "other practicality concern" score.

Absent specific suggestions, and recognizing that in all cases, the suggestions came from a small minority of the respondents, a simple scoring was applied such that each comment was given equal weight. Suggestions to rank a project "higher" were treated as suggestions to score the value in question at least one full "point range" higher. A similar approach was used for projects that were suggested for lower rankings. All other commenter's were assumed to have supported the existing scoring values.

For example:

- Assume the Prioritization showed project X as having a "improves one or more existing standards" score of 72.1.
- One entity submits a comment that X should be ranked higher.
- One entity submits a comment that X should be ranked lower.
- The other thirteen entities do not comment on X.
- The "higher" comment would be treated as a score of 100. (Scoring as 75 would not be a full point range higher, as the acceptable point ranges in the prioritization sheet are 0, 25, 50, 75, and 100. Choosing 75 would only be a fractional step higher).

- The “lower” comment would be treated as a score of 25. (Scoring as 50 would not be a full point range higher, as the acceptable point ranges in the prioritization sheet are 0, 25, 50, 75, and 100. Choosing 50 would only be a fractional step higher).
- The remaining thirteen comments would be treated as silent support for the current score of 58.2.
- (13 X 72.1) + (25) + (100) = 1062.3
- 1062.3 ÷ 15 = 70.8.

Based on this approach, the following project scores were modified:

Project 2007-11
Column G - One comment to raise (treated as 100) changed the G score from 70 to 72.
Column M - One comment to raise (treated as 50) changed the M score from 25 to 27

Project 2008-01
Column G - Two comments to raise (treated as 100) changed the G score from 75 to 78.

Project 2009-01
Column G - One comment to lower (treated as 25) changed the G score from 58.3 to 56.1.
Column M - One comment to lower (treated as 0) no change to the M score (0)

Project 2009-03
Column G - One comment to raise (treated as 100) changed the G score from 70.8 to 72.7.

Project 2009-07
Column G - One comment to raise (treated as 100) changed the G score from 87.5 to 88.3

Project 2010-03
Column G - One comment to raise (treated as 75) changed the G score from 45.8 to 47.7

Project 2010-04
Column G - One comment to raise (treated as 100) changed the G score to from 50 to 51.7

Project 2010-05.2
Column F - One comment to lower (treated as 0), changed the F score from 45.8 to 42.7
Column G - One comment to lower (treated as 25) changed the G score to from 62.5 to 60

Project 2010-08
Column M - Two comments to rasie (treated as 25) changed the M score from 10 to 12

Project 2010-16
Column M - Two comments to raise (treated as 25) changed the M score from 0 to 3.3

Project 2010-17
Column M - One comment to (treated as 25) changed the M score from 0 to 1.7

Project 2012-04
Column F - One comment to lower (treated as 25) changed the F score from 50 to 48.3
Column G - One comment to lower (treated as 25) changed the G score from 70.8 to 67.7

Project 2012-08
Column M - Two comments to raise (treated as 25) change the M score from 0 to 3.3

Additionally, there were some specific changes suggested in response to question 3. The same general procedure was used, as summarized below:

There were 15 total respondents. Six abstained from answering the question, leaving 9 entities indicating they had some sort of opinion. Absent a specific proposal to change a score, it was assumed the entity did not object to the specific score in question.

Project 2008-01
Column K - One suggestion to set the score to 50 changed the K score from 33.3 to 35.2

Project 2009-01
Column L - One suggestion to set the score to 50 changed the L score from 25 to 27.8

Project 2009-03
Column F - One suggestion to set the score to 50 and one suggestion to set the score to 100 changed the F score from 37.5 to 45.8

Project 2009-07
Column L - One suggestion to set the score to 0 and one suggestion to set the score to 50 (the entity actually requested 33, but 50 was the next valid score) resulted in no change to the L score

Project 2010-17
Column L - One suggestion to set the score to 0 and one suggestion to set the score to 50 changed the L score from 29.2 to 28.3

These changes resulted in slight reordering of project within the prioritization matrix. However, upon review, the small number of changes only impacted the Work Plan in later years, and only by one or two months. As such, no changes were made to the Work Plan, as such changes will be captured in the development of the 2013-2015 Plan.

In addition to the above, the Plan was updated to correct minor typographical errors and formatting concerns. Finally, the a section discussing Regional Standards was added to chapter 4, the Regional Work Plan was added as a new Appendix, and descriptions of the regional projects were added to the plan.

All documents developed as part of this Plan's creation can be viewed at the NERC's Reliability Standards Development Plan web page:

http://www.nerc.com/page.php?cid=2|247|290

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net.

Index to Questions, Comments, and Responses

1. Is there anything in the prioritization that is significantly below where it should be ranked? If yes, please explain. …. 7
2. Is there anything in the Plan we deferred that can't wait? If yes, please explain. …. 11
3. For six projects, the SC had disagreements regarding the appropriate score for certain key values. The projects are listed below. For specific information, see the projects, the referenced columns, and the specific cells (highlighted in red) in Appendix 1. Do you believe these projects and their associated priorities are adequately reflected in the Plan? If no, please explain. …..... 13
4. Please provide any additional comments you would care to offer. …..... 17

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Ed Skiba - Co-Chair of NAESB WEQ Standards Review Subcommittee	NAESB Wholesale Electric Quadrant Standards Review Subcommittee										
No additional members listed.													
2.	Group	Chris HIggins	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3
2.	Deanna Phillips	FERC Compliance	WECC	1, 3, 5
3.	Wesley Hutchison	Operational Analysis & Support	WECC	1
4.	Mary Willey	Operational Analysis & Support	WECC	1
5.	David Kirsch	Technical Operations	WECC	1
6.	Ted Snodgrass	Munro Dispatch	WECC	1

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
7. Dean Bender	SPC Technical Svcs	WECC 1										
8. Laurea Oliver	Customer Service Engineering	WECC 1										
3. Group	Guy Zito	Northeast Power Coordinating Council										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Couoncil, LLC	NPCC	10
2.	Gregory Campoli	New York Independent System Operator	NPCC	2
3.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Brian Evans-Mongeon	Utility Services	NPCC	8
8.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
9.	Kathleen Goodman	ISO - New England	NPCC	2
10.	Chantel Haswell	FPL Group, Inc.	NPCC	5
11.	David Kiguel	Hydro One Networks Inc.	NPCC	1
12.	Michael Lombardi	Northeast Utilities	NPCC	1
13.	Randy MacDonald	New Brunswick Power Transmission	NPCC	9
14.	Bruce Metruck	New York Power Authority	NPCC	6
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
16.	Robert Pellegrini	The United Illuminating Company	NPCC	1
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1
18.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5
19.	Saurabh Saksena	National Grid	NPCC	1
20.	Michael Schiavone	National Grid	NPCC	1
21.	Wayne Sipperly	New York Power Authority	NPCC	5
22.	Donald Weaver	New Brunswick System Operator	NPCC	2
23.	Ben Wu	Orange and Rockland Utilities	NPCC	1
24.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3

4.	Group	Jesus Sammy Alcaraz	Imperial Irrigation District (IID)	X		X	X	X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tino Zaragoza	IID	WECC	1
2.	Sammy Alcaraz	IID	WECC	3
3.	Diana Torres	IID	WECC	4
4.	Marcela Caballero	IID	WECC	5
5.	Cathy Bretz	IID	WECC	6

5.	Group	Connie Lowe	Electric Market Policy	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Michael Gildea		MRO	3
2.	Mike Garton		NPCC	3
3.	Louis Slade		RFC	5, 6
4.	Mike Crowley		SERC	1

6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
3.	Jim Howard	Lakeland Electric	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1
6.	Cairo Vanegas	Fort Pierce Utility Authorities	FRCC	4
7.	Randy Hahn	Ocala Utility Services	FRCC	3

7.	Individual	Wendy Sandberg	NERC										
8.	Individual	Michelle R D'Antuono	Ingleside Cogeneration LP					X					
9.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X					
10.	Individual	Michael Moltane	ITC Holdings	X									
11.	Individual	David Proebstel	Clallam County PUD No.1			X							
12.	Individual	John Seelke	PSEG Services Corp	X		X		X	X				
13.	Individual	Jim Eckelkamp	Progress Energy	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
14.	Individual	Barbara Kedrowski	Wisconsin Electric Power Company			X	X	X					
15.	Individual	Michael Falvo	Independent Electricity System Operator		X								

1. Is there anything in the prioritization that is significantly below where it should be ranked? If yes, please explain.

Summary Consideration: In general, entities were supportive of the prioritization, but several had specific changes. These changes were incorporated into score changes as summarized in the "general summary" above. Some typographical errors were noted and corrected.

Organization	Yes or No	Question 1 Comment
NAESB Wholesale Electric Quadrant Standards Review Subcommittee		
Bonneville Power Administration		BPA thanks you for the opportunity to comment on 2012-2014 Reliability Standards Development Plan. BPA has no comments or concerns at this time.
Response: Thank you for your comment.		
Northeast Power Coordinating Council		
Imperial Irrigation District (IID)		
Electric Market Policy		Dominion appreciates the time NERC has devoated to capturing potential standard topics needing attention or revision. This standardization priority tool, in which input was taken from the industry members toward the ranking of these projects provides a good basis to collect opinion and creates some structure for comparision of one standard topic companied to another. It is obviously there was a great deal of work that went into calculating the reliability, time sensitivity, and practicticality priority that each of these projects have in the eyes of some and it is well presented

Organization	Yes or No	Question 1 Comment
		throughout the document. Below are some minor considerations: 1. Chapter 3, Page 7; last sentence. Add 'o'; in a deferral 'of' the work. 2. Formatting needs to be corrected for the page numbers at the bottom of each page.
Response: Thank you for your comment. We have corrected the typographical error, but it is unclear what is incorrect regarding the page number formatting.		
Florida Municipal Power Agency		It seems to FMPA that Project 2010-05.2 on SPS / RAS and Project 2012-04 on Protection System Commissioning Testing are ranked too high and can be delayed another year. It seems that the new PRC-005-2 reduces the importance of commissioning testing. FMPA believes the existing standards on SPSs are adequate and cannot find documentation on the reliability gap perceived. FMPA believes that Project 2009-07 is higher priority than both of these projects, both in light of the ambiguity of what "delayed clearing" means in the TPL standard and due to the recent FERC Order 754 on the TPL-002 interpretation and FERC's statement that: "We agree with the Trade Associations that there may be a system protection issue that merits further exploration by technical experts ... the Commission believes that there is an issue concerning the study of the non-operation of non-redundant primary protection systems; e.g., the study of a single point of failure on protection systems ... we direct Commission staff to meet with NERC and its appropriate subject matter experts to explore this reliability concern, including where it can best be addressed, and identify any additional actions necessary to address the matter." (para 19-20). Presumably, it is this project 2009-07 that would explore these "system protection issues" related to "single point of failure".

Organization	Yes or No	Question 1 Comment
Response: Thank you for your comments. The SCD has revised the scores on these projects to account for your input.		
NERC	No	
Ingleside Cogeneration LP	Yes	It is clear that the lack of clarity in the Reliability Standards have led to inconsistencies in the compliance process. The gap is being addressed through Compliance Application Notices (CANs), but bypasses the strict review which is fundamental to the Standards Development process. Similarly, gray areas in the Functional Model have lead to forced registrations in certain Regions. These arbitrary actions can easily lead to a loss of confidence by the industry in the fairness and usefulness of regulatory oversight. As a result, Ingleside Cogeneration, LP believes that there are three related projects that should be rated far higher in the NERC priority scheme. These are Project 2010-08 "Functional Model Glossary Revisions", Project 2010-16 "Definition of System Operator", and Project 2012-08 "Glossary Updates."
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		
Consolidated Edison Co. of NY, Inc.	Yes	Project 2010-17 has now identified a Phase 2 to this project. This continuation of that effort is not mentioned, listed separately or prioritized. It should receive high priority in order to assure that several key issues identified for Phase 2 and impacting the Bulk Electric System Definition are resolved promptly, e.g., genertor threshold, point of demarcation, contiguous, etc.
Response: The Standards Committee has elected to not treat this as a separate project – rather, this second phase is being treated as a continuation of the existing project and the team's work. As such, the work plan reflects this project continuing through 2013.		

Organization	Yes or No	Question 1 Comment
ITC Holdings	Yes	Project 2007-11 Disturbance Monitoring priority should be at the point where it is in development mode and not held off for a minimum of 1½ additional years.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		
Clallam County PUD No.1	No	Process seems to have assigned reasonable priorities.
Response: Thank you for your comment.		
PSEG Services Corp	Yes	2010-03 Modeling Data should be higher. Modeling impacts standards such as TPL. It would also impact BES Definition exclusions and inclusions, which reference the TPL standards. Also, 2010-04 Demand Data is essential to 2010-03. Modeling data includes load data. These projects should be joined. 2008-01 is critical since its implementing a 2003 Blackout report, and 2009-03 is likewise critical regarding disturbance and sabotage reporting.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input. **At this time, the SC intends to keep 2010-03 and 2010-04 as separate projects, However, it will reconsidered that decision as these projects are analyzed further and move closer to development.**		
Progress Energy		
Wisconsin Electric Power Company	Yes	Since the glossary is the backbone of all the standards, it should be updated before 2015.
Response: Thank you for your comments. The SC has assumed that you are referring to the following projects: 2010-08, 2010-16, 2010-17, and 2012-08. The SC has revised the scores on these projects to account for your input.		

Organization	Yes or No	Question 1 Comment
Independent Electricity System Operator	No	

2. Is there anything in the Plan we deferred that can't wait? If yes, please explain.

Summary Consideration: In general, entities were supportive of the Plan, but two suggested specific changes. These changes were incorporated into score changes as summarized in the "general summary" above.

Organization	Yes or No	Question 2 Comment
NAESB Wholesale Electric Quadrant Standards Review Subcommittee	No	
Bonneville Power Administration		
Northeast Power Coordinating Council		
Imperial Irrigation District (IID)	No	
Electric Market Policy	No	
Florida Municipal Power Agency	No	
NERC	No	
Ingleside Cogeneration LP	Yes	See the response to Question 1 above.
Response: Thank you. Please see response to your question 1 comment.		
Consolidated Edison Co. of NY,		

Organization	Yes or No	Question 2 Comment
Inc.		
ITC Holdings	Yes	Project 2007-11 should not be delayed another 1 ½ years. This is due to issues with the existing fill in the blank standard PRC-002-1 which is non FERC approved and PRC-018-1 which is FERC approved. Entities are required to comply with PRC-018-1 but there is no enforcement for the regional entities to provide where DME is required to be installed. Besides being in development, at minimum entities should be provided the responses to the March 2009 comments.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input. **At such time as the project moves into formal development, the responses to comments will be reviewed, modified if necessary, and posted for the industry.**		
Clallam County PUD No.1	No	
PSEG Services Corp	No	
Progress Energy		
Wisconsin Electric Power Company	Yes	Since the glossary is the backbone of all the standards, it should be updated before 2015. Have all the standards received their "every five year" review?
Response: Thank you for your comments. The SC has assumed that you are referring to the following projects: 2010-08, 2010-16, 2010-17, and 2012-08. The SC has revised the scores on these projects to account for your input. **Several standards have not reviewed their "every five year review." Based on current assumptions, there will be a number in 2012 that do not meet this obligation. NERC and the SC are working together to evaluate options for addressing this issue.**		

Organization	Yes or No	Question 2 Comment
Independent Electricity System Operator	No	

3. For six projects, the SC had disagreements regarding the appropriate score for certain key values. The projects are listed below. For specific information, see the projects, the referenced columns, and the specific cells (highlighted in red) in Appendix 1. Do you believe these projects and their associated priorities are adequately reflected in the Plan? If no, please explain.

Project 2007-17 Protection System Maintenance and Testing (column L)
Project 2008-01 Voltage and Reactive Planning and Control (column K)
Project 2009-01 Disturbance and Sabotage Reporting (column L)
Project 2009-03 Emergency Operations (column F)
Project 2009-07 Reliability of Protection Systems (column L)
Project 2010-17 Definition of Bulk Electric System (column L)

Summary Consideration: Entities suggested score modifications for five of the six projects listed. These changes were incorporated into score changes as summarized in the "general summary" above.

Organization	Yes or No	Question 3 Comment
NAESB Wholesale Electric Quadrant Standards Review Subcommittee	Yes	
Bonneville Power Administration		
Northeast Power Coordinating Council		
Imperial Irrigation District (IID)	No	
Electric Market Policy	Yes	

Organization	Yes or No	Question 3 Comment
Florida Municipal Power Agency	No	The EOP standards (Project 2009-03) in general need a lot of work from a clarity / compliance / roles perspective, e.g., BA and TOP requirements are often intermingled, roles and responsibilities are not clear, etc. For instance, EOP-001 Attachment 1 does not identify what functional entity is responsible for each of the tasks. In EOP-002, if the BA is a separate entity from the LSE or DP, there is no requirement in the standards for LSEs to obey the directives of the BA in the same manner as to the RC (IRO-001) and the TOP (TOP-001). EOP-003 on Load Shedding has redundancies with UFLS and UVLS and assigns different functional entities to those systems. EOP-003 is unclear which requirements refer to automatic load shedding and which to manual load shedding. In EOP-005-2 it is unclear if an entity whose system is restored only after "a state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage" is supposed to do anything. Etc. FMPA would rate column K at a 50 since the EOP standards in general are the least clear of all the standards as to roles, responsibilities, and interpretations of certain words (e.g., the failed interpretation of the word "simulation" as used in EOP-005-1 R7). The clarity around what is and what is not BES (Project 2010-17) is probably less than what the scoring indicates. FMPA would rate column L closer to 40. In addition, the clarity of the existing TPL standards is less than what the scoring indicates around the definition of "delayed clearing". FMPA would move this score to something like 33.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		
NERC	No	
Ingleside Cogeneration LP	No	Ingleside Cogeneration LP believes that priorities of Project 2007-17 "Protection System Maintenance and Testing", Project 2009-03 "Emergency Operations", and Project 2010-17 "Definition of the Bulk Electric System" are correctly reflected in the

Organization	Yes or No	Question 3 Comment
		plan. However, in our opinion, Project 2009-01 "Disturbance and Sabotage Reporting" should be taken out of the "Active" listing. There is already a significant overlap between this project and that of the Events Analysis Working Group (EAWG) - which should managed in one place or the other. Even beyond the duplication of effort, there is only a secondary reliability benefit in the dissemination of reporting information to regulatory bodies; which should not precedence over more pressing activities. Lastly, Project 2008-01 "Voltage and Reactive Planning and Control" and Project 2009-07 "Reliability of Protection Systems" are appropriately under consideration in the 2013 work plan. Ingleside Cogeneration LP believes that next year's prioritization process may drive their priority down as there is so much related Protection System and frequency control Standards development already underway. Once complete, there is a good chance that both of these projects will be less pressing
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		
Consolidated Edison Co. of NY, Inc.		
ITC Holdings		
Clallam County PUD No.1	Yes	
PSEG Services Corp	No	The SC should not be assiging scores to items that require a technical background. 2008-01 should be a 50 in col. K; 2009-01 should be a 50 in col. L; 2009-03 should be 100 in col. F. Bothe 2009-07 and 2010-17 should be NA (0) in col. L since that refers to interpretations. 2009-01 is a new std and 2010-17 is a new definition.

Organization	Yes or No	Question 3 Comment
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input. **The SC members were asked to solicit input from colleagues within the industry segments they represented. Accordingly, while the SC members provided input, it was expected their input would represent the interests of those segments based on their collective segment expertise.**		
Progress Energy		
Wisconsin Electric Power Company		
Independent Electricity System Operator	No	We are somewhat surprised at the ranking of Project 2008-01, given the impact that deficiencies in reactive power resources had during the blackout and the fact that this project supports a blackout recommendation. We would have expected this to be started in 2012 and not 2013.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		

4. Please provide any additional comments you would care to offer.

Summary Consideration: Several entities did not suggest changes, but asked clarifying questions, which were answered. Some entities suggested specific prioritization or plan changes; these changes were incorporated into score changes as summarized in the "general summary" above. Some typographical errors were noted and corrected.

Organization	Yes or No	Question 4 Comment
NAESB Wholesale Electric Quadrant Standards Review Subcommittee		a) The WEQ SRS recommends that NAESB express no opinion regarding the ordering of projects as none of the projects in the list have an effect on NAESB activities.b) The WEQ SRS recommends that NAESB ask why BAL-003 is included in the Project 2010-14.1 summary section, but is not listed as an affected standard.
Response: Thank you for your comment. In the case of Project 2010-14.1, the project is will not be making changes to BAL-003, but the new standard being developed will have some impact on BAL-003. Accordingly, the description indicates that it will "support" BAL-003, but the project is not itself proposing changes to BAL-003.		
Bonneville Power Administration		
Northeast Power Coordinating Council		Editorial comments: Page 1--in the fourth bullet down, "he" should be replaced with "the". Page 7--in the paragraph entitled "Five-Year Review Obligation", fourth sentence, replace "f" with "of". Page 14--the second bullet under "Additional Projects in 2013:", replace "Panning" with "Planning".On page 4, in the section "Completed Standards Development Projects", 2007â€07 Vegetation Management should be removed if it hasn't been Board of Trustees approved.
Response: Thank you for your comments. Your suggested changes have been made.		

Organization	Yes or No	Question 4 Comment
Imperial Irrigation District (IID)		
Electric Market Policy		
Florida Municipal Power Agency		FMPA supports this approach and appreciates the work of the Standards Committee to set realistic priorities.
Response: Thank you for your comment.		
NERC		
Ingleside Cogeneration LP		The sheer magnitude of the number of Reliability Standards already in place and planned over the next few years should bring us all pause. Already, Ingleside Cogeneration LP expends significant dollars and resources to demonstrate compliance to requirements which we believe serves little to improve BES reliability in any significant manner.
Response: Thank you for your comment.		
Consolidated Edison Co. of NY, Inc.		Page 10: In the section on Project Implementation, the last step is the Closing. Should there be a step prior to Closing called Submission to and Approval by FERC? This may trigger in most cases additional work before the project can be Closed before it is actually over, and this is not being captured. Page 1: 4th bullet typo “the”Page 4: Vegetation Management Standard should be removed from list if not BOT approved. Page 7 typo “of” 3rd paragraphPage 14 type 2nd bullet “Planning”
Response:Thank you for your comments. The errors you noted have been corrected.		
ITC Holdings		

Organization	Yes or No	Question 4 Comment
Clallam County PUD No.1		No additional comments
PSEG Services Corp		2009-05 Resource Adequacy Assessments can be deleted. The Plannning Committee has implemented such assessments - discuss with Chair Jeff Mitchell; also Paul Kure who was the chair of the G&T Reliability Modeling Planning TF, and Kevan Jefferies who was the chair of the Resource Issues Subcommittee that is implementing the assessments. Ths plan itself is not very coherent. I would prefer to see a plan for each standards grouping - i.e., CIPC, TPL, etc. Those should be developed by the technical committees in conjunction with the SC. In my opinion, while the SC has members with excellent technical background, it is a process committee, and should defer to technical committees on technical matters, including filling in the scores on the prioritization work plan.
Response: Thank you for your comments. The SC will discuss your suggestion regarding 2009-05 with the Planning Committee chair as you have suggested. **Presenting a complex, multi-year plan can be done in a number of ways. The suggestions offered will be considered for the 2013-2015 Plan. Additionally, the Standards Committee will reach out to the technical committees earlier to solicit their assistance in the development of that plan.**		
Progress Energy		1. p. 7, Chapter 3 - General, ¶ 1: the Rapid Development acceleration approach is explained, and supposedly initial trial runs of the approach have yielded "useful lessons learned". What specifically has been learned? This approach to push through a new Standard directive needs a fair amount of review, scrutiny and appraisal by the industry. **Response: The Plan is intended only to provide a brief summary of the Standards programs efforts, and not an exhaustive review of all the lessons learned from the current test effort.** **As the body having oversight of the Standards Development Process, the SC agrees**

Organization	Yes or No	Question 4 Comment
		that appropriate levels of review, scrutiny, and appraisal are necessary. It should be recognized that everything within the Rapid Development approach was specifically designed to be s fully compliant with NERC's Standards Processes Manual (SPM). 2. p. 7, Chapter 3 - General, ¶ 2: the Rapid Revision acceleration approach is also explained, and it is stated that if "an interpretation drafting team identifies simple modifications to a standard that can more effectively address an interpretation request than an interpretation can alone, the team may elect to make such changes and submit them with an associated SAR". An interpretation is not asking for a Standard revision, it is asking for an interpretation, and nothing else. Using the revising of a Standard to give an interpretation will lead to new problems and new requests for interpretation of the newly-revised Standard. **Response: The Submitter of the Request for Interpretation must agree to the use of this new approach if it is to be used in place of an Interpretation. The text in the plan has been updated to indicate this.** 3. p. 7, Chapter 3 - General, ¶ on "Product Quality": Among other things, "enhanced training" is suggested for improving NERC's product quality. We suggest that the bulk of that training needs to be technical in nature, i.e. it needs to enhance drafting team members' knowledge of particular aspects of operating the Bulk Electric System. People can be trained to be the best writers in the world, but the product will still suffer if the technical knowledge is not there. We respectfully submit that this issue has not been adequately addressed by NERC. **Response: NERC assembles its drafting team members based on their experience, and does not believe it would be appropriate for NERC to explicitly seek to train drafting members in their areas of expertise as a function of standards development. To the extent that this is desired, the SC suggests that the commenter provide input into the development of NERC's Business Plan and Budget.**

Organization	Yes or No	Question 4 Comment
		4. p. 8, Chapter 3 - General, "Conclusion": NERC states that the "SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity, all while making sure to consider the implications of cost". We would respectfully submit that true cost of developing NERC Standards has not been adequately addressed from the following standpoints: a. Benefit to the ratepayers b. Benefit to future projects that have insufficiently defined scope at present c. Cost versus benefit **Response: This Plan does not assert that it has analyzed "true" cost. As described in Appendix 1, the "Cost Consideration" metric was used as a subjective review of industry cost and reliability benefit, with the intent of identifying any outliers in which the costs and benefits seemed unusually disproportionate. The SC agrees that this is not an extensive analysis, but it does represent the first such analysis that we are aware of. However, we have rewritten this sentence to reduce the chance of any similar misinterpretations.** 5. p. 9, Chapter 4 - Project Development Overview, ¶ 2: A statement is made that the Prioritization Tool includes "the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability". We respectfully submit that it is not appropriate for the NERC President to have such unilateral authority. **Response: This score demonstrates the manner in which the strategic leadership of NERC (though its president and Board of Trustees) is accounted for in this plan. The SC firmly believes that such coordination is both necessary and appropriate. It should be noted that, as stated in the president's document, the issues were "offered as a starting point for discussion with industry experts." It is the SC's understanding that those priorities will change over time based on such discussions.** 6. p. 10, Chapter 4 - Project Development Overview, 1st complete ¶: An example is

Organization	Yes or No	Question 4 Comment
		cited regarding work management that "projects related to protection systems were generally not started until another project related to protection systems was completed". This demonstrates one of our highest concerns: NERC is trying to take on too much at once. We understand and respect the underlying issues influencing this, but given that the work management struggle is being clearly addressed in this Plan we suggest that this needs to be given more serious consideration. **Response: This Plan is a short-term (1 to 3 year) strategy for addressing the most significant reliability threats we face. NERC and the SC are open to suggestions for alternative approaches.**
Response: Thank you for your comments. Please see embedded responses above.		
Wisconsin Electric Power Company		
Independent Electricity System Operator		The reliability score of Project 2007-11 also appears somewhat low, perhaps because it has no direct or immediate reliability impact. After the fact analysis based on the data captured by properly placed and sufficient number of DMEs will however prove invaluable in providing lessons learned and guiding future industry actions. We suggest that the scores for this project should be reviewed.
Response: Thank you for your comments. The SC has revised the scores on these projects to account for your input.		

END OF REPORT

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Standards Development Plan

2012-2014

This version of the 2012-2014 Reliability Standards Development Plan was reviewed and approved by the Standards Committee, pending specific changes directed at that meeting.

October 13, 2011
For SC Approval

RELIABILITY | ACCOUNTABILITY

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Table of Contents

Table of Contents ii

Chapter 1 – Executive Summary 1

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards 2

Chapter 3 - General 4

Status Updates 4

2011 Reorganization and Hiring 4

Completed Standards Development Projects 5

Progress on Version Zero Standards 5

Interpretations of Reliability Standards 6

Progress on Regulatory Directives 6

Regional Standards Development 7

Rapid Development and Rapid Revision Projects 7

Challenges facing Standards 8

Five-Year Review Obligation 8

Product Quality 8

Standards Program Throughput 8

Conclusion 9

Chapter 4 – Project Development Overview 10

Project Prioritization and Plan Development 10

Project Implementation 11

Chapter 5 – Project Work Plan Summary 13

Projects for 2012-2014 13

Projects for 2015 and Beyond 16
Appendix 1 - Prioritization 18
Appendix 2 – Work Plan 38
Appendix 3 – Regional Work Plan 38
Appendix 4 – Project Summaries 40
Project 2006-06 Reliability Coordination 41
Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003 42
Project 2007-02 Operating Personnel Communication Protocols 43
Project 2007-03 Real-time Transmission Operations 44
Project 2007-06 System Protection Coordination 45
Project 2007-07 Vegetation Management 46
Project 2007-09 Generator Verification 47
Project 2007-11 Disturbance Monitoring 48
Project 2007-12 Frequency Response 49
Project 2007-17 Protection System Maintenance and Testing 50
Project 2008-01 Voltage and Reactive Planning and Control 51
Project 2008-02 Undervoltage Load Shedding 52
Project 2008-06 Cyber Security – Order 706 53
Project 2008-12 Coordinate Interchange Standards 54
Project 2009-01 Disturbance and Sabotage Reporting 55
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities 56
Project 2009-03 Emergency Operations 57
Project 2009-04 Phasor Measurements 58
Project 2009-05 Resource Adequacy Assessments 59
Project 2009-07 Reliability of Protection Systems 60

Project 2010-01 Support Personnel Training 61

Project 2010-02 Connecting New Facilities to the Grid..... 62

Project 2010-03 Modeling Data..... 63

Project 2010-04 Demand Data 64

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations 65

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS..... 66

Project 2010-07 Generator Requirements at the Transmission Interface 67

Project 2010-08 Functional Glossary Model Revisions 68

Project 2010-13.2 Phase 2 of Relay Loadability: Generation 69

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings 70

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves 71

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent 72

Project 2010-16 Definition of System Operator 73

Project 2010-17 Definition of Bulk Electric System 74

Project 2012-01 Equipment Monitoring and Diagnostic Devices..... 75

Project 2012-02 Physical Protection..... 76

Project 2012-03 PRC-004 VSLs..... 77

Project 2012-04 Protection System Commissioning Testing..... 78

Project 2012-05 ATC Revisions - Order 729..... 79

Project 2012-06 Generator Capabilities 80

Project 2012-07 Obsolescence Review..... 81

Project 2012-08 Glossary Updates 82

Project 2012-09 IRO Review 83

Project 2012-11 FAC Review..... 84

Project 2012-12 PER Review..... 85

Project 2012-13 NUC Review 86

Project 2012-14 Risk Analysis 87

Project 2012-15 Flow Limited Paths 88

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements 89

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Mis-operations of Transmission and Generation Protection Systems 90

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program..... 91

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions 92

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program 93

PRC-012-NPCC-1 — Special Protection Systems 94

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability 95

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability 96

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements 97

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements 98

PRC-012-RFC-1 — Special Protection System Requirements 99

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements 100

PRC-006-SPP-1 — Under Frequency Load Shedding 101

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection 102

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region..... 103

BAL-002-WECC-1 — Contingency Reserves..... 104

BAL-004-WECC-1 — Automatic Time Error Correction 105

VAR-001-WECC-1 — Voltage and Reactive Control..... 106

Chapter 1 – Executive Summary

This document provides an update on the status of Standards Development work at NERC, as well as a forecast of work being planned for 2012-2014. The document has several sections:

- Chapter 1 contains this Executive Summary
- Chapter 2 contains introductory remarks from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards
- Chapter 3 provides a general update on Standards Activities in 2011
- Chapter 4 provides a summary of the development of this document and the implementation of projects in general.
- Chapter 5 provides a summary of the Work Plan
- Appendix 1 shows the prioritization scores used in the development of the Work Plan
- Appendix 2 shows the Work Plan in Gantt chart form
- Appendix 3 shows the Regional Work Plan in Gantt chart form
- Appendix 4 provides brief summaries of all the projects proposed within the Work Plan

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards

<to be added>

Chapter 3 - General

This is the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The Plan provides several items of information to its readers:

- Information regarding the state of Standards at NERC, changes in Standards, and challenges facing Standards in the years to come
- Status updates regarding standards and related projects currently in development
- A forecast of Standards Development work scheduled for the next three years
- An overview of the process used to prioritize work and assign resources to Standards development projects

NERC Standards staff endeavors to maintain a complete, updated set of Standards information on the NERC website, which can be found at www.nerc.com.

The Standards Program continues to manage its ongoing load of work in order to move toward the target work load levels identified in early 2011. Progress is being made in this area; however, some projects expected to be completed in 2011 are still in active development. This is largely due to unforeseen complications regarding achieving consensus and managing overall product quality.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, other priorities may necessitate deviations from this plan. As new technologies are discovered or new threats to reliability identified, the actual deployment of resources to staff this plan may shift. Similarly, the estimated times listed for project completion may change as more is learned about a given project.

Status Updates

2011 Reorganization and Hiring

In early 2011, NERC performed a minor reorganization of the Standards staff in order to ensure appropriate focus on key areas. A new position, Director of Regulatory Initiatives, was established to ensure overall coordination between NERC and its various regulators. NERC also established a Manager of Standards Information, with the primary focus of ensuring that information posted on the NERC website accurately reflects the current body of Standards and associated compliance information. Additional staff was hired into the Standards Process, Standards Development, and Regional Standards teams to better support the volume of work ongoing within the Standards Program.

Completed Standards Development Projects

In 2011, NERC completed development of the following projects.

- 2006-02 Assess Transmission and Future Needs (BOT approved, awaiting filing)
- 2007-04 Certifying System Operators (filed with regulators)
- 2008-06 Cyber Security Order 706 Version 4 (filed with regulators)
- 2009-06 Facility Ratings (filed with regulators)
- 2010-10 FAC 729 (filed with regulators)
- 2010-11 TPL Table 1 Footnote B (filed with regulators)
- 2010-13 Relay Loadability Order Phase 1 (filed with regulators)

Progress on Version Zero Standards

The set of Version 0 standards included 110 standards. Of the 110 standards, NERC withdrew three, and the Federal Energy Regulatory Commission (FERC) ruled on the remaining 107 as follows:

- 27 were approved without any directives to modify the associated standard
- 56 were approved with directives to modify the associated standard
- 24 were not approved, pending provision of additional information.

Of the 56 that were approved with directives, progress in revising those standards includes:

- 7 have been approved by FERC
- 9 have been submitted and are pending FERC approval
- 18 are associated with projects under active development
- 22 are associated with projects that are either inactive or not started

Of the 24 that were not approved pending submittal of additional information, progress in revising those standards includes:

- 8 have been approved by FERC
- 4 have been submitted and are pending FERC approval
- 2 are associated with projects under active development
- 10 are associated with projects that are either inactive or not started

As of September 1, 2011, there are 103 Reliability Standards with 1220 requirements that are mandatory and enforceable in the United States.[1]

Interpretations of Reliability Standards

Entities required to comply with a reliability standard have the right to request a formal interpretation of a requirement in a standard. Interpretation projects generally are narrower in scope than other standards projects, but like standards, interpretations are drafted by a drafting team and posted for industry review and ballot. From 2006 to 2011, NERC processed 43 interpretation requests. In addition, NERC received a number of requests for interpretation that were absorbed into standards development projects because drafting teams could not prepare the interpretations without expanding the requirements of the approved standard.

Progress on Regulatory Directives

Since NERC became the Electric Reliability organization (ERO), FERC has issued 44 Orders containing approximately 655 directives related to NERC Reliability Standards. Of the approximately 655 directives issued since 2007, NERC has completed projects associated with approximately 44% of these directives and continues to make substantial progress in addressing the remaining directives focusing first on those that have the greatest impact on reliability.

A significant number of the directives ordered by FERC for implementation by NERC (as the FERC-approved ERO) specify that NERC submit or modify a Reliability Standard that addresses a specific matter, as permitted under Section 215(d)(5) of the Federal Power Act. Other directives order NERC to make changes in its procedural rules. Still other directives order NERC to consider the views of various commenters when NERC next revises a particular Reliability Standard.

NERC processes these various types of directives consistent with its Rules of Procedure (including Appendices 3A- Standard Processes Manual and 3C Procedure for Coordinating Reliability Standards). Specifically, when a regulatory order or rule is issued, that order is reviewed and any directives within the order related to standards development are added to the NERC Standards Issues Database and categorized. NERC then seeks to associate each directive with a specific standard. Projects and the associated Standards, along with the associated regulatory directives, are then prioritized for revision using the prioritization process described elsewhere in this document.

In 2011, NERC developed and filed the first NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. This report is to be filed annually with FERC on or before March 31 of each year consistent with in accordance with Section 321.6 of the NERC Rules of

[1] The data included in this paragraph does not include Regional Reliability Standards.

Procedure ("Rule 321") that was approved by the FERC on March 17, 2011. The progress against the directives issued is outlined in the aforementioned report.

Regional Standards Development

Regional standards work within NERC and the Regions has seen a great deal of development and implementation of new initiatives since the beginning of 2011. First, the Regional Reliability Standards Working Group (RRSWG) transitioned into the Regional Standards Group (RSG). Comprised of the NERC Vice President and Director of Standards and the Standards Managers from each of the eight Regional Entities, the RSG reports to the ERO Executive Management Group (EMG). Its purpose is to provide process and policy recommendations in the execution of the Regional Entity delegation agreements and the NERC Rules of Procedure. An overarching objective is to coordinate the development of Regional and continent-wide standards to support and continually enhance reliability across North America for the benefit of all bulk electric system users, owners, and operators.

In support of this purpose and this objective, a primary initiative of the RSG is to create and sustain viable standards development coordination processes to obtain consistency and uniformity, where appropriate, across the ERO enterprise – NERC and the Regional Entities – while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO as the reliability standards development authority. To that end, the RSG developed a combined list of all regional standards and variances in the development process in order to prioritize these projects continent-wide. This will allow NERC to coordinate the necessary resources through the development and ultimate filing of these standards and variances with applicable regulatory authorities. Project information for each of those regional standards and variances in the development process is provided in this Plan, along with a high-level overview of the project timeline.

Rapid Development and Rapid Revision Projects

NERC's Standards Committee (SC) has tentatively identified two ways to accelerate project development while staying within the boundaries established in the Standard Processes Manual. Both approaches are consistent with the original vision of standards development when the ERO was being developed.

The first, called "Rapid Development," utilizes a small team of professionals to draft a standard over a short, but intensive period of time. The standard is then submitted with its associated SAR and the project moves directly into the first formal comment phase. Under this model, it may be possible to develop and ballot a standard within a period less than a year. The SC is evaluating the approach as part of Project 2010.05.1 Phase 1 of Protection Systems: Misoperations. Initial results have provided useful lessons learned, including the need to carefully select members of the small team to ensure not just subject matter expertise, but balance of interests as well.

The second approach, called "Rapid Revision," takes a similar approach, but is focused on dealing with concerns identified during the Interpretation process. If an interpretation drafting team identifies simple modifications to a standard that can more effectively address an interpretation request than an interpretation can alone, the team may propose to the requester that the team instead make such changes and submit them with an associated SAR. If agreed to be the requester, and following SC review, the changes may move directly to comment and ballot. This approach is being tested with project 2011-INT-01 Interpretation of MOD-028-1 R3.1 for Florida Power and Light.

Challenges facing Standards

Five-Year Review Obligation

As part of its ANSI accreditation, NERC has committed to review each of its standards for modification once every five years. While not giving the appearance of being onerous, this obligation has proven challenging to meet. 2012 marks the fifth year since NERC's first set of standards became mandatory and enforceable in the United States; many of those standards are now due for that five-year review. However, the work load of the ERO remains high, and prioritization has resulted in a deferral of the work required for these five-year reviews except when already associated with a project of reliability value. Using current assumptions, the five-year review obligation will not be met for a number of standards. NERC and the SC are working together to evaluate options for addressing this issue.

Product Quality

As NERC's and the industry's experience with standards has continued, it has become increasingly clear that minor problems with the quality of standards can have significant repercussions when it comes to clarity and compliance. NERC has undertaken efforts to improve the quality of its work products, and will continue to do so in 2012. Steps being taken include creating technical writer positions, enhanced training for staff, and developing additional internal quality assurance processes.

Standards Program Throughput

One continuing challenge is the ability to not only produce quality products, but to do so consistently and regularly. While in some cases limited by necessity due to the scarcity of industry resources available in the workforce, the Standards Program continues to look for ways to improve the efficiency of its processes and its ability to demonstrate tangible progress in standards development on a regular basis. In 2012, Standards staff will be implementing enhanced document management capabilities, as well as portfolio-level project controls to ensure optimal use of resources and overall consistency of throughput. This more global "portfolio view" was used to in part to develop this Plan, but additional improvements are expected in 2012 as well. As such, it should be noted that this, in addition to the normal variables associated with consensus-based product development, may lead to changes in the schedules used to develop the forecasts within this document

Conclusion

The Standards Program continues to make changes to improve its overall effectiveness, and looks forward to additional improvements in 2012. The SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity. Additionally, the plan was developed with the use of a subjective review of the implications of cost. NERC believes altogether, this approach correctly balances the needs of the industry with the public interest, and will continue to work with the industry to ensure the continued protection of reliability in North America.

Chapter 4 – Project Development Overview

Project Prioritization and Plan Development

This year, NERC continued use of the Prioritization Tool (the Tool) developed by the Standards Committee (SC) in late 2010 and early 2011 to help determine how best to assign resources and perform work. Following the finalization of the 2011-2013 Plan, the Standards Committee's Process Subcommittee (SCPS) began to work on improving the Tool for use in the development of the 2012-2014 Plan.

Similar to last year, the Tool utilizes a simple scoring mechanism to identify key considerations for use in determining project priority. Revisions were made to the tool in response to comments received during the development of the 2011-2013 Plan. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (as there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability, and trial testing of a new metric that accounts for "cost considerations." In addition, the tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the SC to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources.

During the month of July 2011, NERC solicited the industry at-large for additional projects for consideration in the 2012-2014 Plan. NERC received nine submissions, resulting in the creation of six new projects. NERC created one project to account for the remaining Order 729 directives yet to be resolved, and one project to account for issues with the MOD-029-01 standard that will need to be addressed at some point in the future. NERC created four additional projects to account for projects to modify standard based on NERC's five-year review obligation, as identified in its Rules of Procedure.

In August, the SC began reviewing each of these projects, assigning them various scores based on input from constituents within their respective segments. NERC staff assembled the results in September, and an initial Prioritization and Work Plan was approved for posting at the September meeting of the SC. This Work Plan assumed an overall throughput capability of thirteen projects in development concurrently, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.

- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The Work Plan identified each project and the amount of work associated with it, then allocated projects in their respective areas in order or priority as resources came available. Some projects were identified that needed additional research, and were scheduled for initiation with sufficient time to allow such work to be completed. Additionally, some projects require specific expertise. To the extent such needs were identified, that expertise was managed to ensure the volume of work did not exceed the resource capacity. For example, projects related to protection systems were generally not started until another project related to protection systems was completed.

This Work Plan, along with the prioritization itself and this document in draft form, were posted for industry comment in September. Comments were received and considered at the October 2011 SCPS meeting; the final prioritization and Plan was approved by the SC at its October meeting. The Plan was presented to NERC' Board of Trustees and was approved at the Board's November meeting.

Project Implementation

Standards development projects at NERC proceed through a specific set of steps, identified in NERC's Standard Processes Manual. In general, the process can be summarized as follows:

- Initiation – projects are identified, and simple problem statements are developed. These problem statements are used to assist in the overall project prioritization effort described above.
- Planning – projects are further developed to determine their scope and merits. The drafting of a formal Standards Authorization Request (SAR) occurs in this step, as well as the development of communication plans if deemed to be necessary. In some cases, this step may occur concurrently with the initial steps of Execution and Control.
- Execution and Control – once the SC has approved a project for moving into this phase, standards or other work products are produced and the project begins moving forward in earnest. A detailed project schedule is developed, and standards are drafted, posted for comment, and balloted, culminating in review by NERC's Board of Trustees for adoption.
- Regulatory Submission - Following adoption by NERC's Board of Trustees, the stadnards are submitted to regulatory aurhorityt

- Closing – Following action by NERC's Board of Trustees, the project is reviewed and analyzed for "lessons learned." Public information is updated as necessary, and any associated regulatory filings are made.

For more information on the specific details of each step in the implementation of projects to develop NERC Reliability Standards, readers are directed to various resources posted at the NERC Standards Resources page:

http://www.nerc.com/commondocs.php?cd=2

Chapter 5 – Project Work Plan Summary

This chapter summarizes the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The following is based on the Standards Committee's Prioritization of Projects (included as Appendix 1) and the associated staff-developed Work Plan (included as Appendix 2). The Regional Work Plan is included as Appendix 3. A detailed summary of projects, including regional projects, is included as Appendix 4.

Projects for 2012-2014

NERC intends to continue development of the following projects in 2012. These are Active projects, and are expected to continue until completion. Although there are other projects that ranked higher this year than some of these projects, the Standards Committee believes that the industry has committed to completing these projects, and given that the workload is reaching a manageable size, moving any of these projects into informal development would be counterproductive.

The projects below have been color coded, to indicate their focus area (Reliability, Time Sensitivity, or Practicality). While most projects impact all three of these areas in some way, this is intended to illustrate the primary consideration driving its consideration.

Existing Active Projects:

- 2006-06 Reliability Coordination. This project ranked #13 in Reliability Priority.
- 2007-02 Operating Personnel Communication Protocols. This project ranked #5 in Reliability Priority.
- 2007-03 Real-time Transmission Operations. This project ranked #4 in Practicality Priority.
- 2007-06 Protection System Coordination. This project ranked #4 in Reliability Priority.
- 2007-07 Vegetation Management. This project is expected to complete in 2012, but at the time of this document's finalization, it has not yet been formally completed.
- 2007-09 Generator Verification.
- 2007-12 Frequency Response. This project ranked #10 in Reliability Priority, and was tied for #2 in Time Sensitivity Priority.
- 2007-17 Protection System Maintenance and Testing. This project ranked #3 in Reliability Priority.
- 2008-06 Cyber Security – Order 706. This project ranked #2 in Reliability Priority.
- 2009-01 Disturbance and Sabotage Reporting. This project ranked #8 in Reliability Priority.
- 2010-05.1 Phase 1 of Protection Systems: Misoperations. This project ranked #7 in Reliability Priority.
- 2010-07 Generator Requirements at the Transmission Interface. This project ranked #13 in Practicality Priority, and was tied for #2 in Time Sensitivity Priority.

- 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves. This project ranked #1 in Time Sensitivity Priority, and #2 in Practicality Priority.
- 2010-17 Definition of Bulk Electric System. This project ranked #10 in Reliability Priority, and was tied for #2 in Time Sensitivity Priority.

NERC intends to initiate development of the following additional projects in 2012. These projects have been assigned based on priority, but constrained by the need to have a limited number of projects under active development at any given time. Project 2010-05.2 is not schedule to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. 2012-04 is not starting until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

While this Plan is a reasonable approach to Standards development, it cannot account for unforeseen events. The Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and factors such new or emerging reliability risks to the Bulk Electric System. Changes to the Plan during its execution are not only possible, but likely, and should be expected.

Additional Projects in 2012:

- 2008-02 Undervoltage Load Shedding. This project ranked #14 in Reliability Priority, and is expected to be started upon the completion of 2006-06 Reliability Coordination.
- 2009-02 Real-time Monitoring and Analysis Capabilities. This project ranked #1 in Practicality Priority, and is expected to be started upon the completion of 2007-03 Real-time Transmission Operations.
- 2009-03 Emergency Operations. This project ranked #4 in Practicality Priority, and is expected to be started upon the completion of 2008-06 Cyber Security – Order 706.
- 2010-01 Support Personnel Training. This project ranked #15 in Reliability Priority, and is expected to be started upon the completion of 2009-01 Disturbance and Sabotage Reporting.
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS. This project ranked #11 in Reliability Priority, and is expected to be started upon the completion of the first phase of the project, 2010-05.1 Phase 1 of Protection Systems: Misoperations.
- 2010-13.2 Phase 2 of Relay Loadability: Generation. This project has been identified as having a higher priority, as it has a FERC deadline. While this was accounted for in the Prioritization, the SC agreed that this should take precedence over the 5-year review projects considered in the Prioritization. This project is expected to be started upon the completion of 2007-12 Frequency Response.

- 2012-04 Protection System Commissioning Testing. This project ranked #9 in Reliability Priority, and is expected to be started upon the completion of 2007-17 Protection System Maintenance and Testing

NERC intends to initiate development of the following projects in 2013. As noted above, these projects have generally been assigned based on priority and constrained by the need to have a limited number of projects under active development at any given time. 2012-06 is not starting until 2013 due to the need for subject matter expertise in reserves and in generator characteristics, which are already committed to projects 2010-14.1 and 2007-09, respectively. 2009-07 is not starting until 2013 due to the need for subject matter expertise in protection systems, which is already committed to project 2007-06.

Additional Projects in 2013:

- 2007-11 Disturbance Monitoring. This project is expected to start upon completion of 2010-17 Definition of Bulk Electric System.
- 2008-01 Voltage and Reactive Planning and Control. This project ranked #3 in practicality, and is expected to start upon completion of 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves
- 2008-12 Coordinate Interchange Standards. This project is expected to start upon completion of 2010-07 Generator Requirements at the Transmission Interface.
- 2009-07 Reliability of Protection Systems. This project ranked #1 in Reliability Priority, and is expected to start upon completion of 2007-06 Protection System Coordination.
- 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent. This project is expected to start upon completion of 2009-02 Real-time Monitoring and Analysis Capabilities.
- 2012-01 Equipment Monitoring and Diagnostic Devices. This project is expected to start upon completion of 2007-02 Operating Personnel Communication Protocols.
- 2012-06 Generator Capabilities. This project ranked #6 in Reliability Priority, and is expected to start upon completion of both 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves and 2007-09 Generator Verification.

NERC intends to initiate development of the following projects in 2014. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. In general, these projects are not projected to be initiated until 2014 due to the need to limit the number of projects active at any given time. 2010-13.3 is not projected to start until 2014 due to the need for subject matter expertise in relay loadability, which is already committed to Phase 2 of the project.

Additional Projects in 2014:

- 2009-04 Phasor Measurements. This project is expected to start upon completion of 2009-03 Emergency Operations.
- 2009-05 Resource Adequacy Assessments. This project is expected to start upon completion of 2012-04 Protection System Commissioning Testing.
- 2010-03 Modeling Data. This project is expected to start upon completion of 2008-01 Voltage and Reactive Panning and Control.
- 2010-04 Demand Data. This project is expected to start upon completion of 2010-05.2 Phase 2 of Protection Systems: SPS and RAS.
- 2010-08 Functional Glossary Model Revisions. This project is expected to start upon completion of 2010-01 Support Personnel Training.
- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings. This project is expected to start upon completion of the second phase of this project, 2010-13.2 Phase 2 of Relay Loadability: Generation.
- 2010-16 Definition of System Operator. This project is expected to start upon completion of 2012-04 Protection System Commissioning Testing.
- 2012-05 ATC Revisions - Order 729. This project is expected to start upon completion of 2008-12 Coordinate Interchange Standards.

Projects for 2015 and Beyond

NERC intends to develop the following projects in 2015 or later, which is beyond the scope of this Plan. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. There is also some question as to whether or not they will provide sufficient value to be cost justified at this time. They have been included for completeness and to ensure that they are recognized as necessary projects.

It should be noted that several of these projects are related to NERC's ongoing obligation to review its standard every five years, as required in the Rules of Procedure. This is discussed in more detail in the General chapter.

- 2010-02 Connecting New Facilities to the Grid
- 2012-02 Physical Protection
- 2012-03 PRC-004 VSLs
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review

- 2012-12 PER Review
- 2012-13 NUC Review
- 2012-14 Risk Analysis

The following two projects were identified as potential projects for consideration, but not included in the prioritization. If necessary, they will be evaluated mid-year on an ad-hoc basis; otherwise, they will be considered in the prioritization process for the 2013-2015 Reliability Standards Development Plan.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2012-15 Flow Limited Paths

Appendix 1 - Prioritization

The following pages show the project rankings in each of the three primary categories: Reliability, Time Sensitivity, and Practicality. The assignment of scores was based on the mean of individual scores provide by members of the Standards Committee. Scores highlighted in red indicate areas where the members of the SC were divided regarding how to assign a particular score.

Following the identification of potential projects, this prioritization is the next step in the creation of the Reliability Standards Development Plan, and provides a starting point for further discussion. The prioritization is used to create the Work Plan which follows as Appendix 2.

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	7	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	6	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	2	29
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	3	7
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	14	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	11	16
Project 2010-07 Transmission Requirements at the Generator Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	12	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	9	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	19	32

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	37	41
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	4	3
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	16	12
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	15	25
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	8	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	20	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	22	20
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	41	43
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	10	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001- through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	17	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	18	19
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	36	40

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	40	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	42	44
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	13	31
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	38	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	39	24
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	21	33
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	TIME SENSITIVITY SORT							
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Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2010-07 Transmission Requirements at the Generator Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	32
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12

NERC Standards Committee
Project Prioritization Worksheet

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Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	20
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	19
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	31
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23

NERC Standards Committee
Project Prioritization Worksheet

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Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	41
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	43
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	40
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
Project Prioritization Worksheet

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Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative, BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12
Project 2010-07 Transmission Requirements at the Generator Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13

NERC Standards Committee
Project Prioritization Worksheet

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Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	19
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29

NERC Standards Committee
Project Prioritization Worksheet

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Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	30
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	31
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	32
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	40
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	41
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	42
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	43
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

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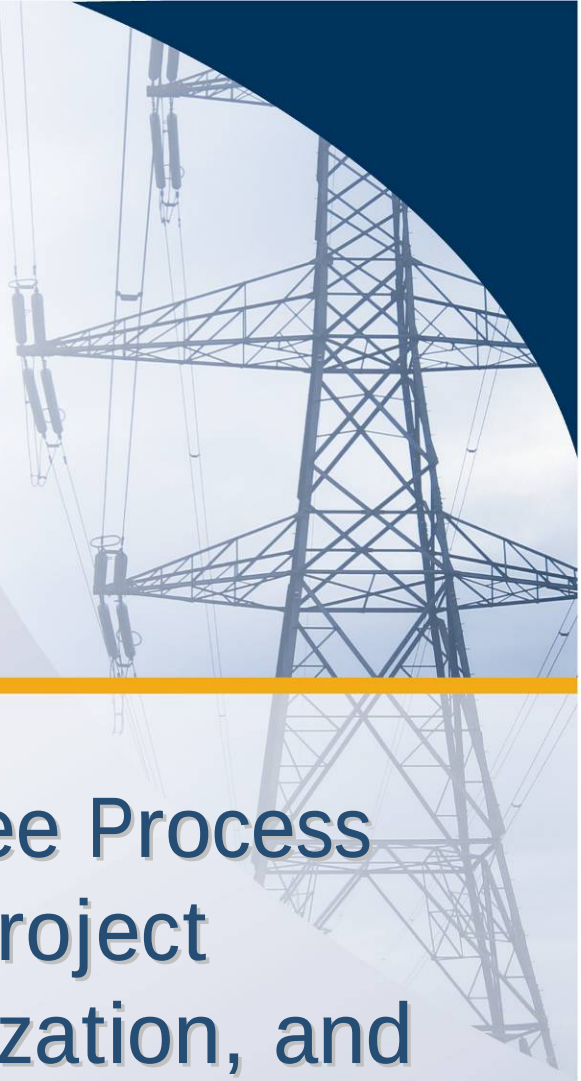

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. **Developing Projects Schedules**

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

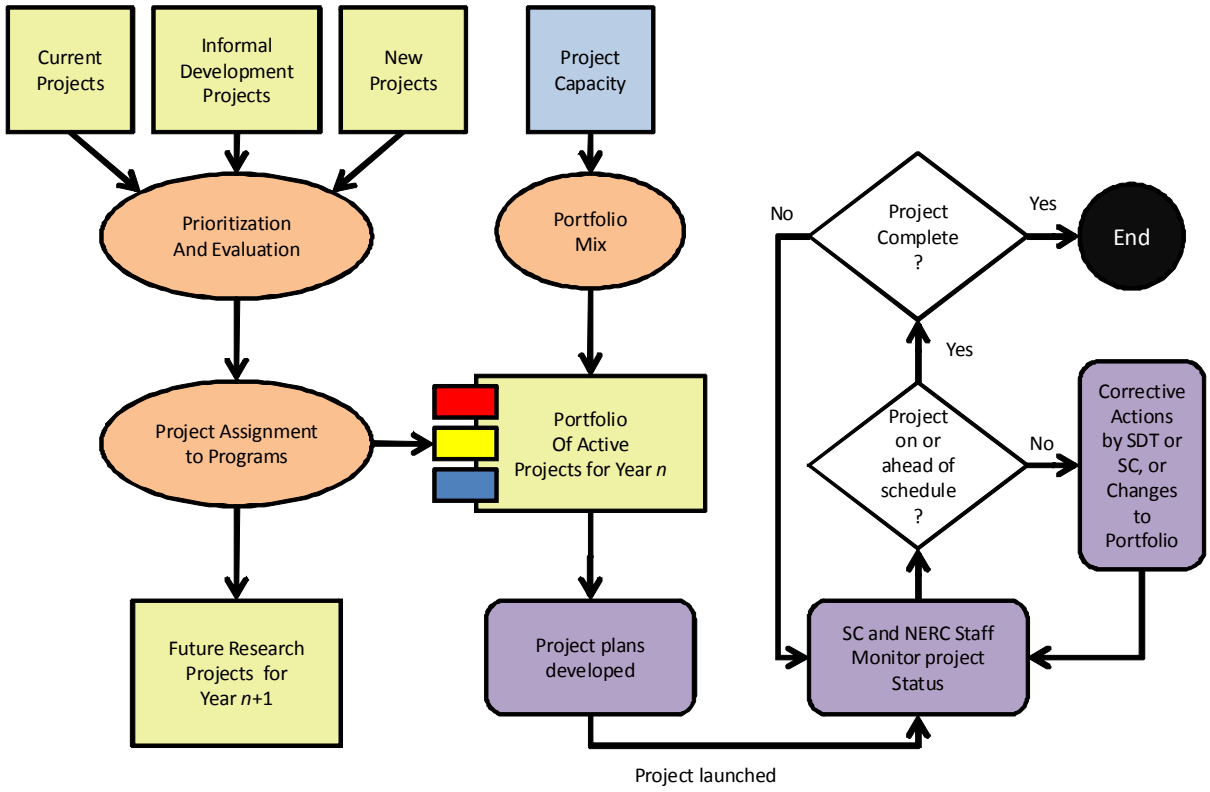
9. **Monitoring Projects**

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
    A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Attachment B: Prioritization Tool

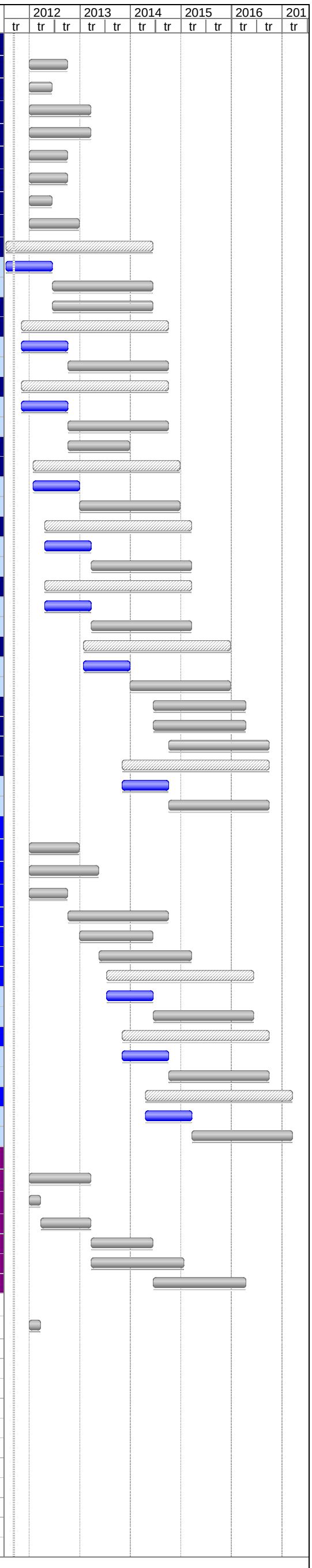
STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	SUMMARY						7	25	3	3
									Cells with this color are blank and need a value entered.				Sort	Sort	Sort	Sort	Sort					
TOTAL RANKING	Project Number and Name	Short Description	Addresses an ERO Strategic Priority (to be completed by NERC Staff) 50 = Yes 0 = No	Addresses a reliability risk not covered by an existing standard 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	Improves one or more existing standards: 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	Cost of Implementation The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Cost of Administration The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Time Sensitivity (to be competed by NERC Staff) Number of months until due date, if any	Addresses compliance issues from NERC Staff or Stakeholders 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	Other Practicality Concern (Explanation for the rating must be indicated in the column to the right) (0 to 50)	Explanation	Reliability Score (0 - 250)	Cost Consideration Score (0 - 100)	Time Sensitivity Score (0 - 100)	Practicality Score (0 - 150)	Total Score (0-600)	TOTAL RANKING	Relaibity Ranking	Cost Consideration Ranking	Time Sensitivity Ranking	Practicality Rnaking
1	Project 2010-13.2 Phase 2 of Relay Loadability: Generation	Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010											0	0	0	0	0	1	1	1	1	1
2	Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings												0	0	0	0	0	2	2	2	2	2
3	Project 2010.05.2 Phase 2 of Protections Systems: SPS and RAS	Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional udpates to PRC-004 as well.											0	0	0	0	0	3	3	3	3	3
4	Project 2010-16 Definition of System Operator												0	0	0	0	0	4	4	4	4	4
5	Project 2007-17 Protection System Maintenance & Testing	Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs; PRC-011-0 — UVLS System Maintenance and Testing; and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn.											0	0	0	0	0	5	5	5	5	5
6	Project 2007-06 System Protection Coordination	Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.											0	0	0	0	0	6	6	6	6	6
7	Project 2007-12 Frequency Response	Requires entities to provide data needed to model each interconnection's frequency response.											0	0	0	0	0	7	7	7	7	7
8	Project 2010-05.1 Phase 1 of Protection Systems: Misoperations	Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not incude SPS and RAS.											0	0	0	0	0	8	8	8	8	8
9	Project 2008-06 Cyber Security - Order 706	This is the second phase (Phase 2) of Project 2008-06 Cyber Security Order 706. The project requires modifications to CIP-002 thru CIP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.											0	0	0	0	0	9	9	9	9	9
10	Project 2010-07 Transmission Requirements at the Generator Interface	This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.											0	0	0	0	0	10	10	10	10	10
11	Project 2009-01 Disturbance and Sabotage Reporting	This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.											0	0	0	0	0	11	11	11	11	11

Appendix 2 – Work Plan

The following page shows the schedule of work in Gantt chart format. Projects for which the Standing Committees will be asked to provide research are identified with blue Gantt chart bars, and have been tentatively allocated a year duration for research (pending feedback from the Standing Committees).

Following the Prioritization, the Work Plan is the next step in the creation of the Reliability Standards Development Plan. It is used primarily to identify project predecessors and ensure resource allocations are consistent and manageable. Once complete, it identifies the estimated start and completion of all projects over the three-year period.

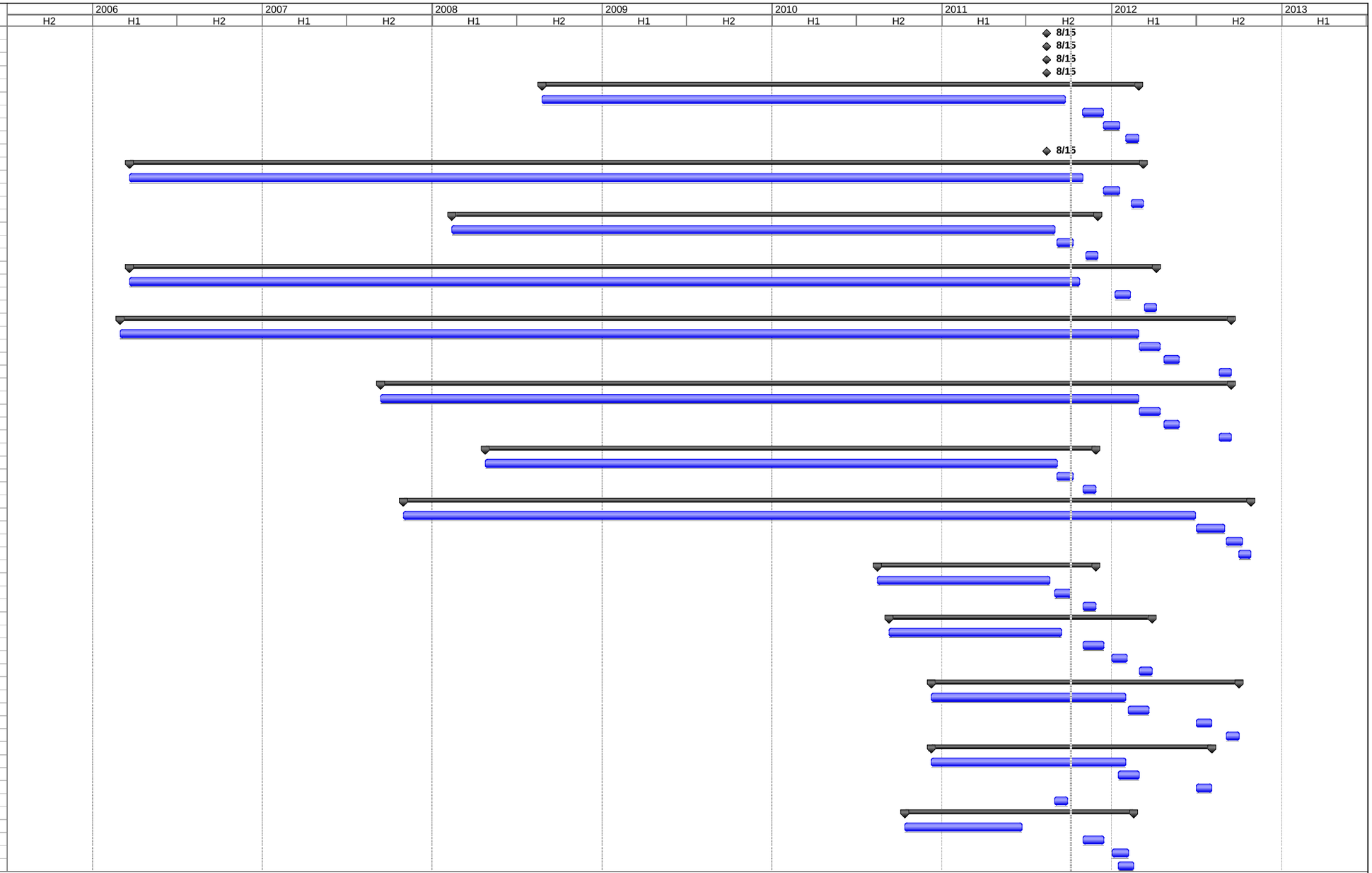
ID	Task Name
1	**Reliability Projects: 8 Slots**
2	**Project 2008-06 Cyber Security - Order 706 (ACTIVE)**
3	**Project 2007-17 Protection System Maintenance & Testing (ACTIVE)**
4	**Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)**
5	**Project 2007-06 System Protection Coordination (ACTIVE)**
6	**Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)**
7	**Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)**
8	**Project 2006-06 Reliability Coordination (ACTIVE)**
9	**Project 2007-09 Generator Verification (ACTIVE)**
10	***Project 2012-04 Protection System Commissioning Testing***
11	Standing Committee Research
12	Standards Development
13	Project 2008-02 Undervoltage Load Shedding
14	**Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS**
15	Standing Committee Research
16	Standards Development
17	**Project 2010-01 Support Personnel Training**
18	Standing Committee Research
19	Standards Development
20	Project 2009-03 Emergency Operations (INFORMAL)
21	**Project 2012-06 Generator Capabilities**
22	Standing Committee Research
23	Standards Development
24	**Project 2009-07 Reliability of Protection Systems**
25	Standing Committee Research
26	Standards Development
27	**Project 2012-01 Equipment Monitoring and Diagnostic Devices**
28	Standing Committee Research
29	Standards Development
30	**Project 2009-04 Phasor Measurements**
31	Standing Committee Research
32	Standards Development
33	Project 2009-05 Resource Adequacy Assessments
34	Project 2010-16 Definition of System Operator
35	Project 2010-08 Functional Model Glossary Revisions
36	**Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings**
37	Standing Committee Research
38	Standards Development
39	**Time-Sensitive Projects - 3 Slots**
40	**Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)**
41	**Project 2010-17 Definition of BES (ACTIVE)**
42	**Project 2007-12 Frequency Response (ACTIVE)**
43	Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)
44	Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)
45	Project 2007-11 Disturbance Monitoring (INFORMAL)
46	**Project 2010-03 Modeling Data**
47	Standing Committee Research
48	Standards Development
49	**Project 2010-04 Demand Data**
50	Standing Committee Research
51	Standards Development
52	**Project 2010-02 Connecting New Facilities to the Grid**
53	Standing Committee Research
54	Standards Development
55	**Practicality Projects - 2 Slots**
56	**Project 2010-07 Transmission Requirements at the Generator Interface (ACTIVE)**
57	**Project 2007-03 Real-time Transmission Operations (ACTIVE)**
58	Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)
59	Project 2008-12 Coordinate Interchange Standards (INFORMAL)
60	Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)
61	Project 2012-05 ATC-Revisions - Order 729
62	**Excess Beyond Capacity for 2012-2014**
63	**Project 2007-07 Vegetation Management (ACTIVE)**
64	Project 2012-02 Physical Protection
65	Project 2012-03 PRC-004 VSLs
66	Project 2012-08 Glossary Updates
67	Project 2012-07 Obsolescence Review
68	Project 2012-09 IRO Review
69	Project 2012-11 FAC Review
70	Project 2012-12 PER Review
71	Project 2012-13 NUC Review
72	Project 2012-14 Risk Analysis
73	*2006-06.2 Phase 2 of Reliability Coordination*
74	*2012-15 Flow Limited Paths*



Appendix 3 – Regional Work Plan

The following page shows the schedule of regional work in Gantt chart format. Projects that are actively being pursued are identified with black Gantt chart bars, with blue bars representing various stages of development. Projects that are "on hold" are represented by a black diamond.

ID	Task Name
1	**PRC-002-FRCC-1 (on hold)**
2	**PRC-003-FRCC-1 (on hold)**
3	**PRC-006-FRCC-1 (on hold)**
4	**PRC-024-FRCC-1 (on hold)**
5	**PRC-006-NPCC-1**
6	Regional standard development
7	Posting of Documents for process evaluation at NERC
8	Prepare BOT Material
9	Develop Initial Draft of Regulatory Filings
10	**PRC-012-NPCC-1 (on hold)**
11	**MOD-024-RFC-01**
12	Regional standard development
13	Prepare BOT Material
14	Develop Initial Draft of Regulatory Filings
15	**MOD-025-RFC-01**
16	Regional standard development
17	Prepare BOT Material
18	Develop Initial Draft of Regulatory Filings
19	**PRC-002-RFC-01**
20	Regional standard development
21	Prepare BOT Material
22	Develop Initial Draft of Regulatory Filings
23	**PRC-006-RFC-1**
24	Regional standard development
25	Posting of Documents for process evaluation at NERC
26	Prepare BOT Material
27	Develop Initial Draft of Regulatory Filings
28	**PRC-012-RFC-1**
29	Regional standard development
30	Posting of Documents for process evaluation at NERC
31	Prepare BOT Material
32	Develop Initial Draft of Regulatory Filings
33	**PRC-006-SERC-01**
34	Regional standard development
35	Prepare BOT Material
36	Develop Initial Draft of Regulatory Filings
37	**PRC-006-SPP-01**
38	Regional standard development
39	Posting of Documents for process evaluation at NERC
40	Prepare BOT Material
41	Develop Initial Draft of Regulatory Filings
42	**IRO-006-TRE-1**
43	Regional standard development
44	Prepare BOT Material
45	Develop Initial Draft of Regulatory Filings
46	**BAL-001-TRE-1**
47	Regional standard development
48	Posting of Documents for process evaluation at NERC
49	Prepare BOT Material
50	Develop Initial Draft of Regulatory Filings
51	**BAL-002-WECC-1**
52	Regional standard development
53	Posting of Documents for process evaluation at NERC
54	Prepare BOT Material
55	Develop Initial Draft of Regulatory Filings
56	**BAL-004-WECC-1**
57	Regional standard development
58	Posting of Documents for process evaluation at NERC
59	Prepare BOT Material
60	Develop Initial Draft of Regulatory Filings
61	**VAR-001-WECC-1**
62	Regional standard development
63	Posting of Documents for process evaluation at NERC
64	Prepare BOT Material
65	Develop Initial Draft of Regulatory Filings



Project: Unified Regional Project Sche
Date: Wed 10/5/11

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Appendix 4 – Project Summaries

The following are detailed summaries of the projects discussed earlier within this plan.

DEVELOPMENT 2012

Project 2006-06 Reliability Coordination

Summary:

This project ensures that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique and enforceable, and that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team is considering comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed. The drafting team is reviewing all of the requirements in this set of standards and making a determination whether to:

- Modify the requirement to improve clarity and measurability while removing ambiguity
- Move the requirement (into another project or Standard, or to the certification process)
- Eliminate the requirement (because it is redundant or doesn't support BPS reliability).

Standards affected:

COM-001, COM-002, IRO-001- IRO-002, IRO-005, IRO-014, IRO-015, IRO-016

Status:

This project's SAR was finalized on May 2, 2007. The draft standards have been posted several times. The NERC Board of Trustees adopted IRO-002-3, IRO-005-4 and IRO-014-2, along with a conforming change to IRO-001-1.1 associated with IRO-014-2 (creating IRO-001-2) on August 4, 2011. The Board also approved the retirement of IRO-015-1 and IRO-016-1. The drafting team is continuing development on COM-001-2, COM-002-3, and additional revisions to IRO-001, which will become IRO-001-3. It is estimated this project will complete in Q2 2012.

FUTURE CONSIDERATION

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003

Summary:

This project will address directives from Order 693 related to the inclusion of measures in IRO-003 and the determination of "critical facilities."

Standards affected:

IRO-003

Status:

A SAR was developed and was finalized on July 14, 2010. However, no additional work has occurred for this project at this time. At this time, no estimate for starting the project has been identified.

DEVELOPMENT 2012

Project 2007-02 Operating Personnel Communication Protocols

Summary:

This project is reviewing COM-003 to ensure the standard is complete, appropriately scoped, and enforceable. The project is also considering other general improvements and stakeholder comments received during the initial development of the standards, as well as other comments received from Electric Reliability Organization (ERO) regulatory authorities. This also satisfies the NERC requirement for five-year review of the standard.

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers. Requirements will include protocols for communicating changes to realtime operating states and protocols for issuing and responding to operating directives.

Standards affected:

COM-003

Status:

This project's SAR was finalized on June 8, 2007. A draft standard was posted November 20, 2009 through January 15, 2010. Subsequently, this team was put on hold for an extended period of time. The project was restarted in 2011, and the team is reviewing comments and preparing to post a new version of the standard. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-03 Real-time Transmission Operations

Summary:

This project is clarifying requirements for real-time operations of the Bulk Electric System in the several standards, as well as providing other general improvements. It will consider stakeholder comments received during the initial development of the standards, as well as and other comments received from ERO regulatory authorities. This also satisfies the NERC requirement for five-year review of the standards.

Standards affected:

PER-001, TOP-001, TOP-002, TOP-003, TOP-004, TOP-004, TOP-005¸ TOP-006, TOP-007, TOP-008

Status:

This project's SAR was finalized November 1, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Initial Ballot from May 31, 2011 through June 9, 2011. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-06 System Protection Coordination

Summary:

This project is reviewing PRC-001-1 to assure that Protection System application and performance issues are coordinated among all related entities. It will ensure the applicable entities within the standard correctly reflect the functional responsibilities, as described in the NERC Functional Model. The project will also incorporate other general improvements, address directives received from ERO regulatory authorities, and consider the observations and recommendations developed by the NERC SPCTF. As necessary, the project will coordinate the transfer of monitoring-related requirements to appropriate other standards through coordination with project 2006-06 Reliability Coordination.

Standards affected:

PRC-001, PRC-027 (New)

Status:

This project's SAR was finalized on July 27, 2007. A draft standard was posted from September 9, 2009 through October 26, 2009. Several interim drafts have been developed since that time. A new results-based version of the standard is in development. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-07 Vegetation Management

Summary:

This project will address some 'fill-in-the-blank' components of the existing standard, wchih were created in 2006 (prior to mandatory and enforceable standards). The project also will investigate applicability to lower voltae transmission lines, address the issue of clearances for lines on both federal and non-federal lands, consider revising the definition of right of way to encompass required clearance areas, and review the suitability of the IEEE 516-2003 standard for minimum vegetation clearance. This also satisfies the NERC requirement for five-year review of the standard.

Standards affected:

FAC-003

Status:

This project's SAR was finalized June 27, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Successive Ballot from February 18, 2011 through February 28, 2011. The team has drafted a revised standard and has requested it be posted for Recirculation Ballot. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-09 Generator Verification

Summary:

This project will create or modify standards to ensure that generators will not trip off-line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions. It will also ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

Standards affected:

MOD-024, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024

Status:

This project's SAR was finalized June 14, 2007. The standards have been posted several times for public comment. Two of the standards were most recently posted for Initial Ballot from July 22, 2011 through August 1, 2011. Three other standards were posted for comment June 12, 2011 through July 15, 2011. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2007-11 Disturbance Monitoring

Summary:

Purpose
This project establishes and clarifies requirements for the installation of Disturbance Monitoring Equipment (DME) and reporting of disturbance data to facilitate analyses of events and verify system models. The project will review PRC-002 and each of the current regional programs developed in accordance with that standard, including any other associated programs and/or requirements related to or contained with the disturbance monitoring program documentation. The project will then determine which requirements should be continent-wide requirements and which requirements should be included in regional standards.

Standards affected:

PRC-002, PRC-018

Status:

This project's SAR was finalized May 21, 2007. An initial draft standard was posted from February 2, 2009, to March 18, 2009. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

DEVELOPMENT 2012

Project 2007-12 Frequency Response

Summary:

Purpose:
This project will modify the BAL-003 Standard to require sufficient Frequency Response from the Balancing Authority to maintain Interconnection Frequency within predefined bounds. It will also ensure the standard provides consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

Standards affected:

BAL-003

Status:

This project's SAR was finalized June 30, 2007. The standard has been posted once for public comment, and is expected to be posted for comment in Q4 of 2011. The project is expected to complete in Q2, 2012.

DEVELOPMENT 2012

Project 2007-17 Protection System Maintenance and Testing

Summary:

This project will modify the standards related to ensuring all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The project will respond to various FERC directives contained in Order 693, as well as make general improvements to the standard.

Standards affected:

PRC-005, PRC-008, PRC-011, PRC-017

Status:

This project's SAR was finalized May 7, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Initial Ballot from September 19, 2011 through September 28, 2011. It is estimated this project will complete in Q2 2012.

PENDING 2013

Project 2008-01 Voltage and Reactive Planning and Control

Summary:

This project will revise the VAR Standards to require that appropriate functional entities develop and coordinate voltage and reactive planning and operating criteria to ensure that there are sufficient reactive resources, and voltage and reactive margins, to manage the risk of voltage instability. The project will also will address the FERC directives in Order 693 associated with these standards. Review and modifications to the existing VAR standards will also consider the Transmission Issues Subcommittee's "Reactive Support & Control Whitepaper" dated 05/18/2009.

Standards affected:

VAR-001, VAR-002

Status:

This project's SAR was finalized April of 2011. This project was moved into informal development in 2011, prior to posting any daft of the standard. It is estimated this project will begin in Q1 2013 and complete in Q2 2014.

PENDING 2012

Project 2008-02 Undervoltage Load Shedding

Summary:

This project will improve the existing standards on Under Voltage Load Shedding (UVLS) to ensure that load is shed when needed to prevent voltage collapse and voltage instability in the Bulk Electric System. The existing standards will be consolidated, and specific criteria for UVLS programs and assessments of those UVLS programs should be added. 'Fill-in-the-blank' elements should be eliminated, and concerns related to Fault-Induced Delayed Voltage Recovery' will be reviewed and addressed.

Standards affected:

PRC-010, PRC-022

Status:

This standard has a proposed SAR that was posted for comment from January 20, 2010, through February 19, 2010. It is estimated this project will start in Q3 2012 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2008-06 Cyber Security – Order 706

Summary:

This project establishes standards to protect the critical cyber assets (including hardware, software, data, and communications networks) essential to the reliable operations of the bulk power system. Currently the project is focused on Version 5 of the standards, which is focused on addressing the remaining directives in Order 706.

Standards affected:

CIP-002, CIP-003, CIP-004, CIP-005, CIP-006, CIP-007, CIP-008, CIP-009, CIP-010 (New), CIP-011 (New)

Status:

This project's SAR was finalized June 9, 2008. Older versions of the standard have been posted, balloted, and approved several times. Version 5 of the standards has not yet been posted for comment. It is estimated this project will complete in Q3 2012.

PENDING 2013

Project 2008-12 Coordinate Interchange Standards

Summary:

This project will revise the set of Coordinate Interchange standards to ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange; to address the Interchange Subcommittee concerns related to the Dynamic Transfers and Pseudo-ties; and to address previously identified stakeholder comments. The project will also consider adding requirements to have backup capability for use when the interchange transaction tool fails.

Standards affected:

INT-001, INT-003, INT-004, INT-005, INT-006, INT-007, INT-008, INT-009, INT-010

Status:

This project's SAR was finalized December 1, 2008. An initial draft set of standards was developed and posted for comment from November 10, 2009 through December 9, 2009. However, the project was moved into informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2009-01 Disturbance and Sabotage Reporting

Summary:

Purpose:

This project entails revisions to existing standards CIP-001-1 – Sabotage Reporting and EOP-004-1 – Disturbance Reporting. The project will eliminate redundancy and provide clarity on sabotage events. Additionally, EOP-004 will be reviewed to eliminate any 'fill-in-the-blank' components.

Standards affected:

CIP-001, EOP-004

Status:

This project's SAR was finalized August 13, 2009. The standard has been posted for comment twice, and is being prepared for Initial Ballot. It is estimated this project will complete in Q3 2012.

PENDING 2012

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Summary:

This project will create new or revised standards to establish requirements for the monitoring and analysis capabilities provided to System Operators to support Real-time System Operations. The project will address availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management.

Standards affected:

New

Status:

This project's SAR was finalized March 31, 2010. The project team posted a White Paper created to illustrate the concepts it intends to pursue as the project unfolds. This posting solicited comments from February 16, 2011, through April 4, 2011. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2012 and complete in Q1 2013.

PENDING 2012

Project 2009-03 Emergency Operations

Summary:

This project will review the EOP-001, EOP-002, and EOP-003 standards and associated interpretations to ensure the requirements are clear and unambiguous. Many of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process; suggestions for improvement have been submitted by stakeholders, other drafting teams, and FERC staff.

Standards affected:

EOP-001, EOP-002, EOP-003

Status:

This project's SAR was finalized November 5, 2010. Prior to the development of an initial draft standard, this project was moved to informal development. It is estimated this project will start in Q3 2012 and complete in Q4 2013.

2014 PENDING RESEARCH

Project 2009-04 Phasor Measurements

Summary:

This project will review several industry studies to determine if there should be phasor requirements developed for a NERC standard. This project is related to the North-American Synchro-Phasor Initiative, and supports a blackout recommendation.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2014 and complete in Q4 2015.

PENDING 2014

Project 2009-05 Resource Adequacy Assessments

Summary:

This project will implement certain recommendations related to resource adequacy from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report,* approved by the NERC Board on June 15, 2004. The project will create a standard with requirements to perform resource adequacy assessments, using metrics that take into account various factors (including, but not limited to, fuel deliverability). The standard would also make the results of the assessments available to the industry, NERC, and appropriate regulatory agencies.

Standards affected:

New

Status:

This project's SAR was finalized August 17. 2007. Prior to the development of an initial draft standard, this project was moved to informal development in 2011. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2013 PENDING RESEARCH

Project 2009-07 Reliability of Protection Systems

Summary:

This project will ensure Protection Systems are designed and installed with redundancy where appropriate, such that if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards.

Standards affected:

New

Status:

This project has an initial draft of a SAR which was posted for comment January 20, 2009, through February 18, 2009. Comment responses have not been prepared, and the SAR has not been finalized. It is estimated this project will start in Q1 2013 and complete in Q1 2015.

2012 PENDING RESEARCH

Project 2010-01 Support Personnel Training

Summary:

This project will develop a standard that requires the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2012 and complete in Q3 2014.

FUTURE CONSIDERATION, PENDING RESEARCH

Project 2010-02 Connecting New Facilities to the Grid

Summary:

22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.

Standards affected:

FAC-001, FAC-002

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2015 and complete in Q1 2017.

2014 PENDING RESEARCH

Project 2010-03 Modeling Data

Summary:

This project will consider merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. This project is related the Modeling Initiative, and supports a blackout recommendation.

Standards affected:

MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, PRC-013, PRC-015

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2014 PENDING RESEARCH

Project 2010-04 Demand Data

Summary:

This project will consolidate MOD-016 through MOD-020 into a single standard, with MOD-021 remaining as a separate standard. Requirements will be made be more specific to clearly identify the format for providing data, and modifications will made in support if previously received industry comments and regulatory directives.

Standards affected:

MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, MOD-021

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations

Summary:

This project addresses a key element for Bulk Electric System (BES) reliability: the correct performance of Protection Systems. Monitoring BES Protection System events to identify and correct the root causes of Misoperations will improve overall Protection System performance. The project will revise the definition of Misoperation and redraft the standard to be more clear and unambiguous.

Standards affected:

PRC-003, PRC-004

Status:

This project's SAR was finalized June 9, 2011. An initial draft of the standard was posted for comment from June 10, 2011 through July 11, 2011. A second draft is being prepared for posting and initial ballot. It is estimated this project will complete in Q3 2012.

2012 PENDING RESEARCH

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS

Summary:

This project will moodily the current standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and to ensure the reliability of the bulk power system. This project is related to the System Protection Initiative.

Standards affected:

PRC-012, PRC-014, PRC-016.

Status:

This project has a draft SAR, but it has not yet been posted for comment. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

DEVELOPMENT 2012

Project 2010-07 Generator Requirements at the Transmission Interface

Summary:

This project will develop any needed changes to the Reliability Standards to provide clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. The project will review standard for applicability, propose changes as necessary, and ensure that requirements that should apply to all generators, regardless of interconnection configuration, are implemented effectively.

Standards affected:

FAC-001, FAC-003, PRC-004, others as needed

Status:

This project's SAR was finalized November 30, 2010. A draft set of standards was developed and posted from June 17, 2011 through July 17, 2011. Discussion and coordination between NERC, FERC , and the members of the project team are ongoing to ensure adequate coverage of all reliability needs. It is estimated this project will complete in Q1 2013.

FUTURE CONSIDERATION

Project 2010-08 Functional Glossary Model Revisions

Summary:

This project will ensure the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria are consistent.

Standards affected:

TBD

Status:

The Functional Model Working Group (FMWG) is responding to comments received from the first posting of the SAR. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

PENDING 2012

Project 2010-13.2 Phase 2 of Relay Loadability: Generation

Summary:

This project is being created in response to directives included in FERC Order 733. The project will draft a new standard to address generator relay loadability.

Standards affected:

New

Status:

This project's SAR was finalized November 1, 2010. Prior to the development of an initial draft, this project was moved to informal development in 2011. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

2014 PENDING RESEARCH

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

Summary:

This project is being created in response to directives includes in FERC Order 733. The project will draft a new standard to address protective relay operations due to power swings.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves

Summary:

This project will review the standard related to Control Performance and Disturbance control, and propose modifications or new standards as necessary. This project includes the testing and analysis of the new Balancing Authority ACE Limit (BAAL) metric, as well as the development of a continent-wide reserve policy to support BAL-01, BAL-002, and BAL-003.

Standards affected:

BAL-001, BAL-002, New

Status:

This project was created by merging two existing teams. As such, there are two SARS associated with the project – one that was finalized on November 7, 2007, and one that was finalized on December 3, 2007. The combined effort was moved into informal development in 2011, but restarted to coordinate with project 2007-12 Frequency Response. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent

Summary:

This project will consider the Time Error Correction standard, AGC, standard, and Inadvertent Accounting standard to determine what changes, if any, are necessary to ensure the standards are clear and unambiguous. In some cases, the standard may no longer be necessary.

Standards affected:

BAL-004, BAL-005, BAL-006

Status:

This project is currently in informal development. Based on its priority, it has been identified in the 2012-2014 Work Plan to begin in Q2 2013 and complete in Q1 2015.

PENDING 2014

Project 2010-16 Definition of System Operator

Summary:

This project will remove the 'Generator Operator' from the current definition of System Operator. This will more accurately establish the responsibilities and expectations of the Generator Operator consistent with the current manner in which the bulk electric system is operated.

Standards affected:

TBD

Status:

A proposed SAR and revision to the definition of System Operator was posted for a 30-day formal comment period from November 3, 2010 through December 3, 2010. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

DEVELOPMENT 2012

Project 2010-17 Definition of Bulk Electric System

Summary:

This project will revise the definition of Bulk Electric System (BES) to address various Federal Energy Regulatory Commissions (FERC) concerns the definition must be modified to encompass all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. These concerns have been identified in FERC Order 693 issued on March 16, 2007 and in Order 743 issued on November 18, 2010 (Order 743). The project will also consider additional modifications (beyond those established in the regulatory directives) to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

Standards affected:

Multiple

Status:

This project's SAR was finalized March 25, 2011. The draft definition has been posted twice, with the most recent posting done concurrently with an initial ballot from September 30, 2011, to October 02 2011. The first part of this project is expected to complete in Q1 of 2012. The remainder of this project is estimated to complete in Q2 2013.

2013 PENDING RESEARCH

Project 2012-01 Equipment Monitoring and Diagnostic Devices

Summary:

This project will consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures, with the intent of identifying potential equipment failures prior to their occurrence. This will provide more time to address failing systems and avoid or minimize long lead times.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

FUTURE CONSIDERATION

Project 2012-02 Physical Protection

Summary:

This project will develop standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-03 PRC-004 VSLs

Summary:

This project will address a problem identified in the VSLs of PRC-004. Currently, the VSLs do not address the case where a Corrective Acton Plan was developed or documented, but not fully implemented.

Standards affected:

PRC-004

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

2012 PENDING RESEARCH

Project 2012-04 Protection System Commissioning Testing

Summary:

This project will address a gap in reliability related to protection systems by creating a standard that requires commissioning testing. Improper or inadequate commissioning testing practices are a common cause of protection system Misoperation. However, the current set of approved NERC reliability standards does not address the testing of protection system equipment *before* that equipment is placed into initial service. Creating a commissioning standard would also enhance the effectiveness of the mandatory auditing program.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2012 and complete in Q2 2014.

PENDING 2014

Project 2012-05 ATC Revisions - Order 729

Summary:

This project will respond to the remaining directives in Order 729.

Standards affected:

MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, MOD-030

Status:

This is a new project, which will require SAR development. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

2013 PENDING RESEARCH

Project 2012-06 Generator Capabilities

Summary:

This project will develop standards to ensure generator performance. The project should consider requirements that specify governor droop, frequency response, and reactive response.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2013 and complete in Q4 2014.

FUTURE CONSIDERATION

Project 2012-07 Obsolescence Review

Summary:

This project will create a standard that requires Generator and Transmission Owners periodically review their control and protection systems to identity and electronic, electrical, or mechanical devices that have become obsolete.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-08 Glossary Updates

Summary:

This project will respond to FERC directives to either create or modify the following definitions: Transmission Operator, Generator Operator, Bulk Power System, Reliable Operation, and Reliability Standard.

Standards affected:

TBD

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-09 IRO Review

Summary:

This project will perform the five-year review of several IRO standards, pursuant to NERC's Rules of Procedure.

Standards affected:

IRO-006, IRO-006-EAST, IRO-008, IRO-009, and IRO-010

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-11 FAC Review

Summary:

This project will perform the five-year review of several FAC standards, pursuant to NERC's Rules of Procedure.

Standards affected:

FAC-010, FAC-011, FAC-014

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-12 PER Review

Summary:

This project will perform the five-year review of several PER standards, pursuant to NERC's Rules of Procedure.

Standards affected:

PER-003, PER-004, PER-005

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-13 NUC Review

Summary:

This project will perform the five-year review of the NUC standard, pursuant to NERC's Rules of Procedure.

Standards affected:

NUC-001

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-14 Risk Analysis

Summary:

This project will develop a standard that requires entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist would include things like GMD, voltage collapse, and other extreme events.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-15 Flow Limited Paths

Summary:

The MOD-029 standard includes a provision which, if left uncorrected, could in certain scenarios result in significantly over-conservative ATC values being calculated. This project will address this problem.

Standards affected:

MOD-029

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE DEVELOPMENT

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements

Summary:

FRCC plans to convert the existing handbook document, "FRCC Requirements for Disturbance Monitoring Equipment", revision dated June, 2006 into a new Regional Reliability Standard, that complies with the requirements of NERC Reliability Standard, PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements.

Standards affected:

PRC-002-1

Status:

This Regional project is currently on 'hold'. Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-11 Disturbance Monitoring being classified as a 'Project in Informal Development', FRCC staff will be re-evaluating the current status of the regional project to determine whether to proceed with the Regional Reliability Standard development or to revise the current FRCC Regional Criteria document "FRCC Requirements for Disturbance Monitoring Equipment".

FUTURE DEVELOPMENT

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Mis-operations of Transmission and Generation Protection Systems

Summary:

FRCC plans to convert the existing handbook document, "FRCC Requirements for Analysis of Protection Mis-operations & Corrective Actions Reporting", revision dated October 2003 into a new Regional Reliability Standard, that complies with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Mis-operations of Transmission and Generation Protection Systems.

Standards affected:

PRC-003-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2010-05.1 Protection Systems: Phase 1 (Misoperations) being classified as a 'high priority' project in active development, the Regional project is currently on 'hold'. The FRCC has revised Regional Criteria documents (FRCC Requirements for Analysis of Protection Misoperations and Corrective Actions Reporting, revision date: December 2, 2010) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Mis-operations of Transmission and Generation Protection Systems.

FUTURE DEVELOPMENT

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program

Summary:

FRCC is developing a Regional Reliability Standard to provide last resort system preservation measures by implementing an Underfrequency Load Shedding (UFLS) program. Additional requirements may be needed due to FRCC peninsular geography and limited ties to the north. Operating experience and decades of studies by the FRCC and its predecessor reliability organizations have resulted in a well developed UFLS program that is very resilient to frequency excursion resulting from severe and extreme contingencies. The standard development project will effectively use the proven high performance characteristics of the existing FRCC UFLS program and refine its requirements and coordination procedures to comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

Standards affected:

PRC-006-1

Status:

PRC-006-FRCC-1 FRCC Automatic Underfrequency Load Shedding Program has been approved by the FRCC Registered Ballot Body and the FRCC Board of Directors. Based on concerns identified by NERC standards staff and the pending Commission (FERC) approval of the NERC Continent-Wide Reliability Standard PRC-006-1 Automatic Underfrequency Load Shedding and associated Regional variances, the Regional project has been placed on 'hold'. The FRCC has since revised Regional Criteria documents (FRCC Automatic Underfrequency Load Shedding Program, revision date: April 7, 2011) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

FUTURE DEVELOPMENT

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions

Summary:

FRCC is developing a standard to establish “ride through” requirements for generators in the FRCC Region with respect to temporary grid voltage or frequency deviations from their normal range. The Standard should address time duration limits for operation of generator protection for 1) frequencies outside of the 59.5 - 60.5 hertz range, 2) voltages outside of the 95% - 105% range and 3) generator stator current overloads. The Standard should address exemption criteria and mitigation measures available for resolving apparent conflicts between generator capabilities and the coordination requirements. Considerable knowledge of grid frequency and voltage excursions and the time limited capabilities of generators to sustain these conditions have been gained through operating experience and previous reliability studies. This standards development project should effectively use this knowledge to define coordination requirements and procedures that comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

Standards affected:

PRC-024-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-09 Generator Verification being classified as a ‘high priority’ project in active development, the Regional project is currently on ‘hold’. The FRCC is actively revising Regional Criteria documents (FRCC Generator Coordination Requirements) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

2012 DEVELOPMENT

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program

Summary:

The purpose of this Standard is to establish the requirements for NPCC and its members to operate and maintain coordinated a Regional Underfrequency load shedding (UFLS) program. The NPCC's UFLS program will meet the minimum requirements contained in NERC standards and provide those entities to which it is applicable, the guidance necessary to implement it. This standard will also mandate that, when necessary, coordination with neighboring Regional Underfrequency load shedding programs be developed. The unique character, dispersion, sensitivity and density of the NPCC regional loads emphasize the need for this Standard.

The NPCC regional UFLS standard shall apply to all applicable entities within the Region and sub-regional areas that are both synchronous and asynchronous to the eastern interconnection. Quebec has UFLS has different parameters and these are included in the standard and fully coordinated within the Region.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. NPCC expects to complete the drafting of this standard in 2011, conduct a ballot of stakeholders in the first quarter of 2012 and a submission to the NERC Board of Trustees and subsequent filing with FERC to occur in 2012.

FUTURE DEVELOPMENT

PRC-012-NPCC-1 — Special Protection Systems

Summary:

To support and enhance bulk power system reliability, this Standard will establish the criteria for the minimum design objectives and practices for special protection systems, the purpose of which are to detect abnormal system conditions, and take corrective actions other than the isolation of faulted elements to maintain the stability and security of the bulk power system. This Standard will also establish the requirements for close coordination between system planning, design, operating, maintenance and protection functions of areas to ensure that the impacts of special protection system operations do not result in a significant adverse impact.

The proposed Standard will describe the requirements for the design and approval of Special Protection Systems, and the technical criteria required to support its implementation. The Standard will also identify the need for close coordination among various parties to ensure that the Special Protection Systems are implemented correctly, and triggers and resulting actions are made known and communicated in an on-line database.

Standards affected:

PRC-012-0

Status:

This Regional project is currently on 'hold' pending the completion of the NERC Reliability Standard Development Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS and the outcome of the work by the NERC SPCS on the definition of SPS.

2011 DEVELOPMENT

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Real Power capability to support NERC Reliability Standard MOD-024. The objective of the regional standard is to ensure accurate information on generator gross and net Real (MWs) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-024-1

Status:

This Regional standard has been approved by the Reliability*First* Board. Currently, VRFs and VSLs are in development. Reliability*First* expects to complete the drafting of the VRFs and VSLs in 2011, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2011 DEVELOPMENT

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Reactive Power capability to support NERC Reliability Standard MOD-025. The objective of this standard is to ensure that accurate information on generator gross and net Reactive (MVAR) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-025-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011 and subsequent filing with the FERC is expected to occur in 2012.

2011 DEVELOPMENT

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for Disturbance monitoring and reporting to support NERC Reliability Standard PRC-002.

Standards affected:

PRC-002-1

Status:

Reliability*First* is currently working on the technical justification for the locational requirements for DME equipment. This Regional standard has been approved by the Reliability*First* Board. Reliability*First* expects submission of this standard to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2012 DEVELOPMENT

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency assist recovery of frequency following underfrequency events and provide last resort system preservation measures. The standard goes beyond the NERC PRC-006-1 standard and prescribes; with more certainty, aspects that the Planning Coordinator's UFLS program must contain, further details on certain procedural matters with respect to how islands are addressed, and assessment of UFLS program implementation as well as program design. This standard also attempts further consolidating requirements of the Reliability*First* legacy underfrequency load shedding programs, permitting retirement of legacy documents, to ensure appropriate coordination among the Reliability*First* legacy regional UFLS programs.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur later in 2012.

2012 DEVELOPMENT

PRC-012-RFC-1 — Special Protection System Requirements

Summary:

To purpose of the standard is to establish Reliability*First* requirements for the review, development and application of Special Protection Systems (SPS).

Standards affected:

PRC-012-0

Status:

This Regional project is currently in the initial drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur early in 2013.

2011 DEVELOPMENT

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements

Summary:

The SERC UFLS Standard: PRC-006-SERC-1 ("SERC UFLS Standard") was developed to provide regional UFLS requirements to entities in SERC. UFLS requirements have been in place at a continent-wide level and within SERC for many years prior to implementation of federally mandated reliability compliance standards in 2007.

In 2008, SERC commenced work on PRC-006-SERC-1. NERC also began work on revising PRC-006-0 at a continent-wide level. The SERC standard has been developed to be consistent with the continent-wide UFLS standard.

PRC-006-1 clearly defines the roles and responsibilities of parties to whom the standard applies. The standard identifies the Planning Coordinator ("PC") as the entity responsible for developing UFLS schemes within their PC area. This regional standard PRC-006-SERC-1 adds specificity not contained in the NERC standard for development and implementation of a UFLS scheme in the SERC Region that effectively mitigates the consequences of an underfrequency event.

Standards affected:

PRC-006-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011 and subsequent filing with FERC is expected to occur in 2012.

2012 DEVELOPMENT

PRC-006-SPP-1 — Under Frequency Load Shedding

Summary:

PRC-006 (Development and Documentation of Regional UFLS programs) has been identified by NERC as one of the Regional (Fill-in-the Blank) Standards. The requirements developed in this standard at a minimum, need to meet the requirements for the Regional Program as identified in NERC's PRC-006-0. Operating experience and regional studies have resulted in a well developed UFLS program that is very resilient to frequency excursion resulting from severe and extreme contingencies. This standards development intends to effectively use the proven high performance characteristics of the existing SPP UFLS program and refine its requirements and coordination procedures through an open process as described in the SPP Standard Development Process Manual.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. SPP expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection

Summary:

IRO-006-TRE-1 was developed to support bulk power system reliability by providing enforceable requirements associated with certain existing non-routine ERCOT congestion management procedures. This Regional Standard addresses the FERC directive in Paragraph 964 of Order 693, where FERC found that the ERCOT transmission loading relief procedures were superior to the national standard, and directed the ERO to provide Reliability Standards including Requirements, Measures and Levels of Non-Compliance corresponding to the ERCOT procedures for application in the ERCOT Region.

Standards affected:

IRO-006-5 (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of IRO-006-5.)

Status:

This Regional Standard was approved by the Texas RE Board of Directors on June 28, 2011, and it will be submitted to the NERC Board of Trustees in November 2011. Subsequent filing with FERC is expected to occur in 2012.

2011 DEVELOPMENT

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region

Summary:

This Regional Standard is intended to support reliability by ensuring adequate primary frequency response performance in the ERCOT Interconnection. The standard addresses frequency response at the Interconnection level, as well as by individual generating units and facilities. Specific maximum governor droop and deadband settings are provided, along with primary frequency response performance standards (initial and sustained) that allow actual unit-specific performance to be measured.

In 2002, NERC approved a regional difference for ERCOT that made it exempt from Requirement R2 in BAL-001-0 (CPS2), because of ERCOT's lack of synchronous connection to other control areas and the nature of the ERCOT energy market. FERC approved the ERCOT regional difference, finding that ERCOT's practice of (a) determining the minimum frequency response needed for reliability, and (b) requiring generators to have specific governor droop, to be a more stringent practice than Requirement R2 in BAL-001-0. FERC directed NERC to file a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section 5 of the ERCOT protocols. This Regional Standard is responsive to that directive.

Standards affected:

BAL-001-0.1a (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of the continent-wide standard.)

Status:

This project is currently in the Regional Standard development stage, with a stakeholder ballot closing on September 23, 2011. Texas RE expects to submit this standard to its Board of Directors for approval in October, 2011, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur in 2012.

2012 DEVELOPMENT

BAL-002-WECC-1 — Contingency Reserves

Summary:

On Oct. 21, 2010, FERC found that BAL-002-WECC-1 did not meet the statutory criteria for approval and remanded the regional standard to NERC/WECC for further modification. (RM09-15-000; Order 740). FERC held that BAL-002-WECC-1's less stringent requirements had not been supported by the technical data provided.

On remand, the Commission instructed WECC to modify the regional reliability standard to include a number of specific items contained in Order 740. This Request is submitted with the specific and narrow purpose of addressing only those issues mandated for modification in the October 2010 Oder 740.

Standards affected:

BAL-002-WECC-1

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2012 DEVELOPMENT

BAL-004-WECC-1 — Automatic Time Error Correction

Summary:

In the order approving BAL-004-WECC-1 the FERC directed WECC to make several clarifying modifications to the standard. FERC directed WECC to use the FERC-approved Process for Developing and Approving WECC standards to make these clarifying modifications

In addition, the WECC staff has identified the opportunity to make additional modifications to the existing standard to clarify the intent without changing the requirements.

There is also confusion regarding the R3 requirement that the ACE used for NERC reports shall be the same ACE as the AGC operating mode in use. This seems to conflict with the NERC response to NOPR comments that entities may use ATEC ACE for control but should use Raw ACE for reporting. WECC is developing a proposed regional variance to BAL-001-0.1a to address this apparent conflict.

Standards affected:

BAL-004-WECC-1
BAL-001-0.1a

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

VAR-001-WECC-1 — Voltage and Reactive Control

Summary:

The current draft has been converted from a Standard into a Regional Variance to the NERC VAR-001-2 Standard. The format incorporates the NERC Standard into the document with minor additions to address the scope of the variance. The regional variance specifics are included as Section E of the proposed document (see hyperlink above), and in this case, are intended to replace NERC VAR-001-2 requirements R3 and R4 as noted at the beginning of Section E.

Variance

The purpose of this regional variance to a NERC Reliability Standard is to ensure that voltage levels are within limits in real time to protect equipment and the reliable operation of the Western Interconnection. The "Rules of Procedure of the North American Electric Reliability Corporation" (Appendix 3A, page 31) permits the development of a regional variance to a NERC reliability standard on an Interconnection-wide basis when the Regional Reliability Organization has valid justification and when the variance is not inconsistent with or less stringent than the NERC Reliability Standard. The variance is an alternative method for obtaining the same reliability objective as the continent standard and is typically necessitated by a physical difference. A variance is embodied within a reliability standard and as such, if adopted by NERC and approved by the electric reliability organization governmental authority, shall be enforced within the applicable Regional Entity(ies) pursuant to delegated authority.

Standards affected:

VAR-001-2

Status:

This Regional project has been approved by the WECC Board of Directors. WECC expects to submit the draft for the mandatory NERC 45-day comment period in the near future, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Standards Development Plan

2012-2014

November 3, 2011
For Board of Trustees Approval

RELIABILITY | ACCOUNTABILITY

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Table of Contents

Chapter 1 – Executive Summary 1

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training 2

Chapter 3 - General 5

Status Updates 6

2011 Reorganization and Hiring 6

Completed Standards Development Projects 6

Progress on Version Zero Standards 6

Interpretations of Reliability Standards 7

Progress on Regulatory Directives 7

Regional Standards Development 8

Rapid Development and Rapid Revision Projects 8

Challenges facing Standards 9

Five-Year Review Obligation 9

Product Quality 9

Standards Program Throughput 9

Conclusion 10

Chapter 4 – Project Development Overview 11

Project Prioritization and Plan Development 11

Project Implementation 12

Chapter 5 – Project Work Plan Summary 14

Projects for 2012-2014 14

Projects for 2015 and Beyond 17
Appendix 1 - Prioritization 18
Appendix 2 – Work Plan 38
Appendix 3 – Regional Work Plan 38
Appendix 4 – Project Summaries 40
Project 2006-06 Reliability Coordination 41
Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003 42
Project 2007-02 Operating Personnel Communication Protocols 43
Project 2007-03 Real-time Transmission Operations 44
Project 2007-06 System Protection Coordination 45
Project 2007-07 Vegetation Management 46
Project 2007-09 Generator Verification 47
Project 2007-11 Disturbance Monitoring 48
Project 2007-12 Frequency Response 49
Project 2007-17 Protection System Maintenance and Testing 50
Project 2008-01 Voltage and Reactive Planning and Control 51
Project 2008-02 Undervoltage Load Shedding 52
Project 2008-06 Cyber Security – Order 706 53
Project 2008-12 Coordinate Interchange Standards 54
Project 2009-01 Disturbance and Sabotage Reporting 55
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities 56
Project 2009-03 Emergency Operations 57
Project 2009-04 Phasor Measurements 58
Project 2009-05 Resource Adequacy Assessments 59
Project 2009-07 Reliability of Protection Systems 60

Project 2010-01 Support Personnel Training 61

Project 2010-02 Connecting New Facilities to the Grid..... 62

Project 2010-03 Modeling Data..... 63

Project 2010-04 Demand Data 64

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations 65

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS..... 66

Project 2010-07 Generator Requirements at the Transmission Interface 67

Project 2010-08 Functional Glossary Model Revisions 68

Project 2010-13.2 Phase 2 of Relay Loadability: Generation 69

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings 70

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves 71

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent 72

Project 2010-16 Definition of System Operator 73

Project 2010-17 Definition of Bulk Electric System 74

Project 2012-01 Equipment Monitoring and Diagnostic Devices..... 75

Project 2012-02 Physical Protection..... 76

Project 2012-03 PRC-004 VSLs..... 77

Project 2012-04 Protection System Commissioning Testing..... 78

Project 2012-05 ATC Revisions - Order 729..... 79

Project 2012-06 Generator Capabilities 80

Project 2012-07 Obsolescence Review..... 81

Project 2012-08 Glossary Updates 82

Project 2012-09 IRO Review 83

Project 2012-11 FAC Review..... 84

Project 2012-12 PER Review..... 85

Project 2012-13 NUC Review 86

Project 2012-14 Risk Analysis 87

Project 2012-15 Flow Limited Paths 88

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements 89

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems 90

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program..... 91

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions 92

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program 93

PRC-012-NPCC-1 — Special Protection Systems 94

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability 95

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability 96

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements 97

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements 98

PRC-012-RFC-1 — Special Protection System Requirements 99

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements 100

PRC-006-SPP-1 — Under Frequency Load Shedding 101

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection 102

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region..... 103

BAL-002-WECC-1 — Contingency Reserves..... 104

BAL-004-WECC-1 — Automatic Time Error Correction 105

VAR-001-WECC-1 — Voltage and Reactive Control..... 106

Chapter 1 – Executive Summary

This document provides an update on the status of Standards Development work at NERC, as well as a forecast of work being planned for 2012-2014. The document has several sections:

- Chapter 1 contains this Executive Summary
- Chapter 2 contains introductory remarks from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards
- Chapter 3 provides a general update on Standards Activities in 2011
- Chapter 4 provides a summary of the development of this document and the implementation of projects in general
- Chapter 5 provides a summary of the Work Plan
- Appendix 1 shows the prioritization scores used in the development of the Work Plan
- Appendix 2 shows the Work Plan in Gantt chart form
- Appendix 3 shows the Regional Work Plan in Gantt chart form
- Appendix 4 provides brief summaries of all the projects proposed within the Work Plan

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training

To: NERC's Board of Trustees, Stakeholders, Regulatory Authorities, and other interested parties

NERC is committed to the development of clear, technically excellent standards for the reliable planning and operation of the North American bulk power system. NERC's industry-based standard development process strives to leverage the knowledge and experience of subject-matter experts to develop stakeholder consensus in support of standards that achieve reliability objectives and are responsive to regulatory directives, balanced against the burdens and costs of compliance imposed upon the more than 1,900 entities that are now subject to these standards. No single standard can ensure this outcome. Rather, NERC strives to develop and enhance a portfolio of performance, risk-mitigation, and competency-based reliability standards that achieve a consistent defense in depth against credible events that may lead to cascading, uncontrolled separation, or instability and ensure prompt system restoration when extreme events occur.

Achieving this balance is intrinsically difficult. Just as the management of the reliability "bar" through enforceable standards is an ongoing and evolving process, the process for developing standards needs to evolve as well, in response to the learning that has occurred in the period since passage of the Energy Policy Act of 2005 and the initial enforcement of NERC standards in June 2007. We would like to use this message to highlight current achievements in the standards arena and our plans for 2012-2014, as well as certain emerging factors and concerns.

NERC's Reliability Standards Development Plan delivered the following results in 2011:

- As of November 1, 2011, 20 new or revised standards have been approved by the Board of Trustees, and are either filed or in the process of being filed with the FERC.
- Results Based Standard development principles were used for all new standards projects.
- The Standards Committee worked with NERC staff to prioritize standards development resources on twelve high priority projects. There has been no specific redirection of this effort relative to the selected priorities by regulatory authorities.
- Stakeholder-driven Quality Review has been integrated into the standards development process to assure the best quality standards from a compliance and implementation perspective.
- NERC undertook a first effort to develop a standard on a Rapid Development basis utilizing the new Standard Processes Manual.

- To balance the resources committed to the development of new standards versus the interpretation of existing standards, the Standards Committee has limited the number of interpretations under active development to three projects at any one time, while pursuing new procedural options such as "rapid revision" to correct deficiencies in the underlying standard.

The 2012-14 Reliability Standards Development Plan described in this report builds on recent experience by proposing an achievable yet ambitious plan of standards development. The 2012-14 Plan provides for:

- Continuation of ongoing standards projects with sufficient resources to ensure timely completion.
- Project priorities were established using a more comprehensive model with scores and explanatory inputs from the Standards Committee, NERC staff and industry stakeholders.
- Projects have been ranked for development priority along three tracks, based on consideration of Reliability Benefits, Time Sensitivity, and Practicality.
- As ongoing projects are completed, we are scheduling follow-on projects based on the availability of subject-matter experts and the completion of technical input, research, and industry outreach conducted by NERC's standing committees and subcommittees.
- Finally, the 2012-14 Plan incorporates a more comprehensive integration of the regional standards effort into this process. For the first time a complete project management process is being applied to regional standards development.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, a wide variety of electric system events and emerging risks to bulk power system reliability may necessitate deviations from this plan. In order to respond to such threats and initiate development of new or revised standards, the actual deployment of resources to staff this plan may shift. Additionally, the estimated times listed for project completion may change as more is learned about a given project.

NERC currently is investigating the following "emerging issues," each of which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Not every issue is addressable or best addressed through development of a new industry standard; the issues outlined above illustrate that truism. But where a standards related response is indicated, we will be ready to reprioritize and adjust.

The Standards Committee and NERC staff also recognize that major standards process efficiencies are still necessary if we are to make efficient use of NERC and industry resources, while meeting external expectations for the timely development and approval of technically excellent reliability standards. In 2012, we need to ask ourselves once again, "is there a better way to develop reliability standards?"

We achieve the past results and plan for the future results only with your support, and greatly appreciate that the industry has accepted the evolving prioritization process. Our efforts to effectively manage and balance the many conflicting demands placed upon both the industry and NERC staff resources has provided this next plan, which we hope you will endorse.

Each of us, day in and day out, is driven to do the "right" thing, and your ERO's reputation will be enhanced through your active support for completion of NERC's 2012-14 Reliability Standards Development Plan.

Sincerely,

Allen Mosher
Senior Director of Policy Analysis and Reliability, American Public Power Association
Chair, NERC Standards Committee

Herb Schrayshuen
Vice President of Standards and Training, NERC

Chapter 3 - General

This is the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The Plan provides several items of interest to its readers:

- Information regarding the state of Standards at NERC, changes in Standards, and challenges facing Standards in the years to come;
- Status updates regarding standards and related projects currently in development;
- A forecast of Standards Development work scheduled for the next three years; and
- An overview of the process used to prioritize work and assign resources to Standards development projects.

NERC Standards staff endeavors to maintain a complete, updated set of Standards information on the NERC website, which can be found at www.nerc.com.

The Standards Program continues to manage its ongoing load of work in order to move toward the target work load levels initially identified in early 2011. Progress is being made in this area; however, some projects expected to be completed in 2011 are still in active development. This is largely due to unforeseen complications regarding achieving consensus and managing overall product quality.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, other priorities may necessitate deviations from this plan. As new technologies are discovered or new threats to reliability identified, the actual deployment of resources to staff this plan may shift. Similarly, the estimated times listed for project completion may change as more is learned about a given project.

NERC is currently investigating the following "emerging issues," which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Status Updates

2011 Reorganization and Hiring

In early 2011, NERC performed a minor reorganization of the Standards staff in order to ensure appropriate focus on key areas. A new position, Director of Regulatory Initiatives, was established to ensure overall coordination between NERC and its various regulators. NERC also established a Manager of Standards Information, with the primary focus of ensuring that information posted on the NERC website accurately reflects the current body of Standards and associated compliance information. Additional staff was hired into the Standards Process, Standards Development, and Regional Standards teams to better support the volume of work ongoing within the Standards Program.

Completed Standards Development Projects

In 2011, NERC completed development of the following projects.

- 2006-02 Assess Transmission and Future Needs (BOT approved, awaiting filing)
- 2007-04 Certifying System Operators (filed with regulators)
- 2008-06 Cyber Security Order 706 Version 4 (filed with regulators)
- 2009-06 Facility Ratings (filed with regulators)
- 2010-10 FAC 729 (filed with regulators)
- 2010-11 TPL Table 1 Footnote B (filed with regulators)
- 2010-13 Relay Loadability Order Phase 1 (filed with regulators)

Progress on Version Zero Standards

The set of Version 0 standards included 110 standards. Of the 110 standards, NERC withdrew three, and the Federal Energy Regulatory Commission (FERC) ruled on the remaining 107 as follows:

- 27 were approved without any directives to modify the associated standard
- 56 were approved with directives to modify the associated standard
- 24 were not approved, pending provision of additional information

Of the 56 that were approved with directives, progress in revising those standards includes:

- 7 have been approved by FERC
- 9 have been submitted and are pending FERC approval
- 18 are associated with projects under active development

- 22 are associated with projects that are either inactive or not started

Of the 24 that were not approved pending submittal of additional information, progress in revising those standards includes:

- 8 have been approved by FERC
- 4 have been submitted and are pending FERC approval
- 2 are associated with projects under active development
- 10 are associated with projects that are either inactive or not started

As of September 1, 2011, there are 103 continent-wide Reliability Standards with 1220 requirements that are mandatory and enforceable in the United States.[1]

Interpretations of Reliability Standards

Entities required to comply with a reliability standard have the right to request a formal interpretation of a requirement in a standard. Interpretation projects generally are narrower in scope than other standards projects, but like standards, interpretations are drafted by a drafting team and posted for industry review and ballot. From 2006 to 2011, NERC processed 43 interpretation requests. In addition, NERC received a number of requests for interpretation that were absorbed into standards development projects because drafting teams could not prepare the interpretations without expanding the requirements of the approved standard.

Progress on Regulatory Directives

Since NERC became the Electric Reliability organization (ERO), FERC has issued 44 Orders containing approximately 655 directives related to NERC Reliability Standards. Of the approximately 655 directives issued since 2007, NERC has completed projects associated with approximately 44% of these directives and continues to make substantial progress in addressing the remaining directives focusing first on those that have the greatest impact on reliability.

A significant number of the directives ordered by FERC for implementation by NERC (as the FERC-approved ERO) specify that NERC submit or modify a Reliability Standard that addresses a specific matter, as permitted under Section 215(d)(5) of the Federal Power Act. Other directives order NERC to make changes in its procedural rules. Still other directives order NERC to consider the views of various commenters when NERC next revises a particular Reliability Standard.

[1] The data included in this paragraph does not include Regional Reliability Standards.

NERC processes these various types of directives consistent with its Rules of Procedure (including Appendices 3A- Standard Processes Manual and 3C Procedure for Coordinating Reliability Standards). Specifically, when a regulatory order or rule is issued, that order is reviewed and any directives within the order related to standards development are added to the NERC Standards Issues Database and categorized. NERC then seeks to associate each directive with a specific standard. Projects and the associated Standards, along with the associated regulatory directives, are then prioritized for revision using the prioritization process described elsewhere in this document.

In 2011, NERC developed and filed the first NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. This report is to be filed annually with FERC on or before March 31 of each year in accordance with Section 321.6 of the NERC Rules of Procedure ("Rule 321") that was approved by the FERC on March 17, 2011. The progress against the directives issued is outlined in the aforementioned report.

Regional Standards Development

Regional standards work within NERC and the Regions has seen a great deal of development and implementation of new initiatives since the beginning of 2011. First, the Regional Reliability Standards Working Group (RRSWG) transitioned into the Regional Standards Group (RSG). Comprised of the NERC Vice President of Standards and Training and the Standards Managers from each of the eight Regional Entities, the RSG reports to the ERO Executive Management Group (EMG). Its purpose is to provide process and policy recommendations in the execution of the Regional Entity delegation agreements and the NERC Rules of Procedure. An overarching objective is to coordinate the development of Regional and continent-wide standards to support and continually enhance reliability across North America for the benefit of all bulk electric system users, owners and operators.

In support of this purpose and this objective, a primary initiative of the RSG is to create and sustain viable standards development coordination processes to obtain consistency and uniformity, where appropriate, across the ERO enterprise – NERC and the Regional Entities – while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO as the reliability standards development authority. To that end, the RSG developed a combined list of all regional standards and variances in the development process in order to prioritize these projects continent-wide. This will allow NERC to coordinate the necessary resources through the development and ultimate filing of these standards and variances with applicable regulatory authorities. Project information for each of those regional standards and variances in the development process is provided in this Plan, along with a high-level overview of the project timeline.

Rapid Development and Rapid Revision Projects

NERC's Standards Committee (SC) tentatively has identified two ways to accelerate project development while staying within the boundaries established in the Standard Processes Manual. Both approaches are consistent with the original vision of standards development when the ERO was being developed.

The first, called "Rapid Development," utilizes a small team of professionals to draft a standard over a short, but intensive period of time. The standard is then submitted with its associated SAR and the project moves directly into the first formal comment phase. Under this model, it may be possible to develop and ballot a standard within a period less than a year. The SC is evaluating the approach as part of Project 2010-05.1 Phase 1 of Protection Systems: Misoperations. Initial results have provided useful lessons learned, including the need to carefully select members of the small team to ensure not just subject matter expertise, but balance of interests as well.

The second approach, called "Rapid Revision," takes a similar approach, but is focused on dealing with concerns identified during the Interpretation process. If an interpretation drafting team identifies simple modifications to a standard that can address an interpretation request more effectively than an interpretation can alone, the team may propose to the requester that the team instead make such changes and submit them with an associated SAR. If agreed to by the requester, and following SC review, the changes may move directly to comment and ballot. This approach is being tested with project 2011-INT-01 Interpretation of MOD-028-1 R3.1 for Florida Power and Light.

Challenges facing Standards

Five-Year Review Obligation

As part of its Rules of Procedure, NERC has committed to review each of its standards for modification once every five years. 2012 marks the fifth year since NERC's first set of standards became mandatory and enforceable in the United States; many of those standards are now due for that five-year review. While not giving the appearance of being onerous, this obligation has proved challenging to meet. The work load of the ERO remains high, and maintaining focus on those projects that are most beneficial to reliability has resulted in a delay of the work required for these five-year reviews (except when already associated with a project of significant reliability value). Using current assumptions, the five-year review obligation will not be met for a number of standards. NERC and the SC are working together with the NERC Board of Trustees to evaluate options for addressing this issue.

Product Quality

As NERC's and the industry's experience with standards has evolved, it has become increasingly clear that minor problems with the quality of standards can have significant repercussions when it comes to clarity and compliance. NERC has undertaken efforts to improve the quality of its work products, and will continue to do so in 2012. Steps being taken include creating technical writer positions, enhanced training for staff, and developing additional internal quality assurance processes.

Standards Program Throughput

One continuing challenge is the ability to not only produce quality products, but to do so consistently and efficiently. While in some cases limited by necessity due to the scarcity of industry resources available in the workforce, the Standards Program continues to look for ways to improve the efficiency of its processes and its ability to demonstrate tangible progress

in standards development on a regular basis. In 2012, Standards staff will be implementing enhanced document management capabilities, as well as portfolio-level project controls to ensure optimal use of resources and overall consistency of throughput. This more global "portfolio view" was used to in part to develop this Plan, but additional improvements are expected in 2012 as well. As such, it should be noted that this, in addition to the normal variables associated with consensus-based product development, may lead to changes in the schedules used to develop the forecasts within this document

Conclusion

The Standards Program continues to make changes to improve its overall effectiveness, and looks forward to additional improvements in 2012. The SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity. Additionally, the plan was developed with the use of a subjective review of the implications of cost. NERC believes this approach correctly balances the needs of the industry with the public interest, and will continue to work with the industry to ensure the continued protection of reliability in North America.

Chapter 4 – Project Development Overview

Project Prioritization and Plan Development

This year, NERC continued use of the Prioritization Tool (the Tool) developed by the Standards Committee (SC) in late 2010 and early 2011 to help determine how best to assign resources and perform work. Following the finalization of the 2011-2013 Plan, the Standards Committee's Process Subcommittee (SCPS) began to work on improving the Tool for use in the development of the 2012-2014 Plan.

Similar to last year, the Tool utilizes a simple scoring mechanism to identify key considerations for use in determining project priority. Revisions were made to the tool in response to comments received during the development of the 2011-2013 Plan. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (as there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability, and trial testing of a new metric that accounts for "cost considerations." In addition, the Tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the SC to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources.

During the month of July 2011, NERC solicited the industry at-large for additional projects for consideration in the 2012-2014 Plan. NERC received nine submissions, resulting in the creation of six new projects. NERC created one project to account for the remaining Order 729 directives yet to be resolved, and one project to account for issues with the MOD-029-01 standard that will need to be addressed at some point in the future. NERC created four additional projects to account for projects to modify standards based on NERC's five-year review obligation, as identified in its Rules of Procedure.

In August, the SC began reviewing each of these projects, assigning them various scores based on input from constituents within their respective segments. NERC staff assembled the results in September, and an initial Prioritization and Work Plan was approved for posting at the September meeting of the SC. This Work Plan assumed an overall throughput capacity of thirteen projects in development concurrently, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.

- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The Work Plan identified each project and the amount of work associated with it, then allocated projects in their respective areas in order or priority as resources came available. Some projects were identified that needed additional research and were scheduled for initiation with sufficient time to allow such work to be completed. Additionally, some projects require specific expertise. To the extent such needs were identified, that expertise was managed to ensure the volume of work did not exceed the resource capacity. For example, projects related to protection systems generally were not started until another project related to protection systems was completed.

This Work Plan, along with the prioritization itself and this document in draft form, were posted for industry comment in September. Comments were received and considered at the October 2011 SCPS meeting; the final prioritization and Plan was approved by the SC at its October meeting. The Plan was presented to NERC' Board of Trustees and was approved at the Board's November meeting.

Project Implementation

Standards development projects at NERC proceed through a specific set of steps, identified in NERC's Standard Processes Manual. In general, the process can be summarized as follows:

- Initiation – projects are identified, and simple problem statements are developed. These problem statements are used to assist in the overall project prioritization effort described above.
- Planning – projects are further developed to determine their scope and merits. The drafting of a formal Standards Authorization Request (SAR) occurs in this step, as well as the development of communication plans if deemed to be necessary. In some cases, this step may occur concurrently with the initial steps of Execution and Control.
- Execution and Control – once the SC has approved a project for moving into this phase, standards or other work products are produced and the project begins moving forward in earnest. A detailed project schedule is developed, and standards are drafted, posted for comment, and balloted, culminating in review by NERC's Board of Trustees for adoption.
- Regulatory Submission - Following adoption by NERC's Board of Trustees, the standards are submitted to regulatory authorities.

- Closing – Following action by NERC's Board of Trustees, the project is reviewed and analyzed for "lessons learned." Public information is updated as necessary, and any necessary supplemental regulatory filings are made.

For more information on the specific details of each step in the implementation of projects to develop NERC Reliability Standards, readers are directed to various resources posted at the NERC Standards Resources page:

http://www.nerc.com/commondocs.php?cd=2

Chapter 5 – Project Work Plan Summary

This chapter summarizes the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The following is based on the Standards Committee's Prioritization of Projects (included as Appendix 1) and the associated staff-developed Work Plan (included as Appendix 2). The Regional Work Plan is included as Appendix 3. A detailed summary of projects, including regional projects, is included as Appendix 4.

Projects for 2012-2014

NERC intends to continue development of the following projects in 2012. These are Active Projects, and are expected to continue until completion. Although there are other projects that ranked higher this year than some of these projects, the Standards Committee believes that the industry has committed to completing these projects, and given that the workload is reaching a manageable size, moving any of these projects into informal development would be counterproductive.

The projects below have been color coded, to indicate their focus area (Reliability, Time Sensitivity, or Practicality). While most projects impact all three of these areas in some way, this is intended to illustrate the primary consideration driving each project's development priority.

Existing Active Projects:

- 2006-06 Reliability Coordination.
- 2007-02 Operating Personnel Communication Protocols.
- 2007-03 Real-time Transmission Operations.
- 2007-06 Protection System Coordination.
- 2007-07 Vegetation Management. This project is expected to be completed in early 2012, but at the time of this document's finalization, it has not yet been formally completed.
- 2007-09 Generator Verification.
- 2007-12 Frequency Response.
- 2007-17 Protection System Maintenance and Testing.
- 2008-06 Cyber Security – Order 706.
- 2009-01 Disturbance and Sabotage Reporting.
- 2010-05.1 Phase 1 of Protection Systems: Misoperations.
- 2010-07 Generator Requirements at the Transmission Interface.
- 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves.
- 2010-17 Definition of Bulk Electric System.

NERC intends to initiate development of the following additional projects in 2012. These projects have been assigned based on priority, but constrained by the need to have a limited

number of projects under active development at any given time. Project 2010-05.2 is not schedule to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. 2012-04 is not starting until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

While this Plan is a reasonable approach to Standards development, it cannot account for unforeseen events. The Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and factors such as new or emerging reliability risks to the Bulk Electric System. Changes to the Plan during its execution are not only possible, but likely, and should be expected.

Additional Projects in 2012:

- 2008-02 Undervoltage Load Shedding.
- 2009-02 Real-time Monitoring and Analysis Capabilities. This project is currently in informal development.
- 2009-03 Emergency Operations. This project is currently in informal development.
- 2010-01 Support Personnel Training. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS. This project is expected to be started upon the completion of the first phase of the project, 2010-05.1 Phase 1 of Protection Systems: Misoperations. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-13.2 Phase 2 of Relay Loadability: Generation. This project is currently in informal development. This project has been identified as having a higher priority, as it has a FERC deadline. While this was accounted for in the Prioritization, the SC agreed that this should take precedence over the 5-year review projects considered in the Prioritization.
- 2012-04 Protection System Commissioning Testing. This project is expected to be started upon the completion of 2007-17 Protection System Maintenance and Testing. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.

NERC intends to initiate development of the following projects in 2013. As noted above, these projects generally have been assigned based on priority and constrained by the need to have a limited number of projects under active development at any given time. 2012-06 is not starting until 2013 due to the need for subject matter expertise in reserves and in generator characteristics, which are already committed to projects 2010-14.1 and 2007-09, respectively. 2009-07 is not starting until 2013 due to the need for subject matter expertise in protection systems, which is already committed to project 2007-06.

Additional Projects in 2013:

- 2007-11 Disturbance Monitoring. This project is currently in informal development.
- 2008-01 Voltage and Reactive Planning and Control. This project is currently in informal development.
- 2008-12 Coordinate Interchange Standards. This project is currently in informal development.
- 2009-07 Reliability of Protection Systems. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until after the completion of 2007-06 Protection System Coordination.
- 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent. This project is currently in informal development.
- 2012-01 Equipment Monitoring and Diagnostic Devices. This project requires research prior to initiation, which is expected to be completed in the latter part of 2012.
- 2012-06 Generator Capabilities. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until completion of both 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves and 2007-09 Generator Verification.

NERC intends to initiate development of the following projects in 2014. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. In general, these projects are not projected to be initiated until 2014 due to the need to limit the number of projects active at any given time. 2010-13.3 is not projected to start until 2014 due to the need for subject matter expertise in relay loadability, which is already committed to Phase 2 of the project.

Additional Projects in 2014:

- 2009-04 Phasor Measurements. This project requires research prior to initiation, which is expected to be completed in 2013.
- 2009-05 Resource Adequacy Assessments.
- 2010-03 Modeling Data. This project requires research prior to initiation, which is expected to be completed in the latter part of 2013.
- 2010-04 Demand Data. This project requires research prior to initiation, which is expected to be completed in 2014.
- 2010-08 Functional Glossary Model Revisions.

- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is expected to not start until completion of the previous phase of this project, 2010-13.2 Phase 2 of Relay Loadability: Generation.
- 2010-16 Definition of System Operator.
- 2012-05 ATC Revisions - Order 729.

Projects for 2015 and Beyond

NERC intends to develop the following projects in 2015 or later, which is beyond the scope of this Plan. These projects have been identified as having a lower priority. There also is some question as to whether or not they will provide sufficient value to be cost justified at this time. They have been included for completeness and to ensure that they are recognized as necessary projects.

It should be noted that several of these projects are related to NERC's ongoing obligation to review its standard every five years, as required in the Rules of Procedure. This is discussed in more detail in the General chapter.

- 2010-02 Connecting New Facilities to the Grid
- 2012-02 Physical Protection
- 2012-03 PRC-004 VSLs
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review
- 2012-12 PER Review
- 2012-13 NUC Review
- 2012-14 Risk Analysis

The following two projects were identified as potential projects for consideration, but not included in the prioritization. If necessary, they will be evaluated mid-year on an ad-hoc basis; otherwise, they will be considered in the prioritization process for the 2013-2015 Reliability Standards Development Plan.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2012-15 Flow Limited Paths

Appendix 1 - Prioritization

The following pages show the project rankings in each of the three primary categories: Reliability, Time Sensitivity and Practicality. The assignment of scores was based on the mean of individual scores provide by members of the Standards Committee. Scores highlighted in red indicate areas where the members of the SC were divided regarding how to assign a particular score.

Following the identification of potential projects, this prioritization is the next step in the creation of the Reliability Standards Development Plan, and provides a starting point for further discussion. The prioritization is used to create the Work Plan that follows as Appendix 2.

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	7	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	6	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	2	29
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	3	7
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	14	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	11	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	12	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	9	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	19	32

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	37	41
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	4	3
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	16	12
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	15	25
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	8	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	20	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	22	20
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	41	43
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	10	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001- through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	17	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	18	19
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	36	40

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Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	40	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	42	44
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	13	31
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	38	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	39	24
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	21	33
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
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Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	32
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Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12

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Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	20
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	19
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	31
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23

NERC Standards Committee
Project Prioritization Worksheet

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Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	41
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	43
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	40
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
Project Prioritization Worksheet

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Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative, BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13

NERC Standards Committee
Project Prioritization Worksheet

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Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	19
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	30
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	31
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	32
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	40
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	41
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	42
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	43
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

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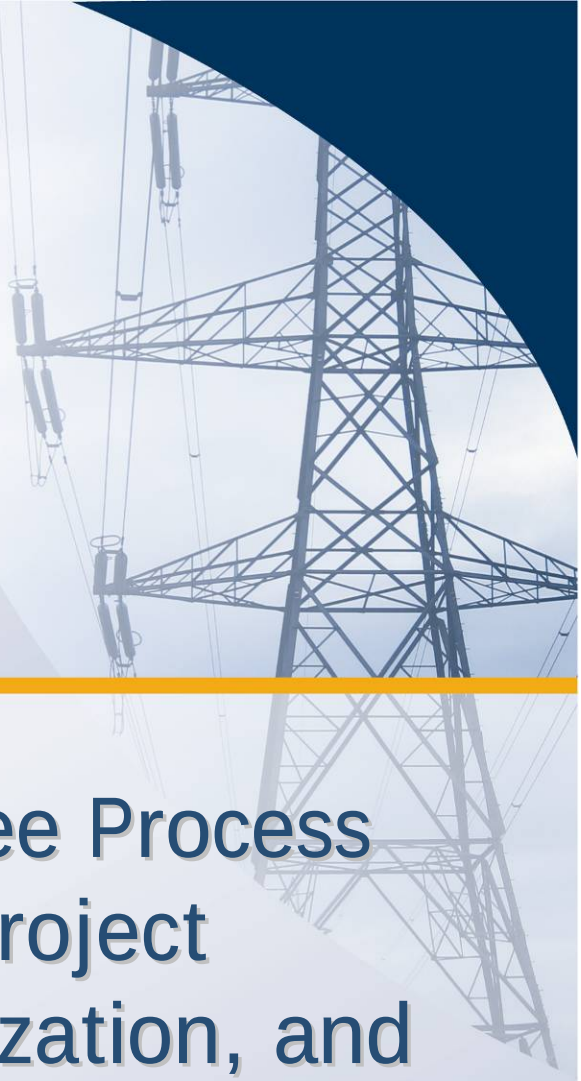

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. **Developing Projects Schedules**

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

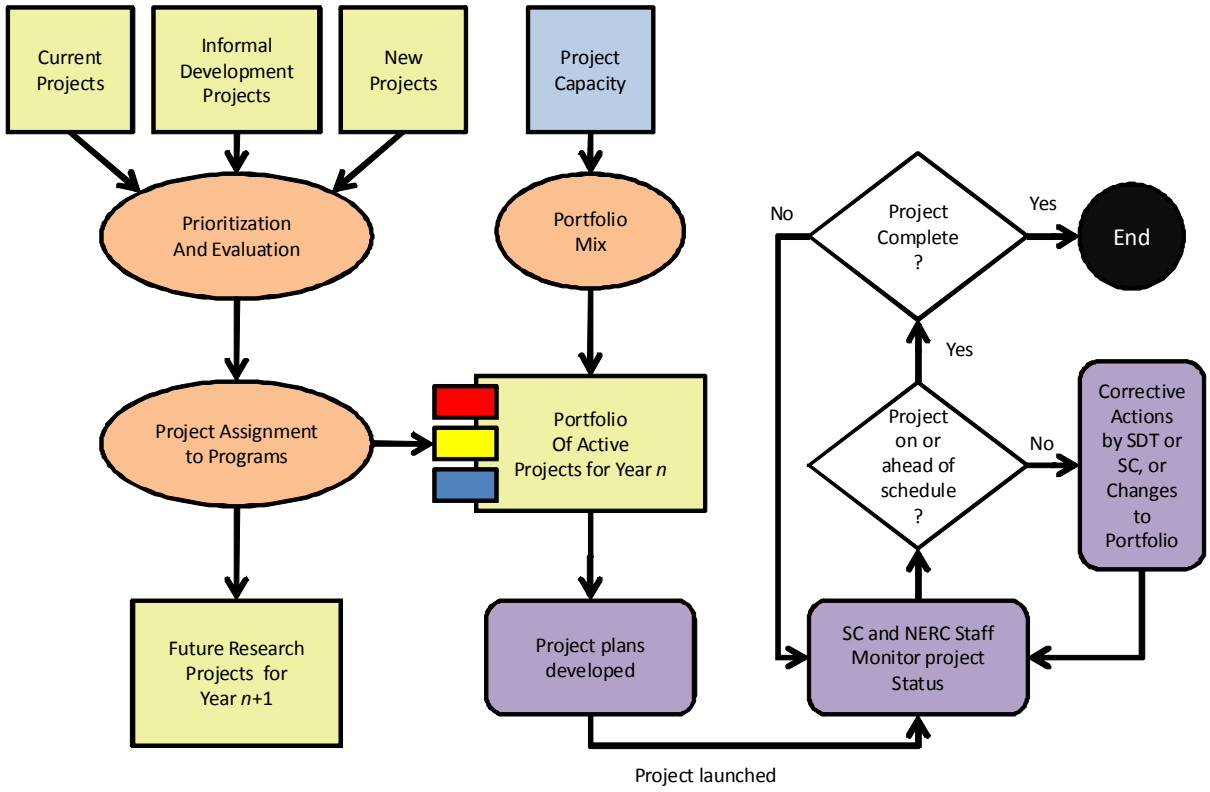
9. **Monitoring Projects**

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
    A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Attachment B: Prioritization Tool

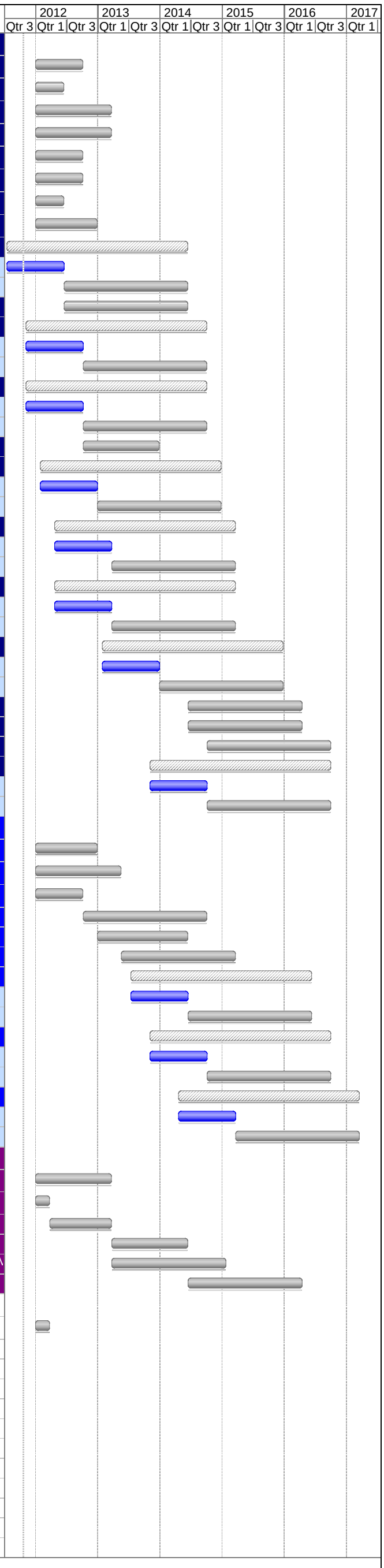
STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	SUMMARY						7	25	3	3
									Cells with this color are blank and need a value entered.				Sort	Sort	Sort	Sort	Sort					
TOTAL RANKING	Project Number and Name	Short Description	Addresses an ERO Strategic Priority (to be completed by NERC Staff) 50 = Yes 0 = No	Addresses a reliability risk not covered by an existing standard 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	Improves one or more existing standards: 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	Cost of Implementation The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Cost of Administration The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Time Sensitivity (to be competed by NERC Staff) Number of months until due date, if any	Addresses compliance issues from NERC Staff or Stakeholders 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	Other Practicality Concern (Explanation for the rating must be indicated in the column to the right) (0 to 50)	Explanation	Reliability Score (0 - 250)	Cost Consideration Score (0 - 100)	Time Sensitivity Score (0 - 100)	Practicality Score (0 - 150)	Total Score (0-600)	TOTAL RANKING	Relaibity Ranking	Cost Consideration Ranking	Time Sensitivity Ranking	Practicality Rnaking
1	Project 2010-13.2 Phase 2 of Relay Loadability: Generation	Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010											0	0	0	0	0	1	1	1	1	1
2	Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings												0	0	0	0	0	2	2	2	2	2
3	Project 2010.05.2 Phase 2 of Protections Systems: SPS and RAS	Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional udpates to PRC-004 as well.											0	0	0	0	0	3	3	3	3	3
4	Project 2010-16 Definition of System Operator												0	0	0	0	0	4	4	4	4	4
5	Project 2007-17 Protection System Maintenance & Testing	Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs; PRC-011-0 — UVLS System Maintenance and Testing; and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn.											0	0	0	0	0	5	5	5	5	5
6	Project 2007-06 System Protection Coordination	Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.											0	0	0	0	0	6	6	6	6	6
7	Project 2007-12 Frequency Response	Requires entities to provide data needed to model each interconnection's frequency response.											0	0	0	0	0	7	7	7	7	7
8	Project 2010-05.1 Phase 1 of Protection Systems: Misoperations	Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not incude SPS and RAS.											0	0	0	0	0	8	8	8	8	8
9	Project 2008-06 Cyber Security - Order 706	This is the second phase (Phase 2) of Project 2008-06 Cyber Security Order 706. The project requires modifications to CIP-002 thru CIP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.											0	0	0	0	0	9	9	9	9	9
10	Project 2010-07 Transmission Requirements at the Generator Interface	This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.											0	0	0	0	0	10	10	10	10	10
11	Project 2009-01 Disturbance and Sabotage Reporting	This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.											0	0	0	0	0	11	11	11	11	11

Appendix 2 – Work Plan

The following page shows the schedule of work in Gantt chart format. Projects for which the Standing Committees will be asked to provide research are identified with blue Gantt chart bars, and have been tentatively allocated a year duration for research (pending feedback from the Standing Committees).

Following the Prioritization, the Work Plan is the next step in the creation of the Reliability Standards Development Plan. It is used primarily to identify project predecessors and ensure resource allocations are consistent and manageable. Once complete, it identifies the estimated start and completion of all projects over the three-year period.

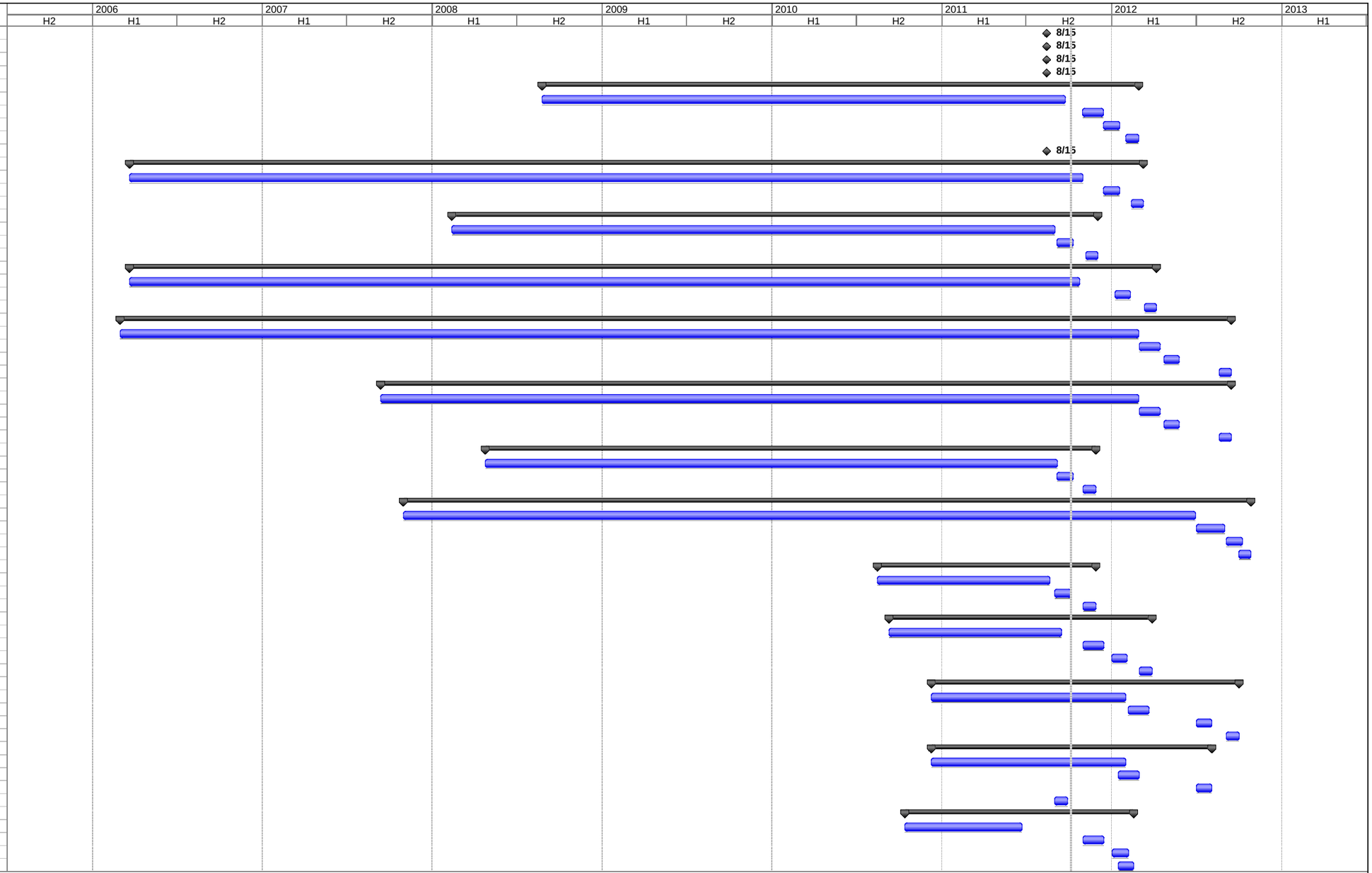
ID	Task Name
1	**Reliability Projects: 8 Slots**
2	**Project 2008-06 Cyber Security - Order 706 (ACTIVE)**
3	**Project 2007-17 Protection System Maintenance & Testing (ACTIVE)**
4	**Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)**
5	**Project 2007-06 System Protection Coordination (ACTIVE)**
6	**Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)**
7	**Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)**
8	**Project 2006-06 Reliability Coordination (ACTIVE)**
9	**Project 2007-09 Generator Verification (ACTIVE)**
10	***Project 2012-04 Protection System Commissioning Testing***
11	Standing Committee Research
12	Standards Development
13	Project 2008-02 Undervoltage Load Shedding
14	**Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS**
15	Standing Committee Research
16	Standards Development
17	**Project 2010-01 Support Personnel Training**
18	Standing Committee Research
19	Standards Development
20	Project 2009-03 Emergency Operations (INFORMAL)
21	**Project 2012-06 Generator Capabilities**
22	Standing Committee Research
23	Standards Development
24	**Project 2009-07 Reliability of Protection Systems**
25	Standing Committee Research
26	Standards Development
27	**Project 2012-01 Equipment Monitoring and Diagnostic Devices**
28	Standing Committee Research
29	Standards Development
30	**Project 2009-04 Phasor Measurements**
31	Standing Committee Research
32	Standards Development
33	Project 2009-05 Resource Adequacy Assessments
34	Project 2010-16 Definition of System Operator
35	Project 2010-08 Functional Model Glossary Revisions
36	**Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings**
37	Standing Committee Research
38	Standards Development
39	**Time-Sensitive Projects - 3 Slots**
40	**Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)**
41	**Project 2010-17 Definition of BES (ACTIVE)**
42	**Project 2007-12 Frequency Response (ACTIVE)**
43	Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)
44	Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)
45	Project 2007-11 Disturbance Monitoring (INFORMAL)
46	**Project 2010-03 Modeling Data**
47	Standing Committee Research
48	Standards Development
49	**Project 2010-04 Demand Data**
50	Standing Committee Research
51	Standards Development
52	**Project 2010-02 Connecting New Facilities to the Grid**
53	Standing Committee Research
54	Standards Development
55	**Practicality Projects - 2 Slots**
56	**Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)**
57	**Project 2007-03 Real-time Transmission Operations (ACTIVE)**
58	Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)
59	Project 2008-12 Coordinate Interchange Standards (INFORMAL)
60	Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORM
61	Project 2012-05 ATC-Revisions - Order 729
62	**Excess Beyond Capacity for 2012-2014**
63	**Project 2007-07 Vegetation Management (ACTIVE)**
64	Project 2012-02 Physical Protection
65	Project 2012-03 PRC-004 VSLs
66	Project 2012-08 Glossary Updates
67	Project 2012-07 Obsolescence Review
68	Project 2012-09 IRO Review
69	Project 2012-11 FAC Review
70	Project 2012-12 PER Review
71	Project 2012-13 NUC Review
72	Project 2012-14 Risk Analysis
73	*2006-06.2 Phase 2 of Reliability Coordination*
74	*2012-15 Flow Limited Paths*



Appendix 3 – Regional Work Plan

The following page shows the schedule of regional work in Gantt chart format. Projects that are actively being pursued are identified with black Gantt chart bars, with blue bars representing various stages of development. Projects that are "on hold" are represented by a black diamond.

ID	Task Name
1	**PRC-002-FRCC-1 (on hold)**
2	**PRC-003-FRCC-1 (on hold)**
3	**PRC-006-FRCC-1 (on hold)**
4	**PRC-024-FRCC-1 (on hold)**
5	**PRC-006-NPCC-1**
6	Regional standard development
7	Posting of Documents for process evaluation at NERC
8	Prepare BOT Material
9	Develop Initial Draft of Regulatory Filings
10	**PRC-012-NPCC-1 (on hold)**
11	**MOD-024-RFC-01**
12	Regional standard development
13	Prepare BOT Material
14	Develop Initial Draft of Regulatory Filings
15	**MOD-025-RFC-01**
16	Regional standard development
17	Prepare BOT Material
18	Develop Initial Draft of Regulatory Filings
19	**PRC-002-RFC-01**
20	Regional standard development
21	Prepare BOT Material
22	Develop Initial Draft of Regulatory Filings
23	**PRC-006-RFC-1**
24	Regional standard development
25	Posting of Documents for process evaluation at NERC
26	Prepare BOT Material
27	Develop Initial Draft of Regulatory Filings
28	**PRC-012-RFC-1**
29	Regional standard development
30	Posting of Documents for process evaluation at NERC
31	Prepare BOT Material
32	Develop Initial Draft of Regulatory Filings
33	**PRC-006-SERC-01**
34	Regional standard development
35	Prepare BOT Material
36	Develop Initial Draft of Regulatory Filings
37	**PRC-006-SPP-01**
38	Regional standard development
39	Posting of Documents for process evaluation at NERC
40	Prepare BOT Material
41	Develop Initial Draft of Regulatory Filings
42	**IRO-006-TRE-1**
43	Regional standard development
44	Prepare BOT Material
45	Develop Initial Draft of Regulatory Filings
46	**BAL-001-TRE-1**
47	Regional standard development
48	Posting of Documents for process evaluation at NERC
49	Prepare BOT Material
50	Develop Initial Draft of Regulatory Filings
51	**BAL-002-WECC-1**
52	Regional standard development
53	Posting of Documents for process evaluation at NERC
54	Prepare BOT Material
55	Develop Initial Draft of Regulatory Filings
56	**BAL-004-WECC-1**
57	Regional standard development
58	Posting of Documents for process evaluation at NERC
59	Prepare BOT Material
60	Develop Initial Draft of Regulatory Filings
61	**VAR-001-WECC-1**
62	Regional standard development
63	Posting of Documents for process evaluation at NERC
64	Prepare BOT Material
65	Develop Initial Draft of Regulatory Filings



Project: Unified Regional Project Sche
Date: Wed 10/5/11

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Appendix 4 – Project Summaries

The following are detailed summaries of the projects discussed earlier within this plan.

DEVELOPMENT 2012

Project 2006-06 Reliability Coordination

Summary:

This project ensures that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable, and that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team is considering comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed. The drafting team is reviewing all of the requirements in this set of standards and making a determination whether to:

- Modify the requirement to improve clarity and measurability while removing ambiguity;
- Move the requirement (into another project or Standard, or to the certification process); or
- Eliminate the requirement (because it is redundant or does not support BPS reliability).

This project ranked #13 in Reliability Priority.

Standards affected:

COM-001, COM-002, IRO-001- IRO-002, IRO-005, IRO-014, IRO-015, IRO-016

Status:

This project's SAR was finalized on May 2, 2007. The draft standards have been posted several times. The NERC Board of Trustees adopted IRO-002-3, IRO-005-4 and IRO-014-2, along with a conforming change to IRO-001-1.1 associated with IRO-014-2 (creating IRO-001-2) on August 4, 2011. The Board also approved the retirement of IRO-015-1 and IRO-016-1. The drafting team is continuing development on COM-001-2, COM-002-3, and additional revisions to IRO-001, which will become IRO-001-3. It is estimated this project will complete in Q2 2012.

FUTURE CONSIDERATION

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003

Summary:

This project will address directives from Order 693 related to the inclusion of measures in IRO-003 and the determination of "critical facilities."

Standards affected:

IRO-003

Status:

A SAR was developed and was finalized on July 14, 2010. However, no additional work has occurred for this project at this time. No estimate for starting the project has been identified.

DEVELOPMENT 2012

Project 2007-02 Operating Personnel Communication Protocols

Summary:

This project is reviewing COM-003 to ensure the standard is complete, appropriately scoped, and enforceable. The project is also considering other general improvements and stakeholder comments received during the initial development of the standards, as well as other comments received from Electric Reliability Organization (ERO) regulatory authorities. This also satisfies the NERC requirement for five-year review of the standard.

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers. Requirements will include protocols for communicating changes to real-time operating states and protocols for issuing and responding to operating directives.

This project ranked #5 in Reliability Priority.

Standards affected:

COM-003

Status:

This project's SAR was finalized on June 8, 2007. A draft standard was posted November 20, 2009 through January 15, 2010. Due to focusing on other priorities, this team was temporarily put on hold. The project was restarted in 2011, and the team is reviewing comments and preparing to post a new version of the standard. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-03 Real-time Transmission Operations

Summary:

This project is clarifying requirements for real-time operations of the Bulk Electric System in several standards, as well as providing other general improvements. It will consider stakeholder comments received during the initial development of the standards, as well as other comments received from ERO regulatory authorities. This also satisfies the NERC requirement for five-year review of the standards.

This project ranked #5 in Practicality Priority.

Standards affected:

PER-001, TOP-001, TOP-002, TOP-003, TOP-004, TOP-004, TOP-005¸ TOP-006, TOP-007, TOP-008

Status:

This project's SAR was finalized November 1, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from May 31, 2011 through June 9, 2011. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-06 System Protection Coordination

Summary:

This project is reviewing PRC-001-1 to assure that Protection System application and performance issues are coordinated among all related entities. It will ensure the applicable entities within the standard correctly reflect the functional responsibilities, as described in the NERC Functional Model. The project will also incorporate other general improvements, address directives received from ERO regulatory authorities, and consider the observations and recommendations developed by the NERC SPCTF. As necessary, the project will coordinate the transfer of monitoring-related requirements to other standards as appropriate through coordination with project 2006-06 Reliability Coordination.

This project ranked #4 in Reliability Priority.

Standards affected:

PRC-001, PRC-027 (New)

Status:

This project's SAR was finalized on July 27, 2007. A draft standard was posted from September 9, 2009 through October 26, 2009. Several interim drafts have been developed since that time. A new results-based version of the standard is in development. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-07 Vegetation Management

Summary:

This project will address some 'fill-in-the-blank' components of the existing standard, which were created in 2006 (prior to mandatory and enforceable standards). The project also will investigate applicability to lower voltage transmission lines, address the issue of clearances for lines on both federal and non-federal lands, consider revising the definition of right of way to encompass required clearance areas, and review the suitability of the IEEE 516-2003 standard for minimum vegetation clearance. This also satisfies the NERC requirement for five-year review of the standard.

Standards affected:

FAC-003

Status:

This project's SAR was finalized June 27, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Successive Ballot from February 18, 2011 through February 28, 2011. The team has drafted a revised standard and has requested it be posted for Recirculation Ballot. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-09 Generator Verification

Summary:

This project will create or modify standards to ensure that generators will not trip off-line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions. It also will ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

Standards affected:

MOD-024, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024

Status:

This project's SAR was finalized June 14, 2007. The standards have been posted several times for public comment. Two of the standards were posted most recently for Initial Ballot from July 22, 2011 through August 1, 2011. Three other standards were posted for comment June 12, 2011 through July 15, 2011. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2007-11 Disturbance Monitoring

Summary:

Purpose
This project establishes and clarifies requirements for the installation of Disturbance Monitoring Equipment (DME) and reporting of disturbance data to facilitate analyses of events and verify system models. The project will review PRC-002 and each of the current regional programs developed in accordance with that standard, including any other associated programs and/or requirements related to or contained within the disturbance monitoring program documentation. The project will then determine which requirements should be continent-wide requirements and which requirements should be included in regional standards.

Standards affected:

PRC-002, PRC-018

Status:

This project's SAR was finalized May 21, 2007. An initial draft standard was posted from February 2, 2009, to March 18, 2009. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

DEVELOPMENT 2012

Project 2007-12 Frequency Response

Summary:

Purpose:
This project will modify the BAL-003 Standard to require sufficient Frequency Response from the Balancing Authority to maintain Interconnection Frequency within predefined bounds. It also will ensure the standard provides consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

This project is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

BAL-003

Status:

This project's SAR was finalized June 30, 2007. The standard has been posted once for public comment, and is expected to be posted for comment in Q4 of 2011. The project is expected to complete in Q2, 2012.

DEVELOPMENT 2012

Project 2007-17 Protection System Maintenance and Testing

Summary:

This project will modify the standards related to ensuring all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The project will respond to various FERC directives contained in Order 693, as well as make general improvements to the standard.

This project ranked #3 in Reliability Priority.

Standards affected:

PRC-005, PRC-008, PRC-011, PRC-017

Status:

This project's SAR was finalized May 7, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from September 19, 2011 through September 28, 2011. It is estimated this project will complete in Q2 2012.

PENDING 2013

Project 2008-01 Voltage and Reactive Planning and Control

Summary:

This project will revise the VAR Standards to require that appropriate functional entities develop and coordinate voltage and reactive planning and operating criteria to ensure that there are sufficient reactive resources, and voltage and reactive margins, to manage the risk of voltage instability. The project will also address the FERC directives in Order 693 associated with these standards. Review and modifications to the existing VAR standards will also consider the Transmission Issues Subcommittee's "Reactive Support & Control Whitepaper" dated 05/18/2009.

This project ranked #3 in practicality.

Standards affected:

VAR-001, VAR-002

Status:

This project's SAR was finalized April of 2011. This project was moved into informal development in 2011, prior to posting any daft of the standard. It is estimated this project will begin in Q1 2013 and complete in Q2 2014.

PENDING 2012

Project 2008-02 Undervoltage Load Shedding

Summary:

This project will improve the existing standards on Under Voltage Load Shedding (UVLS) to ensure that load is shed when needed to prevent voltage collapse and voltage instability in the Bulk Electric System. The existing standards will be consolidated, and specific criteria for UVLS programs and assessments of those UVLS programs should be added. 'Fill-in-the-blank' elements should be eliminated, and concerns related to Fault-Induced Delayed Voltage Recovery will be reviewed and addressed.

This project ranked #14 in Reliability Priority.

Standards affected:

PRC-010, PRC-022

Status:

This standard has a proposed SAR that was posted for comment from January 20, 2010, through February 19, 2010. It is estimated this project will start in Q3 2012 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2008-06 Cyber Security – Order 706

Summary:

This project establishes standards to protect the critical cyber assets (including hardware, software, data, and communications networks) essential to the reliable operations of the bulk power system. Currently the project is focused on Version 5 of the standards, which is focused on addressing the remaining directives in Order 706.

This project ranked #2 in Reliability Priority.

Standards affected:

CIP-002, CIP-003, CIP-004, CIP-005, CIP-006, CIP-007, CIP-008, CIP-009, CIP-010 (New), CIP-011 (New)

Status:

This project's SAR was finalized June 9, 2008. Older versions of the standard have been posted, balloted, and approved several times. Version 5 of the standards has not yet been posted for comment. It is estimated this project will complete in Q3 2012.

PENDING 2013

Project 2008-12 Coordinate Interchange Standards

Summary:

This project will revise the set of Coordinate Interchange standards to ensure that each requirement is assigned to an owner, operator, or user of the bulk power system, and not to a tool used to coordinate interchange; to address the Interchange Subcommittee concerns related to the Dynamic Transfers and Pseudo-ties; and to address previously identified stakeholder comments. The project also will consider adding requirements to have backup capability for use when the interchange transaction tool fails.

Standards affected:

INT-001, INT-003, INT-004, INT-005, INT-006, INT-007, INT-008, INT-009, INT-010

Status:

This project's SAR was finalized December 1, 2008. An initial draft set of standards was developed and posted for comment from November 10, 2009 through December 9, 2009. However, the project was moved into informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2009-01 Disturbance and Sabotage Reporting

Summary:

Purpose:

This project entails revisions to existing standards CIP-001-1 – Sabotage Reporting and EOP-004-1 – Disturbance Reporting. The project will eliminate redundancy and provide clarity on sabotage events. Additionally, EOP-004 will be reviewed to eliminate any 'fill-in-the-blank' components.

This project ranked #8 in Reliability Priority.

Standards affected:

CIP-001, EOP-004

Status:

This project's SAR was finalized August 13, 2009. The standard has been posted for comment twice, and is being prepared for Initial Ballot. It is estimated this project will complete in Q3 2012.

PENDING 2012

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Summary:

This project will create new or revised standards to establish requirements for the monitoring and analysis capabilities provided to System Operators to support Real-time System Operations. The project will address availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management.

This project ranked #1 in Practicality Priority.

Standards affected:

New

Status:

This project's SAR was finalized March 31, 2010. The project team posted a White Paper created to illustrate the concepts it intends to pursue as the project unfolds. This posting solicited comments from February 16, 2011, through April 4, 2011. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2012 and complete in Q1 2013.

PENDING 2012

Project 2009-03 Emergency Operations

Summary:

This project will review the EOP-001, EOP-002, and EOP-003 standards and associated interpretations to ensure the requirements are clear and unambiguous. Many of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process; suggestions for improvement have been submitted by stakeholders, other drafting teams, and FERC staff.

This project ranked #4 in Practicality Priority.

Standards affected:

EOP-001, EOP-002, EOP-003

Status:

This project's SAR was finalized November 5, 2010. Prior to the development of an initial draft standard, this project was moved to informal development. It is estimated this project will start in Q3 2012 and complete in Q4 2013.

2014 PENDING RESEARCH

Project 2009-04 Phasor Measurements

Summary:

This project will review several industry studies to determine if there should be phasor requirements developed for a NERC standard. This project is related to the North-American Synchro-Phasor Initiative, and supports a blackout recommendation.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2014 and complete in Q4 2015.

PENDING 2014

Project 2009-05 Resource Adequacy Assessments

Summary:

This project will implement certain recommendations related to resource adequacy from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report,* approved by the NERC Board on June 15, 2004. The project will create a standard with requirements to perform resource adequacy assessments, using metrics that take into account various factors (including, but not limited to, fuel deliverability). The standard would also make the results of the assessments available to the industry, NERC, and appropriate regulatory agencies.

Standards affected:

New

Status:

This project's SAR was finalized August 17. 2007. Prior to the development of an initial draft standard, this project was moved to informal development in 2011. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2013 PENDING RESEARCH

Project 2009-07 Reliability of Protection Systems

Summary:

This project will ensure Protection Systems are designed and installed with redundancy where appropriate, such that if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards.

This project ranked #1 in Reliability Priority.

Standards affected:

New

Status:

This project has an initial draft of a SAR that was posted for comment January 20, 2009, through February 18, 2009. Comment responses have not been prepared, and the SAR has not been finalized. It is estimated this project will start in Q1 2013 and complete in Q1 2015.

2012 PENDING RESEARCH

Project 2010-01 Support Personnel Training

Summary:

This project will develop a standard that requires the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system.

This project ranked #15 in Reliability Priority.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2012 and complete in Q3 2014.

FUTURE CONSIDERATION, PENDING RESEARCH

Project 2010-02 Connecting New Facilities to the Grid

Summary:

22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.

Standards affected:

FAC-001, FAC-002

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2015 and complete in Q1 2017.

2014 PENDING RESEARCH

Project 2010-03 Modeling Data

Summary:

This project will consider merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. This project is related the Modeling Initiative, and supports a blackout recommendation.

Standards affected:

MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, PRC-013, PRC-015

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2014 PENDING RESEARCH

Project 2010-04 Demand Data

Summary:

This project will consolidate MOD-016 through MOD-020 into a single standard, with MOD-021 remaining as a separate standard. Requirements will be made be more specific to clearly identify the format for providing data, and modifications will made in support if previously received industry comments and regulatory directives.

Standards affected:

MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, MOD-021

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations

Summary:

This project addresses a key element for Bulk Electric System (BES) reliability: the correct performance of Protection Systems. Monitoring BES Protection System events to identify and correct the root causes of Misoperations will improve overall Protection System performance. The project will revise the definition of Misoperation and redraft the standard to be more clear and unambiguous.

This project ranked #7 in Reliability Priority.

Standards affected:

PRC-003, PRC-004

Status:

This project's SAR was finalized June 9, 2011. An initial draft of the standard was posted for comment from June 10, 2011 through July 11, 2011. A second draft is being prepared for posting and initial ballot. It is estimated this project will complete in Q3 2012.

2012 PENDING RESEARCH

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS

Summary:

This project will moodily the current standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and to ensure the reliability of the bulk power system. This project is related to the System Protection Initiative.

This project ranked #11 in Reliability Priority.

Standards affected:

PRC-012, PRC-014, PRC-016.

Status:

This project has a draft SAR, but it has not yet been posted for comment. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

DEVELOPMENT 2012

Project 2010-07 Generator Requirements at the Transmission Interface

Summary:

This project will develop any needed changes to the Reliability Standards to provide clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. The project will review standard for applicability, propose changes as necessary, and ensure that requirements that should apply to all generators, regardless of interconnection configuration, are implemented effectively.

This project ranked #12 in Reliability Priority, #13 in Practicality Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

FAC-001, FAC-003, PRC-004, others as needed

Status:

This project's SAR was finalized November 30, 2010. A draft set of standards was developed and posted from June 17, 2011 through July 17, 2011. Discussion and coordination between NERC, FERC , and the members of the project team are ongoing to ensure adequate coverage of all reliability needs. It is estimated this project will complete in Q1 2013.

FUTURE CONSIDERATION

Project 2010-08 Functional Glossary Model Revisions

Summary:

This project will ensure the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria are consistent.

Standards affected:

TBD

Status:

The Functional Model Working Group (FMWG) is responding to comments received from the first posting of the SAR. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

PENDING 2012

Project 2010-13.2 Phase 2 of Relay Loadability: Generation

Summary:

This project is being created in response to directives included in FERC Order 733. The project will draft a new standard to address generator relay loadability.

Standards affected:

New

Status:

This project's SAR was finalized November 1, 2010. Prior to the development of an initial draft, this project was moved to informal development in 2011. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

2014 PENDING RESEARCH

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

Summary:

This project is being created in response to directives includes in FERC Order 733. The project will draft a new standard to address protective relay operations due to power swings.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves

Summary:

This project will review the standard related to Control Performance and Disturbance control, and propose modifications or new standards as necessary. This project includes the testing and analysis of the new Balancing Authority ACE Limit (BAAL) metric, as well as the development of a continent-wide reserve policy to support BAL-01, BAL-002, and BAL-003.

This project ranked #1 in Time Sensitivity Priority, and #2 in Practicality Priority.

Standards affected:

BAL-001, BAL-002, New

Status:

This project was created by merging two existing teams. As such, there are two SARs associated with the project – one that was finalized on November 7, 2007, and one that was finalized on December 3, 2007. The combined effort was moved into informal development in 2011, but restarted to coordinate with project 2007-12 Frequency Response. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent

Summary:

This project will consider the Time Error Correction standard, AGC, standard, and Inadvertent Accounting standard to determine what changes, if any, are necessary to ensure the standards are clear and unambiguous. In some cases, the standard may no longer be necessary.

Standards affected:

BAL-004, BAL-005, BAL-006

Status:

This project is currently in informal development. Based on its priority, it has been identified in the 2012-2014 Work Plan to begin in Q2 2013 and complete in Q1 2015.

PENDING 2014

Project 2010-16 Definition of System Operator

Summary:

This project will remove the 'Generator Operator' from the current definition of System Operator. This will more accurately establish the responsibilities and expectations of the Generator Operator consistent with the current manner in which the bulk electric system is operated.

Standards affected:

TBD

Status:

A proposed SAR and revision to the definition of System Operator was posted for a 30-day formal comment period from November 3, 2010 through December 3, 2010. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

DEVELOPMENT 2012

Project 2010-17 Definition of Bulk Electric System

Summary:

This project will revise the definition of Bulk Electric System (BES) to address various Federal Energy Regulatory Commissions (FERC) concerns the definition must be modified to encompass all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. These concerns have been identified in FERC Order 693 issued on March 16, 2007 and in Order 743 issued on November 18, 2010 (Order 743). The project will also consider additional modifications (beyond those established in the regulatory directives) to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

This project ranked #10 in Reliability Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

Multiple

Status:

This project's SAR was finalized March 25, 2011. The draft definition has been posted twice, with the most recent posting done concurrently with an initial ballot from September 30, 2011, to October 02 2011. The first part of this project is expected to complete in Q1 of 2012. The remainder of this project is estimated to complete in Q2 2013.

2013 PENDING RESEARCH

Project 2012-01 Equipment Monitoring and Diagnostic Devices

Summary:

This project will consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures, with the intent of identifying potential equipment failures prior to their occurrence. This will provide more time to address failing systems and avoid or minimize long lead times.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

FUTURE CONSIDERATION

Project 2012-02 Physical Protection

Summary:

This project will develop standards for the safety and protection of essential equipment, buildings, and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-03 PRC-004 VSLs

Summary:

This project will address a problem identified in the VSLs of PRC-004. Currently, the VSLs do not address the case where a Corrective Acton Plan was developed or documented, but not fully implemented.

Standards affected:

PRC-004

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

2012 PENDING RESEARCH

Project 2012-04 Protection System Commissioning Testing

Summary:

This project will address a gap in reliability related to protection systems by creating a standard that requires commissioning testing. Improper or inadequate commissioning testing practices are a common cause of protection system Misoperation. However, the current set of approved NERC reliability standards does not address the testing of protection system equipment *before* that equipment is placed into initial service. Creating a commissioning standard would also enhance the effectiveness of the mandatory auditing program.

This project ranked #9 in Reliability Priority,

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2012 and complete in Q2 2014.

PENDING 2014

Project 2012-05 ATC Revisions - Order 729

Summary:

This project will respond to the remaining directives in Order 729.

Standards affected:

MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, MOD-030

Status:

This is a new project, which will require SAR development. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

2013 PENDING RESEARCH

Project 2012-06 Generator Capabilities

Summary:

This project will develop standards to ensure generator performance. The project should consider requirements that specify governor droop, frequency response, and reactive response.

This project ranked #6 in Reliability Priority

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2013 and complete in Q4 2014.

FUTURE CONSIDERATION

Project 2012-07 Obsolescence Review

Summary:

This project will create a standard that requires Generator and Transmission Owners periodically review their control and protection systems to identity and electronic, electrical, or mechanical devices that have become obsolete.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-08 Glossary Updates

Summary:

This project will respond to FERC directives to either create or modify the following definitions: Transmission Operator, Generator Operator, Bulk Power System, Reliable Operation, and Reliability Standard.

Standards affected:

TBD

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-09 IRO Review

Summary:

This project will perform the five-year review of several IRO standards, pursuant to NERC's Rules of Procedure.

Standards affected:

IRO-006, IRO-006-EAST, IRO-008, IRO-009, and IRO-010

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-11 FAC Review

Summary:

This project will perform the five-year review of several FAC standards, pursuant to NERC's Rules of Procedure.

Standards affected:

FAC-010, FAC-011, FAC-014

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-12 PER Review

Summary:

This project will perform the five-year review of several PER standards, pursuant to NERC's Rules of Procedure.

Standards affected:

PER-003, PER-004, PER-005

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-13 NUC Review

Summary:

This project will perform the five-year review of the NUC standard, pursuant to NERC's Rules of Procedure.

Standards affected:

NUC-001

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-14 Risk Analysis

Summary:

This project will develop a standard that requires entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist would include things like GMD, voltage collapse, and other extreme events.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-15 Flow Limited Paths

Summary:

The MOD-029 standard includes a provision that, if left uncorrected, could in certain scenarios result in significantly over-conservative ATC values being calculated. This project will address this problem.

Standards affected:

MOD-029

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE DEVELOPMENT

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements

Summary:

FRCC plans to convert the existing handbook document, "FRCC Requirements for Disturbance Monitoring Equipment" (revision dated June, 2006) into a new Regional Reliability Standard that complies with the requirements of NERC Reliability Standard, PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements.

Standards affected:

PRC-002-1

Status:

This Regional project is currently on "hold." Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-11 Disturbance Monitoring being classified as a "Project in Informal Development," FRCC staff will be re-evaluating the current status of the regional project to determine whether to proceed with the Regional Reliability Standard development or to revise the current FRCC Regional Criteria document "FRCC Requirements for Disturbance Monitoring Equipment."

FUTURE DEVELOPMENT

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems

Summary:

FRCC plans to convert the existing handbook document "FRCC Requirements for Analysis of Protection Misoperations & Corrective Actions Reporting" (revision dated October, 2003) into a new Regional Reliability Standard, that complies with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

Standards affected:

PRC-003-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2010-05.1 Protection Systems: Phase 1 (Misoperations) being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC has revised Regional Criteria documents ("FRCC Requirements for Analysis of Protection Misoperations and Corrective Actions Reporting," revision dateed December 2, 2010) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

FUTURE DEVELOPMENT

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program

Summary:

FRCC is developing a Regional Reliability Standard to provide last resort system preservation measures by implementing an Underfrequency Load Shedding (UFLS) program. Additional requirements may be needed due to FRCC peninsular geography and limited ties to the north. Operating experience and decades of studies by the FRCC and its predecessor reliability organizations have resulted in a well-developed UFLS program that is very resilient to frequency excursion resulting from severe and extreme contingencies. The standard development project will effectively use the proven high performance characteristics of the existing FRCC UFLS program and refine its requirements and coordination procedures to comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

Standards affected:

PRC-006-1

Status:

PRC-006-FRCC-1 FRCC Automatic Underfrequency Load Shedding Program has been approved by the FRCC Registered Ballot Body and the FRCC Board of Directors. Based on concerns identified by NERC standards staff and the pending Commission (FERC) approval of the NERC Continent-Wide Reliability Standard PRC-006-1 Automatic Underfrequency Load Shedding and associated Regional variances, the Regional project has been placed on “hold.” The FRCC has since revised Regional Criteria documents (FRCC Automatic Underfrequency Load Shedding Program, revision date: April 7, 2011) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

FUTURE DEVELOPMENT

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions

Summary:

FRCC is developing a standard to establish "ride through" requirements for generators in the FRCC Region with respect to temporary grid voltage or frequency deviations from their normal range. The Standard should address time duration limits for operation of generator protection for

1) frequencies outside of the 59.5 - 60.5 hertz range,
2) voltages outside of the 95% - 105% range, and
3) generator stator current overloads.

The Standard should address exemption criteria and mitigation measures available for resolving apparent conflicts between generator capabilities and the coordination requirements. Considerable knowledge of grid frequency and voltage excursions and the time limited capabilities of generators to sustain these conditions has been gained through operating experience and previous reliability studies. This standards development project should effectively use this knowledge to define coordination requirements and procedures that comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

Standards affected:

PRC-024-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-09 Generator Verification being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC is actively revising Regional Criteria documents (FRCC Generator Coordination Requirements) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

2012 DEVELOPMENT

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program

Summary:

The purpose of this Standard is to establish the requirements for NPCC and its members to operate and maintain a coordinated Regional Underfrequency load shedding (UFLS) program. The NPCC's UFLS program will meet the requirements contained in NERC standards, and provide those entities to which it is applicable the guidance necessary to implement it. This standard will also mandate that coordination with neighboring Regional Underfrequency load shedding programs be developed when necessary. The unique character, dispersion, sensitivity and density of the NPCC regional loads emphasize the need for this Standard.

The NPCC regional UFLS standard shall apply to all applicable entities within the Region and sub-regional areas that are both synchronous and asynchronous to the Eastern Interconnection. Quebec UFLS has different parameters, and these are included in the standard and fully coordinated within the Region.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. NPCC expects to complete the drafting of this standard in 2011 and conduct a ballot of stakeholders in the first quarter of 2012. Submission to the NERC Board of Trustees and subsequent filing with FERC is expected to occur in 2012.

FUTURE DEVELOPMENT

PRC-012-NPCC-1 — Special Protection Systems

Summary:

To support and enhance bulk power system reliability, this Standard will establish the criteria for the minimum design objectives and practices for special protection systems (the purpose of which are to detect abnormal system conditions, and take corrective actions other than the isolation of faulted elements to maintain the stability and security of the bulk power system). This Standard will also establish the requirements for close coordination between system planning, design, operating, maintenance and protection functions to ensure that the impacts of special protection system operations do not result in a significant adverse impact.

The proposed Standard will describe the requirements for the design and approval of Special Protection Systems and the technical criteria required to support its implementation. The Standard will also identify the need for close coordination among various parties to ensure that the Special Protection Systems are implemented correctly, and triggers and resulting actions are made known and communicated in an on-line database.

Standards affected:

PRC-012-0

Status:

This Regional project is currently on “hold” pending the completion of the NERC Reliability Standard Development Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS, and the outcome of the work by the NERC SPCS on the definition of SPS.

2011 DEVELOPMENT

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Real Power capability to support NERC Reliability Standard MOD-024. The objective of the regional standard is to ensure accurate information on generator gross and net Real (MWs) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-024-1

Status:

This Regional standard has been approved by the Reliability*First* Board. Currently, VRFs and VSLs are in development. Reliability*First* expects to complete the drafting of the VRFs and VSLs in 2011, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2011 DEVELOPMENT

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Reactive Power capability to support NERC Reliability Standard MOD-025. The objective of this standard is to ensure that accurate information on generator gross and net Reactive (MVAR) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-025-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011 and subsequent filing with the FERC is expected to occur in 2012.

2011 DEVELOPMENT

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for Disturbance monitoring and reporting to support NERC Reliability Standard PRC-002.

Standards affected:

PRC-002-1

Status:

Reliability*First* is currently working on the technical justification for the locational requirements for DME equipment. This Regional standard has been approved by the Reliability*First* Board. Reliability*First* expects submission of this standard to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2012 DEVELOPMENT

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency and assist in the recovery of frequency following underfrequency events, providing last resort system preservation measures. The standard goes beyond the NERC PRC-006-1 standard and prescribes with more certainty aspects that the Planning Coordinator's UFLS program must contain, further details on certain procedural matters with respect to how islands are addressed, and assessment of UFLS program implementation as well as program design. This standard also attempts further consolidating requirements of the Reliability*First* legacy underfrequency load shedding programs, permitting retirement of legacy documents to ensure appropriate coordination among the Reliability*First* legacy regional UFLS programs.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur later in 2012.

2012 DEVELOPMENT

PRC-012-RFC-1 — Special Protection System Requirements

Summary:

To purpose of the standard is to establish Reliability*First* requirements for the review, development and application of Special Protection Systems (SPS).

Standards affected:

PRC-012-0

Status:

This Regional project is currently in the initial drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur early in 2013.

2011 DEVELOPMENT

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements

Summary:

The SERC UFLS Standard: PRC-006-SERC-1 ("SERC UFLS Standard") was developed to provide regional UFLS requirements to entities in SERC. UFLS requirements have been in place at a continent-wide level and within SERC for many years prior to implementation of federally mandated reliability compliance standards in 2007.

In 2008, SERC commenced work on PRC-006-SERC-1. NERC also began work on revising PRC-006-0 at a continent-wide level. The SERC standard has been developed to be consistent with the continent-wide UFLS standard.

PRC-006-1 clearly defines the roles and responsibilities of parties to whom the standard applies. The standard identifies the Planning Coordinator ("PC") as the entity responsible for developing UFLS schemes within their PC area. This regional standard PRC-006-SERC-1 adds specificity not contained in the NERC standard for development and implementation of a UFLS scheme in the SERC Region that effectively mitigates the consequences of an underfrequency event.

Standards affected:

PRC-006-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011, and subsequent filing with FERC is expected to occur in 2012.

2012 DEVELOPMENT

PRC-006-SPP-1 — Under Frequency Load Shedding

Summary:

PRC-006 (Development and Documentation of Regional UFLS programs) has been identified by NERC as one of the Regional "Fill-in-the Blank" Standards. At a minimum, the requirements developed in this standard need to meet the requirements for the Regional Program as identified in NERC's PRC-006-0. Operating experience and regional studies have resulted in a well developed UFLS program that is very resilient to frequency excursions resulting from severe and extreme contingencies. This standards development effort intends to effectively use the proven high performance characteristics of the existing SPP UFLS program and refine its requirements and coordination procedures through an open process as described in the SPP Standard Development Process Manual.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. SPP expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection

Summary:

IRO-006-TRE-1 was developed to support bulk power system reliability by providing enforceable requirements associated with certain existing non-routine ERCOT congestion management procedures. This Regional Standard addresses the FERC directive in Paragraph 964 of Order 693, where FERC found that the ERCOT transmission loading relief procedures were superior to the national standard, and directed the ERO to provide Reliability Standards including Requirements, Measures and Levels of Non-Compliance corresponding to the ERCOT procedures for application in the ERCOT Region.

Standards affected:

IRO-006-5 (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of IRO-006-5.)

Status:

This Regional Standard was approved by the Texas RE Board of Directors on June 28, 2011, and it will be submitted to the NERC Board of Trustees in November 2011. Subsequent filing with FERC is expected to occur in 2012.

2011 DEVELOPMENT

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region

Summary:

This Regional Standard is intended to support reliability by ensuring adequate primary frequency response performance in the ERCOT Interconnection. The standard addresses frequency response at the Interconnection level, as well as by individual generating units and facilities. Specific maximum governor droop and deadband settings are provided, along with primary frequency response performance standards (initial and sustained) that allow actual unit-specific performance to be measured.

In 2002, NERC approved a regional difference for ERCOT that made it exempt from Requirement R2 in BAL-001-0 (CPS2), because of ERCOT's lack of synchronous connection to other control areas and the nature of the ERCOT energy market. FERC approved the ERCOT regional difference, finding that ERCOT's practice of (a) determining the minimum frequency response needed for reliability, and (b) requiring generators to have specific governor droop, to be a more stringent practice than Requirement R2 in BAL-001-0. FERC directed NERC to file a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section 5 of the ERCOT protocols. This Regional Standard is responsive to that directive.

Standards affected:

BAL-001-0.1a (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of the continent-wide standard.)

Status:

This project has been approved by the Texas RE Board of Directors, with expected submission to the NERC Board of Trustees in 2011 and subsequent filing with FERC to occur in 2012.

2012 DEVELOPMENT

BAL-002-WECC-1 — Contingency Reserves

Summary:

On Oct. 21, 2010, FERC found that BAL-002-WECC-1 did not meet the statutory criteria for approval and remanded the regional standard to NERC/WECC for further modification (RM09-15-000; Order 740). FERC held that BAL-002-WECC-1's less stringent requirements had not been supported by the technical data provided.

On remand, the Commission instructed WECC to modify the regional reliability standard to include a number of specific items contained in Order 740. This Request is submitted with the specific and narrow purpose of addressing only those issues mandated for modification in the October 2010 Oder 740.

Standards affected:

BAL-002-WECC-1

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2012 DEVELOPMENT

BAL-004-WECC-1 — Automatic Time Error Correction

Summary:

In the order approving BAL-004-WECC-1 the FERC directed WECC to make several clarifying modifications to the standard. FERC directed WECC to use the FERC-approved Process for Developing and Approving WECC standards to make these clarifying modifications

In addition, the WECC staff has identified the opportunity to make additional modifications to the existing standard to clarify the intent without changing the requirements.

There is also confusion regarding the R3 requirement that the ACE used for NERC reports shall be the same ACE as the AGC operating mode in use. This seems to conflict with the NERC response to NOPR comments that entities may use ATEC ACE for control but should use Raw ACE for reporting. WECC is developing a proposed regional variance to BAL-001-0.1a to address this apparent conflict.

Standards affected:

BAL-004-WECC-1
BAL-001-0.1a

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

VAR-001-WECC-1 — Voltage and Reactive Control

Summary:

The current draft has been converted from a Standard into a Regional Variance to the NERC VAR-001-2 Standard. The format incorporates the NERC Standard into the document with minor additions to address the scope of the variance. The regional variance specifics are included as Section E of the proposed document (see hyperlink above), and in this case, are intended to replace NERC VAR-001-2 requirements R3 and R4 as noted at the beginning of Section E.

The purpose of this regional variance to a NERC Reliability Standard is to ensure that voltage levels are within limits in real time to protect equipment and the reliable operation of the Western Interconnection. The "Rules of Procedure of the North American Electric Reliability Corporation" (Appendix 3A, page 31) permits the development of a regional variance to a NERC reliability standard on an Interconnection-wide basis when the Regional Reliability Organization has valid justification and when the variance is not inconsistent with or less stringent than the NERC Reliability Standard. The variance is an alternative method for obtaining the same reliability objective as the continent standard and is typically necessitated by a physical difference. A variance is embodied within a reliability standard and as such, if adopted by NERC and approved by the electric reliability organization governmental authority, shall be enforced within the applicable Regional Entity(ies) pursuant to delegated authority.

Standards affected:

VAR-001-2

Status:

This Regional project has been approved by the WECC Board of Directors. WECC expects to submit the draft for the mandatory NERC 45-day comment period in the near future, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Standards Development Plan

2012-2014

Approved by Board of Trustees
November 3, 2011

RELIABILITY | ACCOUNTABILITY

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Table of Contents

Chapter 1 – Executive Summary 1

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training 2

Chapter 3 - General 5

Status Updates 6

2011 Reorganization and Hiring 6

Completed Standards Development Projects 6

Progress on Version Zero Standards 6

Interpretations of Reliability Standards 7

Progress on Regulatory Directives 7

Regional Standards Development 8

Rapid Development and Rapid Revision Projects 8

Challenges facing Standards 9

Five-Year Review Obligation 9

Product Quality 9

Standards Program Throughput 9

Conclusion 10

Chapter 4 – Project Development Overview 11

Project Prioritization and Plan Development 11

Project Implementation 12

Chapter 5 – Project Work Plan Summary 14

Projects for 2012-2014 14

Projects for 2015 and Beyond 17
Appendix 1 - Prioritization 18
Appendix 2 – Work Plan 38
Appendix 3 – Regional Work Plan 38
Appendix 4 – Project Summaries 40
Project 2006-06 Reliability Coordination 41
Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003 42
Project 2007-02 Operating Personnel Communication Protocols 43
Project 2007-03 Real-time Transmission Operations 44
Project 2007-06 System Protection Coordination 45
Project 2007-07 Vegetation Management 46
Project 2007-09 Generator Verification 47
Project 2007-11 Disturbance Monitoring 48
Project 2007-12 Frequency Response 49
Project 2007-17 Protection System Maintenance and Testing 50
Project 2008-01 Voltage and Reactive Planning and Control 51
Project 2008-02 Undervoltage Load Shedding 52
Project 2008-06 Cyber Security – Order 706 53
Project 2008-12 Coordinate Interchange Standards 54
Project 2009-01 Disturbance and Sabotage Reporting 55
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities 56
Project 2009-03 Emergency Operations 57
Project 2009-04 Phasor Measurements 58
Project 2009-05 Resource Adequacy Assessments 59
Project 2009-07 Reliability of Protection Systems 60

Project 2010-01 Support Personnel Training 61

Project 2010-02 Connecting New Facilities to the Grid..... 62

Project 2010-03 Modeling Data..... 63

Project 2010-04 Demand Data 64

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations 65

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS..... 66

Project 2010-07 Generator Requirements at the Transmission Interface 67

Project 2010-08 Functional Glossary Model Revisions 68

Project 2010-13.2 Phase 2 of Relay Loadability: Generation 69

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings 70

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves 71

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent 72

Project 2010-16 Definition of System Operator 73

Project 2010-17 Definition of Bulk Electric System 74

Project 2012-01 Equipment Monitoring and Diagnostic Devices..... 75

Project 2012-02 Physical Protection..... 76

Project 2012-03 PRC-004 VSLs..... 77

Project 2012-04 Protection System Commissioning Testing..... 78

Project 2012-05 ATC Revisions - Order 729..... 79

Project 2012-06 Generator Capabilities 80

Project 2012-07 Obsolescence Review..... 81

Project 2012-08 Glossary Updates 82

Project 2012-09 IRO Review 83

Project 2012-11 FAC Review..... 84

Project 2012-12 PER Review..... 85

Project 2012-13 NUC Review 86

Project 2012-14 Risk Analysis 87

Project 2012-15 Flow Limited Paths 88

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements 89

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems 90

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program..... 91

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions 92

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program 93

PRC-012-NPCC-1 — Special Protection Systems 94

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability 95

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability 96

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements 97

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements 98

PRC-012-RFC-1 — Special Protection System Requirements 99

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements 100

PRC-006-SPP-1 — Under Frequency Load Shedding 101

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection 102

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region..... 103

BAL-002-WECC-1 — Contingency Reserves..... 104

BAL-004-WECC-1 — Automatic Time Error Correction 105

VAR-001-WECC-1 — Voltage and Reactive Control..... 106

Chapter 1 – Executive Summary

This document provides an update on the status of Standards Development work at NERC, as well as a forecast of work being planned for 2012-2014. The document has several sections:

- Chapter 1 contains this Executive Summary
- Chapter 2 contains introductory remarks from the Chair of the Standards Committee and NERC's Vice-President and Director of Standards
- Chapter 3 provides a general update on Standards Activities in 2011
- Chapter 4 provides a summary of the development of this document and the implementation of projects in general
- Chapter 5 provides a summary of the Work Plan
- Appendix 1 shows the prioritization scores used in the development of the Work Plan
- Appendix 2 shows the Work Plan in Gantt chart form
- Appendix 3 shows the Regional Work Plan in Gantt chart form
- Appendix 4 provides brief summaries of all the projects proposed within the Work Plan

Chapter 2 – A Joint Letter from the Chair of the Standards Committee and NERC's Vice-President of Standards and Training

To: NERC's Board of Trustees, Stakeholders, Regulatory Authorities, and other interested parties

NERC is committed to the development of clear, technically excellent standards for the reliable planning and operation of the North American bulk power system. NERC's industry-based standard development process strives to leverage the knowledge and experience of subject-matter experts to develop stakeholder consensus in support of standards that achieve reliability objectives and are responsive to regulatory directives, balanced against the burdens and costs of compliance imposed upon the more than 1,900 entities that are now subject to these standards. No single standard can ensure this outcome. Rather, NERC strives to develop and enhance a portfolio of performance, risk-mitigation, and competency-based reliability standards that achieve a consistent defense in depth against credible events that may lead to cascading, uncontrolled separation, or instability and ensure prompt system restoration when extreme events occur.

Achieving this balance is intrinsically difficult. Just as the management of the reliability "bar" through enforceable standards is an ongoing and evolving process, the process for developing standards needs to evolve as well, in response to the learning that has occurred in the period since passage of the Energy Policy Act of 2005 and the initial enforcement of NERC standards in June 2007. We would like to use this message to highlight current achievements in the standards arena and our plans for 2012-2014, as well as certain emerging factors and concerns.

NERC's Reliability Standards Development Plan delivered the following results in 2011:

- As of November 1, 2011, 20 new or revised standards have been approved by the Board of Trustees, and are either filed or in the process of being filed with the FERC.
- Results Based Standard development principles were used for all new standards projects.
- The Standards Committee worked with NERC staff to prioritize standards development resources on twelve high priority projects. There has been no specific redirection of this effort relative to the selected priorities by regulatory authorities.
- Stakeholder-driven Quality Review has been integrated into the standards development process to assure the best quality standards from a compliance and implementation perspective.
- NERC undertook a first effort to develop a standard on a Rapid Development basis utilizing the new Standard Processes Manual.

- To balance the resources committed to the development of new standards versus the interpretation of existing standards, the Standards Committee has limited the number of interpretations under active development to three projects at any one time, while pursuing new procedural options such as "rapid revision" to correct deficiencies in the underlying standard.

The 2012-14 Reliability Standards Development Plan described in this report builds on recent experience by proposing an achievable yet ambitious plan of standards development. The 2012-14 Plan provides for:

- Continuation of ongoing standards projects with sufficient resources to ensure timely completion.
- Project priorities were established using a more comprehensive model with scores and explanatory inputs from the Standards Committee, NERC staff and industry stakeholders.
- Projects have been ranked for development priority along three tracks, based on consideration of Reliability Benefits, Time Sensitivity, and Practicality.
- As ongoing projects are completed, we are scheduling follow-on projects based on the availability of subject-matter experts and the completion of technical input, research, and industry outreach conducted by NERC's standing committees and subcommittees.
- Finally, the 2012-14 Plan incorporates a more comprehensive integration of the regional standards effort into this process. For the first time a complete project management process is being applied to regional standards development.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, a wide variety of electric system events and emerging risks to bulk power system reliability may necessitate deviations from this plan. In order to respond to such threats and initiate development of new or revised standards, the actual deployment of resources to staff this plan may shift. Additionally, the estimated times listed for project completion may change as more is learned about a given project.

NERC currently is investigating the following "emerging issues," each of which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Not every issue is addressable or best addressed through development of a new industry standard; the issues outlined above illustrate that truism. But where a standards related response is indicated, we will be ready to reprioritize and adjust.

The Standards Committee and NERC staff also recognize that major standards process efficiencies are still necessary if we are to make efficient use of NERC and industry resources, while meeting external expectations for the timely development and approval of technically excellent reliability standards. In 2012, we need to ask ourselves once again, "is there a better way to develop reliability standards?"

We achieve the past results and plan for the future results only with your support, and greatly appreciate that the industry has accepted the evolving prioritization process. Our efforts to effectively manage and balance the many conflicting demands placed upon both the industry and NERC staff resources has provided this next plan, which we hope you will endorse.

Each of us, day in and day out, is driven to do the "right" thing, and your ERO's reputation will be enhanced through your active support for completion of NERC's 2012-14 Reliability Standards Development Plan.

Sincerely,

Allen Mosher
Senior Director of Policy Analysis and Reliability, American Public Power Association
Chair, NERC Standards Committee

Herb Schrayshuen
Vice President of Standards and Training, NERC

Chapter 3 - General

This is the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The Plan provides several items of interest to its readers:

- Information regarding the state of Standards at NERC, changes in Standards, and challenges facing Standards in the years to come;
- Status updates regarding standards and related projects currently in development;
- A forecast of Standards Development work scheduled for the next three years; and
- An overview of the process used to prioritize work and assign resources to Standards development projects.

NERC Standards staff endeavors to maintain a complete, updated set of Standards information on the NERC website, which can be found at www.nerc.com.

The Standards Program continues to manage its ongoing load of work in order to move toward the target work load levels initially identified in early 2011. Progress is being made in this area; however, some projects expected to be completed in 2011 are still in active development. This is largely due to unforeseen complications regarding achieving consensus and managing overall product quality.

This Plan is intended to be a forecast of the standards work expected to be developed in the coming years. However, other priorities may necessitate deviations from this plan. As new technologies are discovered or new threats to reliability identified, the actual deployment of resources to staff this plan may shift. Similarly, the estimated times listed for project completion may change as more is learned about a given project.

NERC is currently investigating the following "emerging issues," which may result in the identification of additional standards development work:

- Cold weather preparedness and winterization
- Geomagnetic disturbances
- Right-of-way clearances and maintenance
- System design and planning
- High Impact/Low Frequency events and disaster preparedness

Status Updates

2011 Reorganization and Hiring

In early 2011, NERC performed a minor reorganization of the Standards staff in order to ensure appropriate focus on key areas. A new position, Director of Regulatory Initiatives, was established to ensure overall coordination between NERC and its various regulators. NERC also established a Manager of Standards Information, with the primary focus of ensuring that information posted on the NERC website accurately reflects the current body of Standards and associated compliance information. Additional staff was hired into the Standards Process, Standards Development, and Regional Standards teams to better support the volume of work ongoing within the Standards Program.

Completed Standards Development Projects

In 2011, NERC completed development of the following projects.

- 2006-02 Assess Transmission and Future Needs (BOT approved, awaiting filing)
- 2007-04 Certifying System Operators (filed with regulators)
- 2008-06 Cyber Security Order 706 Version 4 (filed with regulators)
- 2009-06 Facility Ratings (filed with regulators)
- 2010-10 FAC 729 (filed with regulators)
- 2010-11 TPL Table 1 Footnote B (filed with regulators)
- 2010-13 Relay Loadability Order Phase 1 (filed with regulators)

Progress on Version Zero Standards

The set of Version 0 standards included 110 standards. Of the 110 standards, NERC withdrew three, and the Federal Energy Regulatory Commission (FERC) ruled on the remaining 107 as follows:

- 27 were approved without any directives to modify the associated standard
- 56 were approved with directives to modify the associated standard
- 24 were not approved, pending provision of additional information

Of the 56 that were approved with directives, progress in revising those standards includes:

- 7 have been approved by FERC
- 9 have been submitted and are pending FERC approval
- 18 are associated with projects under active development

- 22 are associated with projects that are either inactive or not started

Of the 24 that were not approved pending submittal of additional information, progress in revising those standards includes:

- 8 have been approved by FERC
- 4 have been submitted and are pending FERC approval
- 2 are associated with projects under active development
- 10 are associated with projects that are either inactive or not started

As of September 1, 2011, there are 103 continent-wide Reliability Standards with 1220 requirements that are mandatory and enforceable in the United States.[1]

Interpretations of Reliability Standards

Entities required to comply with a reliability standard have the right to request a formal interpretation of a requirement in a standard. Interpretation projects generally are narrower in scope than other standards projects, but like standards, interpretations are drafted by a drafting team and posted for industry review and ballot. From 2006 to 2011, NERC processed 43 interpretation requests. In addition, NERC received a number of requests for interpretation that were absorbed into standards development projects because drafting teams could not prepare the interpretations without expanding the requirements of the approved standard.

Progress on Regulatory Directives

Since NERC became the Electric Reliability organization (ERO), FERC has issued 44 Orders containing approximately 655 directives related to NERC Reliability Standards. Of the approximately 655 directives issued since 2007, NERC has completed projects associated with approximately 44% of these directives and continues to make substantial progress in addressing the remaining directives focusing first on those that have the greatest impact on reliability.

A significant number of the directives ordered by FERC for implementation by NERC (as the FERC-approved ERO) specify that NERC submit or modify a Reliability Standard that addresses a specific matter, as permitted under Section 215(d)(5) of the Federal Power Act. Other directives order NERC to make changes in its procedural rules. Still other directives order NERC to consider the views of various commenters when NERC next revises a particular Reliability Standard.

[1] The data included in this paragraph does not include Regional Reliability Standards.

NERC processes these various types of directives consistent with its Rules of Procedure (including Appendices 3A- Standard Processes Manual and 3C Procedure for Coordinating Reliability Standards). Specifically, when a regulatory order or rule is issued, that order is reviewed and any directives within the order related to standards development are added to the NERC Standards Issues Database and categorized. NERC then seeks to associate each directive with a specific standard. Projects and the associated Standards, along with the associated regulatory directives, are then prioritized for revision using the prioritization process described elsewhere in this document.

In 2011, NERC developed and filed the first NERC Standards Report, Status and Timetable for Addressing Regulatory Directives. This report is to be filed annually with FERC on or before March 31 of each year in accordance with Section 321.6 of the NERC Rules of Procedure ("Rule 321") that was approved by the FERC on March 17, 2011. The progress against the directives issued is outlined in the aforementioned report.

Regional Standards Development

Regional standards work within NERC and the Regions has seen a great deal of development and implementation of new initiatives since the beginning of 2011. First, the Regional Reliability Standards Working Group (RRSWG) transitioned into the Regional Standards Group (RSG). Comprised of the NERC Vice President of Standards and Training and the Standards Managers from each of the eight Regional Entities, the RSG reports to the ERO Executive Management Group (EMG). Its purpose is to provide process and policy recommendations in the execution of the Regional Entity delegation agreements and the NERC Rules of Procedure. An overarching objective is to coordinate the development of Regional and continent-wide standards to support and continually enhance reliability across North America for the benefit of all bulk electric system users, owners and operators.

In support of this purpose and this objective, a primary initiative of the RSG is to create and sustain viable standards development coordination processes to obtain consistency and uniformity, where appropriate, across the ERO enterprise – NERC and the Regional Entities – while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO as the reliability standards development authority. To that end, the RSG developed a combined list of all regional standards and variances in the development process in order to prioritize these projects continent-wide. This will allow NERC to coordinate the necessary resources through the development and ultimate filing of these standards and variances with applicable regulatory authorities. Project information for each of those regional standards and variances in the development process is provided in this Plan, along with a high-level overview of the project timeline.

Rapid Development and Rapid Revision Projects

NERC's Standards Committee (SC) tentatively has identified two ways to accelerate project development while staying within the boundaries established in the Standard Processes Manual. Both approaches are consistent with the original vision of standards development when the ERO was being developed.

The first, called "Rapid Development," utilizes a small team of professionals to draft a standard over a short, but intensive period of time. The standard is then submitted with its associated SAR and the project moves directly into the first formal comment phase. Under this model, it may be possible to develop and ballot a standard within a period less than a year. The SC is evaluating the approach as part of Project 2010-05.1 Phase 1 of Protection Systems: Misoperations. Initial results have provided useful lessons learned, including the need to carefully select members of the small team to ensure not just subject matter expertise, but balance of interests as well.

The second approach, called "Rapid Revision," takes a similar approach, but is focused on dealing with concerns identified during the Interpretation process. If an interpretation drafting team identifies simple modifications to a standard that can address an interpretation request more effectively than an interpretation can alone, the team may propose to the requester that the team instead make such changes and submit them with an associated SAR. If agreed to by the requester, and following SC review, the changes may move directly to comment and ballot. This approach is being tested with project 2011-INT-01 Interpretation of MOD-028-1 R3.1 for Florida Power and Light.

Challenges facing Standards

Five-Year Review Obligation

As part of its Rules of Procedure, NERC has committed to review each of its standards for modification once every five years. 2012 marks the fifth year since NERC's first set of standards became mandatory and enforceable in the United States; many of those standards are now due for that five-year review. While not giving the appearance of being onerous, this obligation has proved challenging to meet. The work load of the ERO remains high, and maintaining focus on those projects that are most beneficial to reliability has resulted in a delay of the work required for these five-year reviews (except when already associated with a project of significant reliability value). Using current assumptions, the five-year review obligation will not be met for a number of standards. NERC and the SC are working together with the NERC Board of Trustees to evaluate options for addressing this issue.

Product Quality

As NERC's and the industry's experience with standards has evolved, it has become increasingly clear that minor problems with the quality of standards can have significant repercussions when it comes to clarity and compliance. NERC has undertaken efforts to improve the quality of its work products, and will continue to do so in 2012. Steps being taken include creating technical writer positions, enhanced training for staff, and developing additional internal quality assurance processes.

Standards Program Throughput

One continuing challenge is the ability to not only produce quality products, but to do so consistently and efficiently. While in some cases limited by necessity due to the scarcity of industry resources available in the workforce, the Standards Program continues to look for ways to improve the efficiency of its processes and its ability to demonstrate tangible progress

in standards development on a regular basis. In 2012, Standards staff will be implementing enhanced document management capabilities, as well as portfolio-level project controls to ensure optimal use of resources and overall consistency of throughput. This more global "portfolio view" was used to in part to develop this Plan, but additional improvements are expected in 2012 as well. As such, it should be noted that this, in addition to the normal variables associated with consensus-based product development, may lead to changes in the schedules used to develop the forecasts within this document

Conclusion

The Standards Program continues to make changes to improve its overall effectiveness, and looks forward to additional improvements in 2012. The SC's work on this Plan has appropriately focused the industry on standards development to ensure the best progress in improving reliability, addressing concerns in a timely manner, and assisting with implementation complexity. Additionally, the plan was developed with the use of a subjective review of the implications of cost. NERC believes this approach correctly balances the needs of the industry with the public interest, and will continue to work with the industry to ensure the continued protection of reliability in North America.

Chapter 4 – Project Development Overview

Project Prioritization and Plan Development

This year, NERC continued use of the Prioritization Tool (the Tool) developed by the Standards Committee (SC) in late 2010 and early 2011 to help determine how best to assign resources and perform work. Following the finalization of the 2011-2013 Plan, the Standards Committee's Process Subcommittee (SCPS) began to work on improving the Tool for use in the development of the 2012-2014 Plan.

Similar to last year, the Tool utilizes a simple scoring mechanism to identify key considerations for use in determining project priority. Revisions were made to the tool in response to comments received during the development of the 2011-2013 Plan. Changes included the elimination and consolidation of scores that seemed to overlap or be redundant, removal of the "Project Percent Complete" evaluations (as there is currently no intention of moving projects into Informal Development, as was considered during the development of the 2011-2013 Plan), the addition of a score to account for projects related to the NERC President's Top Priority Issues for Bulk Power System Reliability, and trial testing of a new metric that accounts for "cost considerations." In addition, the Tool was modified to allow a more sophisticated analysis of each of the key drivers in project prioritization. This allowed the SC to consider each of those factors separately, as well as in aggregate, to determine how best to allocate resources.

During the month of July 2011, NERC solicited the industry at-large for additional projects for consideration in the 2012-2014 Plan. NERC received nine submissions, resulting in the creation of six new projects. NERC created one project to account for the remaining Order 729 directives yet to be resolved, and one project to account for issues with the MOD-029-01 standard that will need to be addressed at some point in the future. NERC created four additional projects to account for projects to modify standards based on NERC's five-year review obligation, as identified in its Rules of Procedure.

In August, the SC began reviewing each of these projects, assigning them various scores based on input from constituents within their respective segments. NERC staff assembled the results in September, and an initial Prioritization and Work Plan was approved for posting at the September meeting of the SC. This Work Plan assumed an overall throughput capacity of thirteen projects in development concurrently, and divided that capability into three areas:

- Reliability Projects – those projects expected to be the most beneficial to Reliability. Capacity for eight concurrent projects was assigned to this area.
- Time-Sensitive Projects – those projects with time sensitivity, such as those responsive to FERC orders with specified deadlines, as well as those projects needed to meet the ERO's five-year review obligation. Capacity for three concurrent projects was assigned to this area.

- Practicality Projects – those projects that improve the overall effectiveness of NERC's Reliability Standards, including addressing failed interpretations, improving the clarity of often violated standards, and other such general improvements. Capacity for two concurrent projects was assigned to this area.

The Work Plan identified each project and the amount of work associated with it, then allocated projects in their respective areas in order or priority as resources came available. Some projects were identified that needed additional research and were scheduled for initiation with sufficient time to allow such work to be completed. Additionally, some projects require specific expertise. To the extent such needs were identified, that expertise was managed to ensure the volume of work did not exceed the resource capacity. For example, projects related to protection systems generally were not started until another project related to protection systems was completed.

This Work Plan, along with the prioritization itself and this document in draft form, were posted for industry comment in September. Comments were received and considered at the October 2011 SCPS meeting; the final prioritization and Plan was approved by the SC at its October meeting. The Plan was presented to NERC' Board of Trustees and was approved at the Board's November meeting.

Project Implementation

Standards development projects at NERC proceed through a specific set of steps, identified in NERC's Standard Processes Manual. In general, the process can be summarized as follows:

- Initiation – projects are identified, and simple problem statements are developed. These problem statements are used to assist in the overall project prioritization effort described above.
- Planning – projects are further developed to determine their scope and merits. The drafting of a formal Standards Authorization Request (SAR) occurs in this step, as well as the development of communication plans if deemed to be necessary. In some cases, this step may occur concurrently with the initial steps of Execution and Control.
- Execution and Control – once the SC has approved a project for moving into this phase, standards or other work products are produced and the project begins moving forward in earnest. A detailed project schedule is developed, and standards are drafted, posted for comment, and balloted, culminating in review by NERC's Board of Trustees for adoption.
- Regulatory Submission - Following adoption by NERC's Board of Trustees, the standards are submitted to regulatory authorities.

- Closing – Following action by NERC's Board of Trustees, the project is reviewed and analyzed for "lessons learned." Public information is updated as necessary, and any necessary supplemental regulatory filings are made.

For more information on the specific details of each step in the implementation of projects to develop NERC Reliability Standards, readers are directed to various resources posted at the NERC Standards Resources page:

http://www.nerc.com/commondocs.php?cd=2

Chapter 5 – Project Work Plan Summary

This chapter summarizes the Reliability Standards Development Plan (the "Plan") for years 2012-2014. The following is based on the Standards Committee's Prioritization of Projects (included as Appendix 1) and the associated staff-developed Work Plan (included as Appendix 2). The Regional Work Plan is included as Appendix 3. A detailed summary of projects, including regional projects, is included as Appendix 4.

Projects for 2012-2014

NERC intends to continue development of the following projects in 2012. These are Active Projects, and are expected to continue until completion. Although there are other projects that ranked higher this year than some of these projects, the Standards Committee believes that the industry has committed to completing these projects, and given that the workload is reaching a manageable size, moving any of these projects into informal development would be counterproductive.

The projects below have been color coded, to indicate their focus area (Reliability, Time Sensitivity, or Practicality). While most projects impact all three of these areas in some way, this is intended to illustrate the primary consideration driving each project's development priority.

Existing Active Projects:

- 2006-06 Reliability Coordination.
- 2007-02 Operating Personnel Communication Protocols.
- 2007-03 Real-time Transmission Operations.
- 2007-06 Protection System Coordination.
- 2007-07 Vegetation Management. This project is expected to be completed in early 2012, but at the time of this document's finalization, it has not yet been formally completed.
- 2007-09 Generator Verification.
- 2007-12 Frequency Response.
- 2007-17 Protection System Maintenance and Testing.
- 2008-06 Cyber Security – Order 706.
- 2009-01 Disturbance and Sabotage Reporting.
- 2010-05.1 Phase 1 of Protection Systems: Misoperations.
- 2010-07 Generator Requirements at the Transmission Interface.
- 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves.
- 2010-17 Definition of Bulk Electric System.

NERC intends to initiate development of the following additional projects in 2012. These projects have been assigned based on priority, but constrained by the need to have a limited

number of projects under active development at any given time. Project 2010-05.2 is not schedule to start until later in 2012 due to the need for subject matter expertise in misoperations, which is already committed to Phase 1 of the project. 2012-04 is not starting until later in 2012 due to the need for subject matter expertise in protection system testing, which is already committed to Project 2007-17.

While this Plan is a reasonable approach to Standards development, it cannot account for unforeseen events. The Plan is subject to modification in response to factors such as delays in the completion of current projects, the need to complete background research prior to initiation of standards development work, unforeseen regulatory directives, and factors such as new or emerging reliability risks to the Bulk Electric System. Changes to the Plan during its execution are not only possible, but likely, and should be expected.

Additional Projects in 2012:

- 2008-02 Undervoltage Load Shedding.
- 2009-02 Real-time Monitoring and Analysis Capabilities. This project is currently in informal development.
- 2009-03 Emergency Operations. This project is currently in informal development.
- 2010-01 Support Personnel Training. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-05.2 Phase 2 of Protection Systems: SPS and RAS. This project is expected to be started upon the completion of the first phase of the project, 2010-05.1 Phase 1 of Protection Systems: Misoperations. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.
- 2010-13.2 Phase 2 of Relay Loadability: Generation. This project is currently in informal development. This project has been identified as having a higher priority, as it has a FERC deadline. While this was accounted for in the Prioritization, the SC agreed that this should take precedence over the 5-year review projects considered in the Prioritization.
- 2012-04 Protection System Commissioning Testing. This project is expected to be started upon the completion of 2007-17 Protection System Maintenance and Testing. This project requires research prior to initiation, which is expected to be completed in the earlier part of 2012.

NERC intends to initiate development of the following projects in 2013. As noted above, these projects generally have been assigned based on priority and constrained by the need to have a limited number of projects under active development at any given time. 2012-06 is not starting until 2013 due to the need for subject matter expertise in reserves and in generator characteristics, which are already committed to projects 2010-14.1 and 2007-09, respectively. 2009-07 is not starting until 2013 due to the need for subject matter expertise in protection systems, which is already committed to project 2007-06.

Additional Projects in 2013:

- 2007-11 Disturbance Monitoring. This project is currently in informal development.
- 2008-01 Voltage and Reactive Planning and Control. This project is currently in informal development.
- 2008-12 Coordinate Interchange Standards. This project is currently in informal development.
- 2009-07 Reliability of Protection Systems. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until after the completion of 2007-06 Protection System Coordination.
- 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent. This project is currently in informal development.
- 2012-01 Equipment Monitoring and Diagnostic Devices. This project requires research prior to initiation, which is expected to be completed in the latter part of 2012.
- 2012-06 Generator Capabilities. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is not expected to start until completion of both 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves and 2007-09 Generator Verification.

NERC intends to initiate development of the following projects in 2014. These projects have been identified as having a lower priority, although some are associated with the 5-year review obligation. In general, these projects are not projected to be initiated until 2014 due to the need to limit the number of projects active at any given time. 2010-13.3 is not projected to start until 2014 due to the need for subject matter expertise in relay loadability, which is already committed to Phase 2 of the project.

Additional Projects in 2014:

- 2009-04 Phasor Measurements. This project requires research prior to initiation, which is expected to be completed in 2013.
- 2009-05 Resource Adequacy Assessments.
- 2010-03 Modeling Data. This project requires research prior to initiation, which is expected to be completed in the latter part of 2013.
- 2010-04 Demand Data. This project requires research prior to initiation, which is expected to be completed in 2014.
- 2010-08 Functional Glossary Model Revisions.

- 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings. Based on the limited number of experts in this subject matter area, and the need for research prior to beginning work, this project is expected to not start until completion of the previous phase of this project, 2010-13.2 Phase 2 of Relay Loadability: Generation.
- 2010-16 Definition of System Operator.
- 2012-05 ATC Revisions - Order 729.

Projects for 2015 and Beyond

NERC intends to develop the following projects in 2015 or later, which is beyond the scope of this Plan. These projects have been identified as having a lower priority. There also is some question as to whether or not they will provide sufficient value to be cost justified at this time. They have been included for completeness and to ensure that they are recognized as necessary projects.

It should be noted that several of these projects are related to NERC's ongoing obligation to review its standard every five years, as required in the Rules of Procedure. This is discussed in more detail in the General chapter.

- 2010-02 Connecting New Facilities to the Grid
- 2012-02 Physical Protection
- 2012-03 PRC-004 VSLs
- 2012-07 Obsolescence Review
- 2012-08 Glossary Updates
- 2012-09 IRO Review
- 2012-11 FAC Review
- 2012-12 PER Review
- 2012-13 NUC Review
- 2012-14 Risk Analysis

The following two projects were identified as potential projects for consideration, but not included in the prioritization. If necessary, they will be evaluated mid-year on an ad-hoc basis; otherwise, they will be considered in the prioritization process for the 2013-2015 Reliability Standards Development Plan.

- 2006-06.2 Phase 2 of Reliability Coordination
- 2012-15 Flow Limited Paths

Appendix 1 - Prioritization

The following pages show the project rankings in each of the three primary categories: Reliability, Time Sensitivity and Practicality. The assignment of scores was based on the mean of individual scores provide by members of the Standards Committee. Scores highlighted in red indicate areas where the members of the SC were divided regarding how to assign a particular score.

Following the identification of potential projects, this prioritization is the next step in the creation of the Reliability Standards Development Plan, and provides a starting point for further discussion. The prioritization is used to create the Work Plan that follows as Appendix 2.

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
Project Number and Name	Short Description	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	7	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	6	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	2	29
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	3	7
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	14	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	11	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	12	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	9	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	19	32

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	RELIABILITY SORT							
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Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	37	41
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	4	3
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	16	12
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	15	25
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	8	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	20	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	22	20
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	41	43
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	10	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001- through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	17	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	18	19
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	36	40

NERC Standards Committee
Project Prioritization Worksheet

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Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	40	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	42	44
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	13	31
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	38	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	39	24
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	21	33
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	TIME SENSITIVITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	32
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative. BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12

NERC Standards Committee
Project Prioritization Worksheet

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Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2009-03 Emergency Operations (INFORMAL)	17 - This set of EOP standards may be merged into a single standard. There are some requirements in IRO-001 that may be improved and merged into the new EOP standard. EOP-001, -002, -003, IRO-001.	0	45.8	72.7	45	45	5	12.5	29.2	50	Getting the industry to agree to combining the standards into one or two instead of four.	118.5	57	94	91.7	23	9	15	4
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	20
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	30
Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	19
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	31
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)	16 - The project will establish requirements for the functionality, performance, and management of Real-time tools for Reliability Coordinators, Transmission Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations. New standard(s).	0	66.7	58.3	90	85	27	37.5	10	50	Getting industry buy in to the deveopment of the tool required.	125	38	57	97.5	22	32	25	1
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23

NERC Standards Committee
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Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	41
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	43
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	40
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	42
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

NERC Standards Committee
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Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)	31 - The project includes of modifications to BAL-001 and BAL-002 to support Frequency Response project. Includes Continent-wide Reserve Policy. 5 Year review of BAL-001. Related to Frequency Response Initiative.	0	50	87.5	81.3	31.3	1	8.3	45.8	40	There is a significant disagreement between FERC Staff, NERC Staff and the industry as to what is required under BAL-002. There could also be signifcant cost savings to the industry if the revisions to BAL-001 were to be realized.	137.5	56	100	94.1	17	12	1	2
Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)	11 - This project supports a blackout recommendation. Industry debate is needed on whether there should be a North American standard that requires a specific amount of reserves, or whether requirements for specific reserves should continue to be addressed at the regional level. The requirements in the existing standards need to be upgraded to be more specific in defining voltage and reactive power schedules. Consideration should be given to adding a requirement for the Reliability Coordinator to monitor and take action if reactive power falls outside identified limits. VAR-001 and -002.	0	66.7	78.3	54.2	30	5	35.2	8.3	50	Addressing Reactive Requirements key to reliability of system. Lenght of Time since the reliability need was identified -- Project was identified to address a Blackout Recommendation (elapsed time = 7 years) and FERC Order 693 directives (elapsed time = 4-1/2 years). Subsequently, NERC Transmission Issues Subcommitte.	145	65	94	93.5	16	4	12	3
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Project 2007-03 Real-time Transmission Operations (ACTIVE)	4 - Requires upgrading and expanding existing requirements that address transmission operator responsibilities to ensure the real-time operating reliability of the transmission assets within the transmission operator's area. PER-001, TOP-001-through TOP-008	0	4.2	66.7	33.3	50	5	50	41.7			70.9	47	94	91.7	28	21	19	5
Project 2008-06 Cyber Security - Order 706 (ACTIVE)	13 - The project requires modifications to CIP-002 thru CIP-009 to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.	50	70.8	100	87.5	75	48	45.8	45.8			220.8	52	22	91.6	2	17	29	6
Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)	15 - This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards. EOP-004, CIP-001 and CIP-008.	50	66.7	56.1	16.7	16.7	5	50	27.8			172.8	72	94	77.8	8	2	6	7
Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)	25 - Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not include SPS and RAS. Related to System Protection Initiative.	50	62.5	62.5	33.3	37.5	5	50	25			175	64	94	75	7	5	5	8
Project 2007-17 Protection System Maintenance & Testing (ACTIVE)	10 - Intended to consolidate several standards into a single maintenance and testing standard: PRC-005 (Transmission and Generation Protection System Maintenance and Testing), PRC-008-0 (Underfrequency Load Shedding Equipment Maintenance Programs), PRC-011-0 (UVLS System Maintenance and Testing), and PRC-017-0 (Special Protection System Maintenance and Testing). Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn. Related to System Protection Initiative.	50	50	100	60	50	5	45.8	25			200	60	94	70.8	3	7	2	9
Project 2010-17 Definition of BES (ACTIVE)	34 - Define the BES as per FERC Order 743.	0	87.5	75	81.3	75	5	37.5	29.2	1.7	From Stakeholder Comments, foundation of standards.	162.5	52	94	68.4	10	18	7	10
Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings	30 - Address concerns with Stable Power Swings as identified in the FERC Order on Relay Loadability. Related to System Protection Initiative. New standard(s).	50	41.7	41.7	81.3	68.8	36	5	12.5	50	Relay performance during "stable" swings is complex. Restraint from tripping during stable swings must be balanced with the necessity of separation during unstable swings. The FERC order ignores this.	133.4	33	42	67.5	18	35	27	11
Project 2007-12 Frequency Response (ACTIVE)	9 - Requires entities to provide data needed to model each interconnection's frequency response, as well as establishes Frequency Response Obligation. Related to Frequency Response Initiative, BAL-003.	0	50	79.2	50	75	5	16.7	10	36.7	Frequency response has declined over the years. This issue is a high priority for FERC.	129.2	51	94	63.4	19	20	13	12
Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)	27 - This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. Multiple standards.	0	75	75	66.7	66.7	5	50	8.3			150	54	94	58.3	12	15	9	13

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
Project Number and Name	**Short Description**	**Addresses an ERO Strategic Priority** (to be completed by NERC Staff) 50 = Yes 0 = No	**Addresses a reliability risk not covered by an existing standard** 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	**Improves one or more existing standards:** 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	**Cost of Implementation** The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Cost of Administration** The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	**Time Sensitivity** (to be competed by NERC Staff) Number of months until due date, if any	**Addresses compliance issues from NERC Staff or Stakeholders** 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	**Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is** 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	**Other Practicality Concern** (Explanation for the rating must be indicated in the column to the right) (0 to 50)	**Explanation**	**Reliability Score (0 - 250)**	**Cost Consideration Score (0 - 100)**	**Time Sensitivity Score (0 - 100)**	**Practicality Score (0 - 150)**	**Reliability Ranking**	**Cost Consideration Ranking**	**Time Sensitivity Ranking**	**Practicality Ranking**
Project 2007-06 System Protection Coordination (ACTIVE)	5 - Requires upgrading and expanding the existing requirements from PRC-001 to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system. PRC-027. Related to System Protection Initiative.	50	62.5	83.3	55	45	5	12.5	41.7			195.8	61	94	54.2	4	6	3	14
Project 2007-07 Vegetation Management (ACTIVE)	6 - Project 2007-07 Vegetation Management Requires upgrading the existing requirements for entities to implement a vegetation management program to prevent transmission outages that adversely impact the reliability of the bulk electric system. FAC-003.	50	4.2	58.3	58.3	45	5	0	0	50	Results-Based Proof-of-Concept	112.5	40	94	50	24	29	16	15
Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS	26 - Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional updates to PRC-004 as well. Related to System Protection Initiative.	50	42.7	60	40	45	5	33.3	12.5			152.7	54	94	45.8	11	14	8	16
Project 2009-07 Reliability of Protection Systems	20 - Requires facility owners to have protection system equipment installed such that, if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards. Related to System Protection Initiative. New standard(s).	50	83.3	88.3	66.7	41.7	0	12.5	25			221.6	66	0	37.5	1	3	33	17
Project 2006-06 Reliability Coordination (ACTIVE)	2 - Requires upgrading and expanding existing requirements that address reliability coordinator actions to prevent instability, uncontrolled separation or cascading outages. COM-001, COM-002, IRO-001, IRO-002, IRO-005, IRO-014, IRO-015, IRO-016, and IRO-003.	50	33.3	66.7	37.5	37.5	5	4.2	25			150	56	94	29.2	13	11	10	18
Project 2007-11 Disturbance Monitoring (INFORMAL)	8 - Requires upgrading and expanding existing requirements for entities to install disturbance monitoring equipment and report disturbance data to ensure information is available to analyze bulk power system disturbances. PRC-002, PRC-018.	0	25	72	75	66.7	5	0	0	26.7	High Regional Priority	97	39	94	26.7	25	31	17	19
Project 2008-12 Coordinate Interchange Standards (INFORMAL)	14 - Revise the set of Coordinate Interchange standards to 1) ensure that each requirement is assigned to an owner, operator or user of the bulk power system, and not to a tool used to coordinate interchange, 2) to address the Interchange Subcommittee's concerns related to the Dynamic Transfers and Pseudo-ties, and 3) to address previously identified stakeholder comments and applicable directives from Order 693. INT-001 through -010.	0	45.8	25	41.7	41.7	5	25	1.7			70.8	47	94	26.7	29	22	20	20
Project 2010-14.1 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORMAL)	32 - The project includes elimination of Time Error Corrections, 5-year review of BAL-005, miscellaneous clean up and modification to BAL-006.	0	4.2	0	50	50	5	0	25			4.2	26	94	25	39	36	23	21
Project 2012-05 ATC-Revisions - Order 729	39 - Respond to directives in Order 729 related to ATC Standards. Perform 5-year review of MOD-001, -004, -008, -029, and -030. Also includes MOD-028.	0	0	0	50	50	51	0	25			0	0	17	25	41	41	31	22
Project 2012-09 IRO Review	43 - 5-Year review of IRO-006, -008, -009, and -010.	0	0	0	50	50	54	16.7	8.3			0	0	12	25	42	42	32	23
Project 2010-08 Functional Model Glossary Revisions	28 - The Functional Model Working Group (FMWG) has received many comments and questions from stakeholders concerning the differences in definitions between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards. This project is designed to address these comments and make the definitions of functional entities consistent between the Functional Model and the NERC Glossary of Terms Used in Reliability Standards.	0	0	29.2	33.3	33.3	0	0	0	12	Foundational piece of ERO	29.2	41	0	12	35	28	42	24
Project 2007-09 Generator Verification (ACTIVE)	7 - Requires upgrading existing requirements for generators to verify their capabilities to ensure that accurate data is used in model to assess the bulk electric system. MOD-025, -026, 027; PRC-019 and -024.	0	66.7	62.5	75	45.8	5	10	0			129.2	52	94	10	20	19	14	25
Project 2012-03 PRC-004 VSLs	37 - Update VSLs to address the situation where Corrective Action Plans were developed or documented, but not fully implemented. PRC-004.	0	0	0	25	50	0	8.3	0			0	0	0	8.3	45	45	45	26
Project 2010-16 Definition of System Operator	33 - Refine definition of "System Operator" to exclude the Generator Operator, as all other "System Operators" have a more wide-area view.	0	8.3	25	33.3	37.5	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	33.3	41	0	7.5	34	27	41	27
Project 2012-08 Glossary Updates	42 - Per FERC Order 693, define Bulk Power System, Reliability Standard, and Reliable Operation. Modify definition of Generator Operator and Transmission Operator.	0	0	0	75	75	0	4.2	0	3.3	From Stakeholder Comments, foundation of standards.	0	0	0	7.5	46	46	46	28
Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)	3 - Requires developing new requirements in support of blackout recommendation #26 to ensure that real-time system operators use standard communication protocols during normal and emergency operations. COM-003.	50	75	70.8	25	25	5	4.2	0			195.8	74	94	4.2	5	1	4	29

NERC Standards Committee
Project Prioritization Worksheet

STANDARDS COMMITTEE Reliability Standard Project Prioritization		(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	PRACTICALITY SORT							
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Project 2008-02 Undervoltage Load Shedding	12 - Consider consolidating PRC-010-0 (Assessment of the Design and Effectiveness of UVLS Program) and (PRC-022-1 — Under-Voltage Load Shedding Program Performance). Currently missing are any criteria for identifying where UVLS should be installed. The team will utilize the FIDVR (Fault-Induced Delayed Voltage Recovery) Technical Reference Paper in the development of requirements. Related to System Protection Initiative.	50	29.2	70.8	83.3	50	5	0	0			150	42	94	0	14	24	11	30
Project 2010-03 Modeling Data	23 - Requires merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. Related to Blackout recommendation and Modeling Initiative. MOD-010 thru -015.	0	41.7	47.7	33.3	33.3	5	0	0			89.4	56	94	0	27	13	18	31
Project 2010-04 Demand Data	24 - As envisioned, this project will result in two standards — with MOD-016 through MOD-020 being merged into a single standard, and MOD-021 remaining as a separate standard. The requirements need to be more specific to clearly identify the format, etc., for providing data.	0	0	51.7	18.8	18.8	5	0	0			51.7	54	94	0	33	16	21	32
Project 2010-02 Connecting New Facilities to the Grid	22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.	0	0	25	33.3	33.3	5	0	0			25	40	94	0	36	30	22	33
Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)	29 - Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010. Related to System Protection Initiative.	50	29.2	50	62.5	50	12	0	0			129.2	42	82	0	21	26	24	34
Project 2012-11 FAC Review	44 - 5-Year Review of FAC-010, -011, -014	0	0	0	50	50	27	0	0			0	0	57	0	40	40	26	35
Project 2012-13 NUC Review	46 - 5-Year Review of NUC-001.	0	0	0	25	25	39	0	0			0	0	37	0	43	43	28	36
Project 2012-12 PER Review	45 - 5-Year Review of PER-003, -004 and -005.	0	0	0	50	50	49	0	0			0	0	20	0	44	44	30	37
Project 2012-06 Generator Capabilities	40 - For all synchronous generators, specify minimum droop settings and frequency response performance. Require proven voltage support and reactive response to a specific level. Related to Frequency Response Initiative. Related to BAL-003 and the Continent Wide Reserve Policy. New standard(s).	50	50	91.7	62.5	37.5	0	0	0			191.7	60	0	0	6	8	34	38
Project 2012-04 Protection System Commissionning Testing	38 - Establish minimum level of required commissioning testing prior to putting protection systems into service. Related to System Protection Initiative. New standard(s).	50	48.3	67.7	41.7	50	0	0	0			166	56	0	0	9	10	35	39
Project 2010-01 Support Personnel Training	21 - Require the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system. New standard(s).	50	45.8	50	85	41.7	0	0	0			145.8	42	0	0	15	25	36	40
Project 2012-01 Equipment Monitoring and Diagnostic Devices	35 - Consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures. New standard(s).	0	25	70.8	87.5	62.5	0	0	0			95.8	36	0	0	26	34	37	41
Project 2009-04 Phasor Measurements	18 - Supports a blackout recommendation. Several industry studies were issued that need to be analyzed to determine appropriate requirements for a NERC standard. Related to North-American Synchro-Phasor Initiative. New standard(s).	0	66.7	0	50	33.3	0	0	0			66.7	46	0	0	30	23	38	42
Project 2009-05 Resource Adequacy Assessments	19 - Implements recommendations from the Resource and Transmission Adequacy Task Force (RTATF) Report and the Gas/Electricity Interdependency Task Force Report, approved by the NERC Board on June 15, 2004, related to resource adequacy. New standard(s).	50	8.3	0	33.3	25	0	0	0			58.3	38	0	0	31	33	39	43
Project 2012-02 Physical Protection	36 - Consider the development of reliability standards for the safety and protection of essential equipment, buildings and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system. New standard(s).	0	45.8	8.3	91.7	83.3	0	0	0			54.1	20	0	0	32	37	40	44
Project 2012-14 Risk Analysis	47 - Require entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist should include things like GMD, voltage collapse, and other extreme events. New standard(s).	0	25	0	100	50	0	0	0			25	19	0	0	37	38	43	45
Project 2012-07 Obsolescence Review	41 - Require all TOs and GOs to periodically review their electronic, electric, mechanical, and other control systems, as well as protection systems, to replace obsolete equipment. New standard(s).	0	25	0	100	75	0	0	0			25	13	0	0	38	39	44	46
Project 2006-06.2 Phase 2 of Reliability Coordination	NA - Address specific directives from FERC Order 693 related to reliability standard IRO-003-2 - Reliability Coordination - Wide-Area View											0	0	0	0	47	47	47	47
Project 2012-15 Flow Limited Paths	NA - Address concerns identified with MOD-029 and its treatment of flow-limited paths.											0	0	0	0	48	48	48	48

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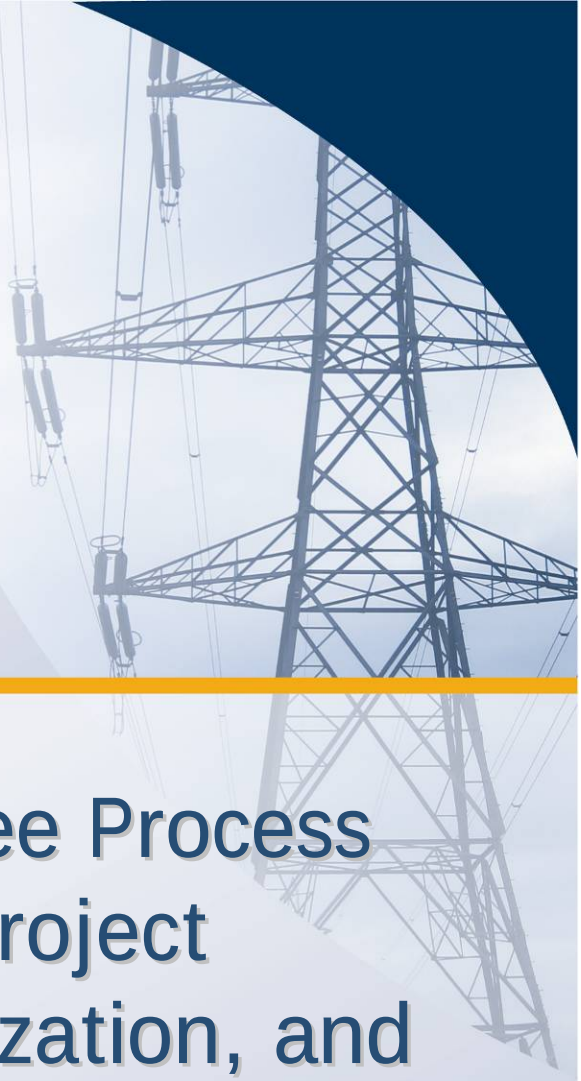

Standards Committee Process for Standards Project Identification, Prioritization, and Monitoring

to ensure the reliability of the bulk power system

Revised July 2011

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Table of Contents

Objective *3*

Changes in this Revision *3*

Background *4*

1. Identifying the List of Standards Projects 4
2. Identifying NERC Project Capacity 4
3. Identifying the Project Portfolio Mix 5
4. Evaluating Each Project 5
5. Determining Cost Considerations 6
6. Determining Projects for Each Program 6
7. Adding New Projects Intra-year and Adjusting Project Priority 6

Attachment A – Project Prioritization Tool Details 9

Attachment B: Prioritization Tool 13

Objective

This document presents a Standards Committee process for identifying, prioritizing, and monitoring NERC standards development projects, taking into account the various drivers for project initiation and the industry's resource constraints. The process provides the flexibility to accommodate new projects and to adjust project priority and completion schedule in response to changing conditions.

Changes in this Revision

When first used in developing the 2011-2013 Reliability Standard Development Plan (RSDP), the Standards Committee solicited feedback on the use of this tool. Stakeholders submitted several comments and suggestions that the Standards Committee deferred until the development of this revision. In response to those comments and suggestions, as well as other feedback received during the development of this revision, the Standards Committee made the following changes:

- Elimination of the perceived duplication between the process of assigning a score based on the number and type of regulatory directives assigned (previously column G) and the process of assigning scores for "Reliability Gap" (previously column H) and "Reliability Improvement" (previously column I). Some concern has been expressed that ranking the priority of directives assigned to a project based on their reliability impact and then additionally rating a project on its reliability impact was "double counting."
- Addition of a score to account for projects that address ERO Strategic Priorities
- Consolidation of all deadlines (regulatory directive based (previously column F), 5-year review based (column K), or otherwise) into one single new "Time Sensitivity" score. While previously, the Standards Committee felt that time limits derived from directives should be given special consideration, further discussion has led to the questioning of that assertion. Instead, all time limits will be considered, and the Standards Committee may elect to use its judgment to make additional modifications to project prioritization results based on specific knowledge or situations.
- Elimination of the "Project Percent Complete" (previously column N) evaluation
- Addition of two preliminary "cost" considerations
- Modification of the scoring mechanism, such that the "total" score is now the sum of the four subject area scores. In two cases, subject matter scores are no longer simple summations, but instead are determined based on slightly more complex equations.
- The ability to rank projects based on different factors (Reliability, Cost Considerations, Time Sensitivity, Practicality, or all factors combined)

Background

Since the startup of the ERO, the number of standards development projects has been significant. Coupled with the increasing number of requests for interpretations and directives issued by regulatory authorities, the industry has experienced a rapid and sustained increase in standards development related workload. The standards development process allows for any individual to propose a new project or request an interpretation. While the Standards Committee can exercise its discretion to delay the start of any project to cope with increased workload and to better manage standard projects to achieve timely completion, additional flexibility beyond just withholding the start of a project is needed.

At its April 2010 meeting, the NERC Standards Committee endorsed a proposal to develop a structured process to assist in managing standards development projects from the project planning stage through submission of a completed standard to the NERC Board of Trustees. The process outlined in this document takes into account industry resource constraints and changing conditions as new projects emerge and as issues are encountered during the course of standard development. It is expected that this process will occur on an annual basis. Projects that are requested mid-cycle will be scored and evaluated as described in Section 7.

1. **Identifying the List of Standards Projects**

   In general, standard projects may be initiated for a variety of reasons, including:

   a. **To meet a deadline.** These deadlines may include the five-year standard revision cycle requirement, regulatory-imposed deadlines, or other time-based commitments.

   b. **To address a Reliability Need** — Industry participants, regulators, NERC staff or the Board of Trustees identify the need for a new standard or revision to an existing standard to meet a reliability need or fill a reliability gap

   c. **To address practical implementation issues.**— Industry participants, NERC and Regional Entity staff identify quality and clarity gaps in NERC's existing reliability standards that need to be remedied to ensure consistent industry compliance. These may be indentified through compliance, through the need for interpretations, or through other means (for example, Regional Entities and stakeholders may propose continent-wide NERC standards that will avoid the need to develop regional standards which will be phased out when the NERC standards are put in place).

   The list of standards projects will include all current projects, all projects in informal development, and all new projects that have yet to be initiated.

   Although any stakeholder can submit a Standards Authorization Request at any time, NERC will generally solicit project candidates for a fixed period of time prior to beginning its annual prioritization. Requests received outside that window of time will be considered for prioritization either at the next annual prioritization or on a case by case basis.

2. **Identifying NERC Project Capacity**

NERC is only able to manage a finite number of projects at a given point in time, due to the limitations of both staff and industry resources. In general, NERC can accommodate 10-12 projects on an ongoing basis. Because some projects are more complex than others, NERC's Standards Committee will work with NERC staff to determine the total capacity for NERC Standards Development. NERC staff will remain responsible for the actual assignment of staff resources to projects.

3. **Identifying the Project Portfolio Mix**

Because there are many legitimate reasons for initiating projects, a simple ranking based on priorities is not sufficient. Although focusing on those projects with the greatest reliability need is important, it does not recognize the practical considerations or the time sensitivity of each project. For example, a project with a low reliability impact may nonetheless be associated with a regulatory imposed deadline; or a project may not directly improve reliability, but make a standard much easier to comprehend and implement successfully.

To address this, the Standards Committee allocates Project Capacity to three programs within the Standards Development portfolio: Time Sensitive projects, Practicality projects, and Reliability projects. This allocation is determined by the Standards Committee each year as the Reliability Standards Development Plan is being drafted. For example, assuming that the SC will pursue a total of 12 projects in 2012, this could result in capacity being allocated for three Time-sensitive projects, three Practicality projects, and six Reliability projects.

4. **Evaluating Each Project**

Each project identified will be evaluated in several areas. Members of the Standards Committee will provide the majority of the evaluation data, while NERC staff will only provide information regarding Time-Sensitivity and alignment with ERO Strategic Priorities (columns E and J in Attachment A).

Each representative on the Standards Committee will provide their recommendations for the values assigned to specific areas of each project. NERC will then aggregate and analyze this information and present it to the Standards Committee for review. In general, the arithmetic mean of all Standards Committee input will be used to set the "score" to be used in the prioritization. So if three members selected 50, 75, and 100 out of a possible total 100, the arithmetic mean would be 75.

However, in those cases where significant disagreement is noted between Standards Committee members, further discussion will occur among the Standards Committee to determine if additional changes should be considered. "Significant" disagreement shall be defined as more than 50% of the Standards Committee members participating having scores that are different from the mean by more than 30% of the maximum value for that particular score. So for example, if three members selected 0, 50, and 100, the mean would be 50. However, 66% (two) of the members would have chosen values that were different from the mean by more than 30% (50 points), so further discussion would be required to reconcile the difference.

5. **Determining Cost Considerations**

   As a first step, all projects will be evaluated for cost considerations. This is accomplished by comparing the "reliability" value to the "cost" value. The calculation of this value is explained in Attachment A's explanation of Column P.

   Cost is measured in two areas – the cost to the industry to comply with the standard, and the cost to the industry to demonstrate compliance with the standard. The first area should be focused on the incremental upgrades and investments needed to meet the standard (e.g., equipment purchases, software upgrades, training), while the second area should consider the cost of retaining data and documents, auditing and audit preparation, and reporting.

   Projects with a score of less than 50 will generally having a lower benefit relative to cost. When contemplating projects for the Reliability Program area, those with a lower benefit should be carefully considered prior to being initiated. However, a lower benefit should generally not by itself preclude a project from consideration.

6. **Determining Projects for Each Program**

   For each of the three portfolio program areas (Time Sensitive, Reliability, or Practicality), the Standards Committee will prioritize the list of projects and assign the top priority projects to the programs until program capacity is eliminated.

   Following this, the Standards Committee will review any projects that are in progress but are not currently assigned to one of the three portfolio programs. In general, the Standards Committee will displace lower priority projects within the program with projects currently in progress – effectively "filling" the programs with active work before adding new work. However, the Standards Committee may, if it so chooses, halt an existing project in order to move a project that it deems more critical forward.

   Next, the Standards Committee will review project interdependencies. If a high-priority project is expected to move forward, and relies on a lower-priority project for completion, then that lower-priority project should displace a higher-priority project to ensure the dependency is honored.

   Finally, the Standards Committee will eliminate any duplicate projects that appear in more than one program. The Standards Committee shall make the determination regarding in which program a project should reside. As these duplicate projects are eliminated, other projects may return or be added to the program.

   Additionally, the Prioritization will develop a list of potential projects for further research and planning. This list of potential projects will be brought to the Standing Committees for their assistance such that they may be considered in the following year for initiation.

7. **Adding New Projects Intra-year and Adjusting Project Priority**

When a new project emerges and is evaluated outside the annual prioritization, the resulting point scores may indicate that the new project should have priorities higher than other projects currently under active development. It is generally assumed that ongoing projects should have highest priority and should continue development work regardless of other projects' emergence. However, both emerging reliability issues and regulatory directives may lead the Standards Committee to direct that one or more projects that are currently assigned to a program be put on hold until resources become available and development work can be restarted.

The Standards Committee will decide if any of the ongoing projects should be stopped or deferred and advise the respective Standard Drafting Teams (SDTs) accordingly, or develop other remedial actions to launch the new projects and continue with all ongoing projects. If it determines that none of the ongoing projects should be stopped and the new projects should be launched, but no resource relief can be provided, the Standards Committee will bring the situation, along with options and recommendations, to the Board of Trustees for its attention and direction.

8. **Developing Projects Schedules**

The time required to complete a standard development project varies from one project to another depending on the scope of work and the complexity of the issues to be addressed. While the SAR proponents generally have a good grasp of the time required to complete a standard project from the formation of the SDT to balloting, the SDT itself may have more intimate knowledge of the technical issues involved and hence a better feel of the time needed to complete its assigned project. Further, since SDT members are industry volunteers that are committed to their projects, it is desirable and appropriate that the SDTs provide inputs into their project schedules and milestone events.

In general, NERC staff together with the Standards Committee will develop an initial project schedule based on past experience, complexity of the standards and other considerations such as available expertise, compliance deadlines, etc. Then, the SDT will be given the opportunity to review and adjust the project schedule at its initial meetings, and present a revised schedule, if necessary, to the Standards Committee for consideration. Once approved by the Standards Committee, the SDT will take ownership of the project and its schedule, and monitor and report project progress to the Standards Committee on an as-needed basis.

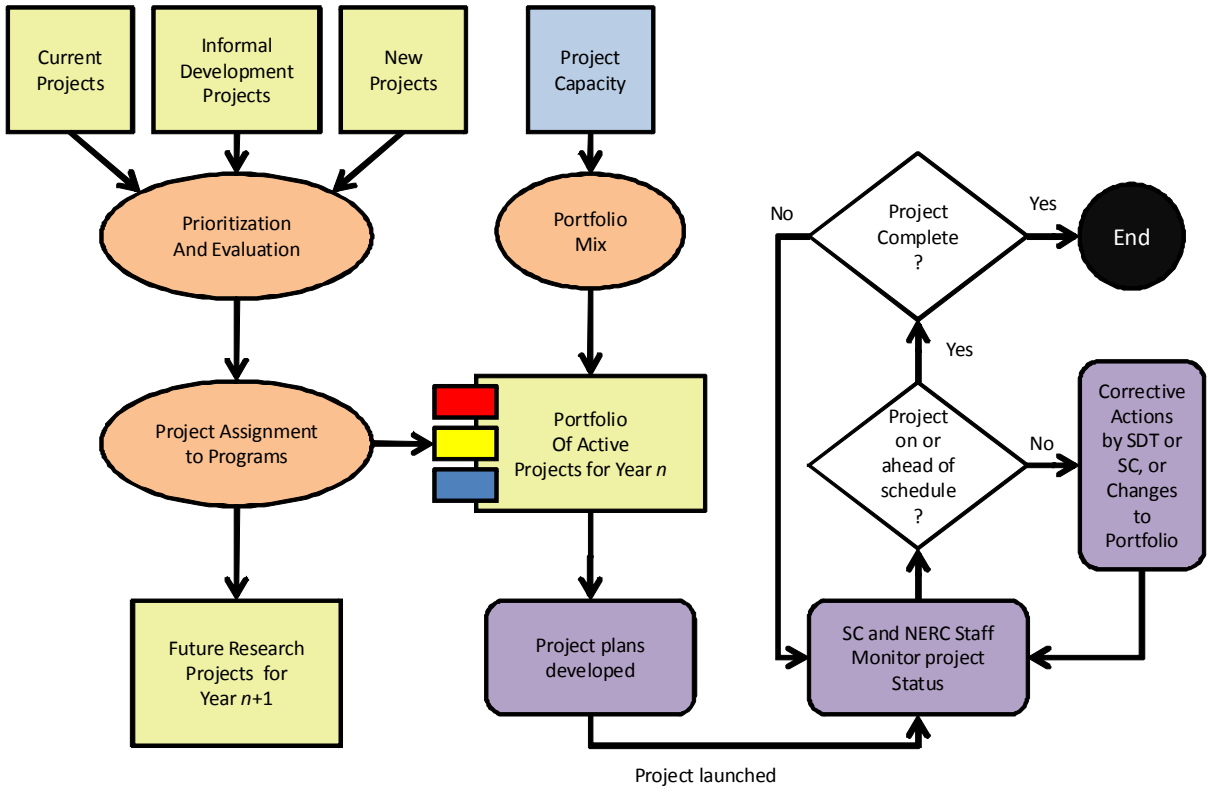
9. **Monitoring Projects**

The SDTs are responsible for monitoring all milestone events and completion schedules for their assigned projects. If at any time the milestone dates for a project are expected to be missed, the responsible SDT should report to the Standards Committee, and present options to put the project back on schedule or request accepting delays with supporting rationale. Where necessary, the SDT may seek the Standards Committee's endorsement or advice for other remedial actions including additional resource support, resolution of contentious issues, accepting an extension of the project schedule, or other actions deemed appropriate.

Such reporting should be made at least two months prior to a milestone date in danger of being missed, and at least four months prior to the scheduled completion date (end of re-circulation balloting) that is in danger of being missed. The Standards Committee will act upon receiving a report from the SDT of potential slippage. In its deliberation, it will assess impacts of implementing any remedial actions on the status of other ongoing or pending projects.

From time to time, the Standards Committee may request the Chair or a representative of an SDT to report on the progress of a project even though there is no indication of a potential slippage.

10. **Project Identification, Prioritization and Management Flow Diagram**
    A flow diagram showing the process described in 1 to 9 is shown below.



Attachment A – Project Prioritization Tool Details

Below is a detailed description of the values and calculations used in the Project Prioritization Tool.

Rows

Row 1 Contains general information and macro buttons.

The ***"Sort"*** macro buttons simply sorts rows 3 through 250 in descending order of the associated column and re-establishes the rankings listed in columns B, T, U, V, W, and X as appropriate.

The ***Click Here to Insert a Row*** macro button shifts all existing data down one row to insert a blank row in row 3. Data will then need to be entered into the new row.

Row 2 Contains the column headers.

Columns

Column A Blank.

Column B ***Priority Number:*** The relative ranking or each project as a result of the most recent "Total" Sort performed.

Column C ***Project Number and Name***

Column D ***Short Description*** (of the Project)

Column E ***Addresses an ERO Strategic Priority***. If the project is expected to aid in meeting one of the ERO's identified strategic priorities, then 50 points are added to the project reliability score. This value is assigned by NERC staff, and is used to calculate the **Reliability Score.**

Column F ***Addresses a reliability risk not covered by an existing standard.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture "gaps" in the reliability standards, and should consider factors such as how the project relates to instability, separation, or a cascading sequence of failures; how it relates to an adequate level of reliability; and how wide the impact of the project is. A "*Fill-in-the-blank"* standard would be one possible example of a "gap." This value is used to calculate the **Reliability Score.** It is also used with Columns G, H, and I in the calculation used to determine the **Cost Consideration Score.**

100 = Severe risk

75 = High risk

50 = Moderate risk

25 = Low risk

0 = N/A

Column G ***Improves one or more existing standards.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. In general, this value is intended to capture ways of improving the effectiveness of existing standards to provide improved reliability, such as raising the minimum level of compliance or adding additional requirements. This value is used to calculate the **Reliability Score.** It is also used with Columns F, H, and I in the calculation used to determine the **Cost Consideration Score.** The project is expected to improve reliability:

100 = Significantly

75 = Moderately

50 = Incrementally

25 = Minimally

0 = N/A

Column H ***Cost of Implementation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and I in the calculation of the **Cost Consideration Score,** and should consider such items as equipment purchases or upgrades, training, and similar costs. In other words, what would it cost the industry to become compliant with the standard? When considered in aggregate, the cost of complying with the standard is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column I ***Cost of Administration.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used with Columns F, G, and H in the calculation of the **Cost Consideration Score,** and should consider things such as the cost to retain data, the cost to document, and the cost of compliance staff evaluating data. In other words, what would it cost the industry (including applicable entities, regions, and NERC) to prove that the standard is being complied with? When considered in aggregate, the cost to demonstrate and verify compliance is expected to be:

100 = Very high

75 = High

50 = Average

25 = Low

0 = Very Low

Column J ***Time Sensitivity.*** Number of months until due date, if any, from the time the prioritization is effective. For example, in 2012, this should be the number of months from January 2012 to the due date. This value is assigned by NERC staff, and is used to calculate the **Time Sensitivity Score.** 0 indicates no deadline exists within the subsequent 60 months.

Column K ***Addresses compliance issues from NERC Staff or Stakeholders.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. For example, if Compliance had idenfied a frequently violated standard, or standards for which one or more CAN's had been developed, or standard which has been identified by stakeholders as being difficult to comprehend. This value is used to calculate the **Practicality Score.**

50 =Significant issues

25 = Moderate issues

10 = Minimal issues

0 = N/A

Column L ***Addresses a failed interpretation or SDT inability to develop an interpretation.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. This value is used to calculate the **Practicality Score.** The interpretation is needed to address a lack of clarity that is:

50 = Significant

25 = Moderate

10 = Minimal

0 = N/A

Column M ***Other Practicality Concern.*** This value is subjective in nature, and will be determined based on the consensus of the Standards Committee. An example of a project that would have points assigned here is the Vegetation Management project because of it being used at the prototype results based standard. Additional considerations would be the breadth of impact to registered entities, projects with active field trials, the length of time project has been in the queue, and projects that clarify a standard or delete redundant requirements. Addressing "*Fill-in-the-blank"* standard would be another area where practicality might drive a need to develop a standard by eliminating the potential for duplicate work among the regions. Between 0 and 50. This value is used to calculate the **Practicality Score**, and must be accompanied by an explanation of the relative value provided in Column N.

Column N ***Explanation:*** the explanation of the value set in column M.

Column O ***Reliability Score.*** The sum of columns E, F, and G. Between 0 and 250.

Column P ***Cost Consideration Score.*** Calculated based on the sum of columns F and G less the sum of the columns H and I, then scaled to produce a value between 0 and 100. Projects with no reliability benefit are automatically scored as 0.

Column Q ***Time Sensitivity Score.*** Calculated by dividing the number of months in column J by sixty, subtracting that value from one, and then multiplying by 100 and rounding. If the number of months is zero or greater than 60, then the score is set at 0. This results in projects with a closer deadline having a higher priority.

Column R ***Practicality Score.*** The sum of columns K, L, and M. Between 0 and 150.

Column S ***Total Score.*** The sum of the **Reliability Score, Cost Consideration Score, Time Sensitivity Score,** and **Practicality Score.** Based on total scores, results in a weighted score with approximately the following distribution of weights:

Reliability 41.6%
Cost Consideration 16.7%
Time Sensitivity 16.7%
Practicality 25%

Columns T-X ***Rankings.*** The numbers show the rankings for each area, and color codes the cells based on the following:

- The top *n* projects, where *n* is the number at the top of the column for columns U, W, and X
- All projects with a Cost Consideration Score greater than or equal to *n*, where *n* is the number at the top of column V.

Attachment B: Prioritization Tool

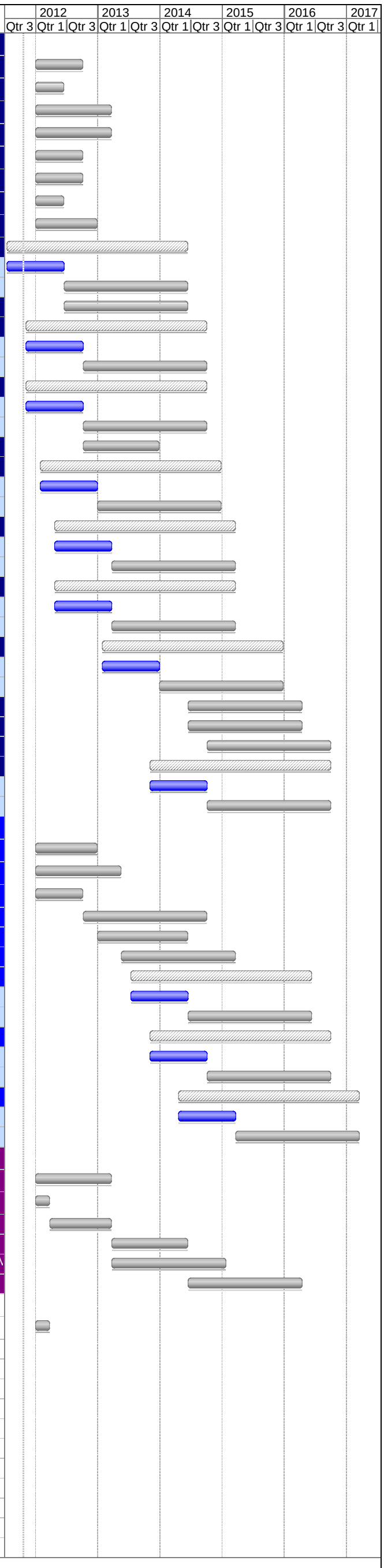
STANDARDS COMMITTEE Reliability Standard Project Prioritization			(E) Click Here to Insert a Row	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	SUMMARY						7	25	3	3
									Cells with this color are blank and need a value entered.				Sort	Sort	Sort	Sort	Sort					
TOTAL RANKING	Project Number and Name	Short Description	Addresses an ERO Strategic Priority (to be completed by NERC Staff) 50 = Yes 0 = No	Addresses a reliability risk not covered by an existing standard 100 = Severe risk 75 = High risk 50 = Moderate risk 25 = Low risk 0 = N/A	Improves one or more existing standards: 100 = Significantly 75 = Moderately 50 = Incrementally 25 = Minimally 0 = N/A	Cost of Implementation The cost of complying with the standard is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Cost of Administration The cost to demonstrate and verify compliance is expected to be: 100 = Very high 75 = High 50 = Average 25 = Low 0 = Very Low	Time Sensitivity (to be competed by NERC Staff) Number of months until due date, if any	Addresses compliance issues from NERC Staff or Stakeholders 50 =Significant issues 25 = Moderate issues 10 = Minimal issues 0 = N/A	Addresses a failed interpretation or SDT inability to develop an interpretation related to a lack of clarity that is 50 = Significant 25 = Moderate 10 = Minimal 0 = N/A	Other Practicality Concern (Explanation for the rating must be indicated in the column to the right) (0 to 50)	Explanation	Reliability Score (0 - 250)	Cost Consideration Score (0 - 100)	Time Sensitivity Score (0 - 100)	Practicality Score (0 - 150)	Total Score (0-600)	TOTAL RANKING	Relaibity Ranking	Cost Consideration Ranking	Time Sensitivity Ranking	Practicality Rnaking
1	Project 2010-13.2 Phase 2 of Relay Loadability: Generation	Draft new standard PRC-025-1 Generator Relay Loadability in compliance with the FERC Order 733 issued March 18, 2010											0	0	0	0	0	1	1	1	1	1
2	Project 2010-13-3 Phase 3 of Relay Loadability: Stable Power Swings												0	0	0	0	0	2	2	2	2	2
3	Project 2010.05.2 Phase 2 of Protections Systems: SPS and RAS	Modify current PRC-012, -014, and -016 standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. May include additional udpates to PRC-004 as well.											0	0	0	0	0	3	3	3	3	3
4	Project 2010-16 Definition of System Operator												0	0	0	0	0	4	4	4	4	4
5	Project 2007-17 Protection System Maintenance & Testing	Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs; PRC-011-0 — UVLS System Maintenance and Testing; and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-008-0, PRC-011-0, and PRC-017-0 would then be withdrawn.											0	0	0	0	0	5	5	5	5	5
6	Project 2007-06 System Protection Coordination	Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.											0	0	0	0	0	6	6	6	6	6
7	Project 2007-12 Frequency Response	Requires entities to provide data needed to model each interconnection's frequency response.											0	0	0	0	0	7	7	7	7	7
8	Project 2010-05.1 Phase 1 of Protection Systems: Misoperations	Modify current PRC-003 and -004 standards and definitions related to Protection System Misoperations to support a good metric for measurement of Protection System performance and ensure the reliability of the bulk power system. Does not incude SPS and RAS.											0	0	0	0	0	8	8	8	8	8
9	Project 2008-06 Cyber Security - Order 706	This is the second phase (Phase 2) of Project 2008-06 Cyber Security Order 706. The project requires modifications to CIP-002 thru CIP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERO Rules of Procedure and to address the directives from FERC Order 706.											0	0	0	0	0	9	9	9	9	9
10	Project 2010-07 Transmission Requirements at the Generator Interface	This project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.											0	0	0	0	0	10	10	10	10	10
11	Project 2009-01 Disturbance and Sabotage Reporting	This project will entail revision to existing standards CIP-001 and EOP-004. The standards may be merged to eliminate redundancy and provide clarity on sabotage events. EOP-004 has some 'fill-in-the-blank' components to eliminate. The development may include other improvements to the standards deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing high quality, enforceable and technically sufficient bulk power system reliability standards.											0	0	0	0	0	11	11	11	11	11

Appendix 2 – Work Plan

The following page shows the schedule of work in Gantt chart format. Projects for which the Standing Committees will be asked to provide research are identified with blue Gantt chart bars, and have been tentatively allocated a year duration for research (pending feedback from the Standing Committees).

Following the Prioritization, the Work Plan is the next step in the creation of the Reliability Standards Development Plan. It is used primarily to identify project predecessors and ensure resource allocations are consistent and manageable. Once complete, it identifies the estimated start and completion of all projects over the three-year period.

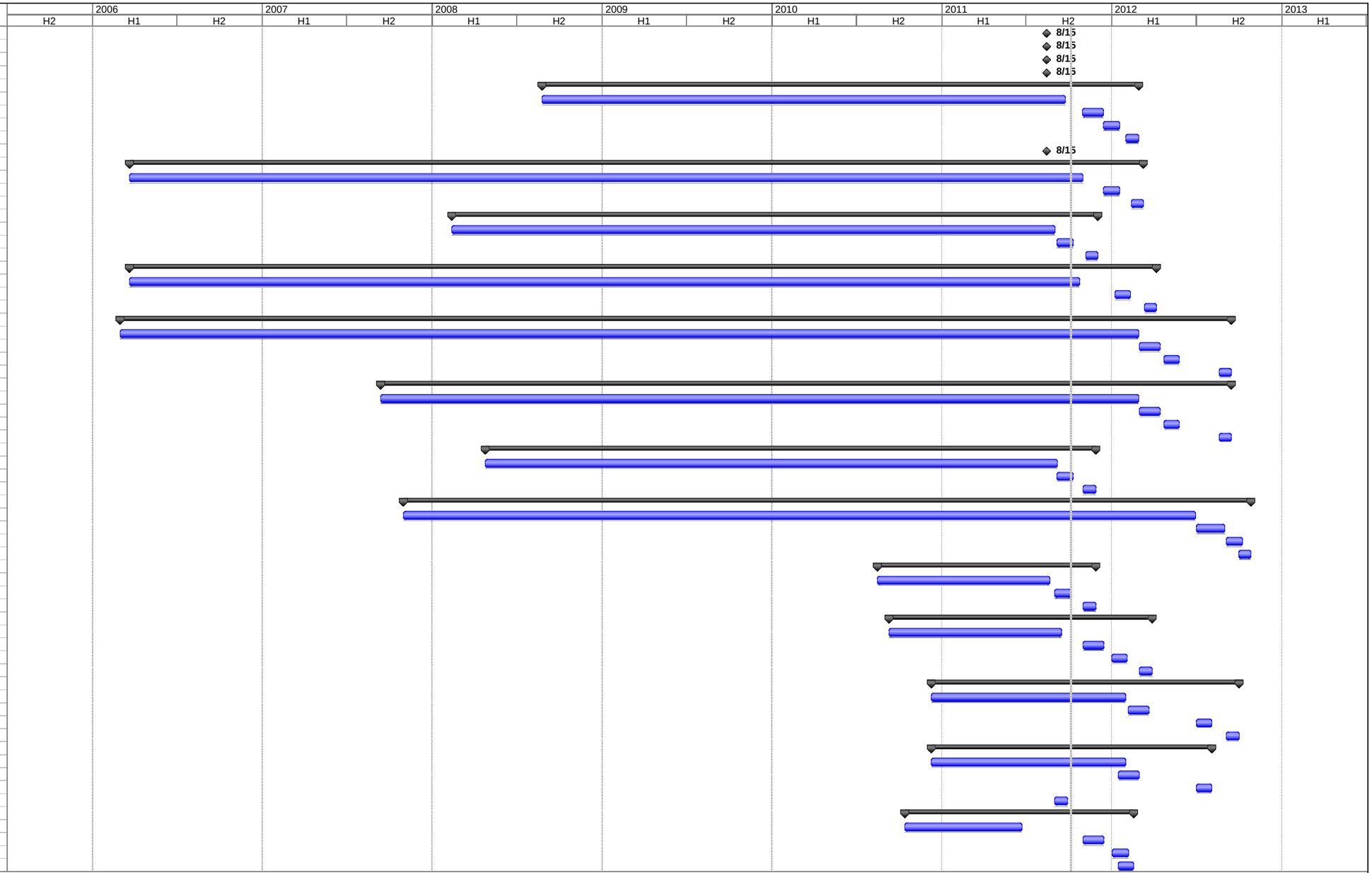
ID	Task Name
1	**Reliability Projects: 8 Slots**
2	**Project 2008-06 Cyber Security - Order 706 (ACTIVE)**
3	**Project 2007-17 Protection System Maintenance & Testing (ACTIVE)**
4	**Project 2007-02 Operating Personnel Communications Protocols (ACTIVE)**
5	**Project 2007-06 System Protection Coordination (ACTIVE)**
6	**Project 2009-01 Disturbance and Sabotage Reporting (ACTIVE)**
7	**Project 2010-05.1 Phase 1 of Protection Systems: Misoperations (ACTIVE)**
8	**Project 2006-06 Reliability Coordination (ACTIVE)**
9	**Project 2007-09 Generator Verification (ACTIVE)**
10	***Project 2012-04 Protection System Commissioning Testing***
11	Standing Committee Research
12	Standards Development
13	Project 2008-02 Undervoltage Load Shedding
14	**Project 2010-05.2 Phase 2 of Protections Systems: SPS and RAS**
15	Standing Committee Research
16	Standards Development
17	**Project 2010-01 Support Personnel Training**
18	Standing Committee Research
19	Standards Development
20	Project 2009-03 Emergency Operations (INFORMAL)
21	**Project 2012-06 Generator Capabilities**
22	Standing Committee Research
23	Standards Development
24	**Project 2009-07 Reliability of Protection Systems**
25	Standing Committee Research
26	Standards Development
27	**Project 2012-01 Equipment Monitoring and Diagnostic Devices**
28	Standing Committee Research
29	Standards Development
30	**Project 2009-04 Phasor Measurements**
31	Standing Committee Research
32	Standards Development
33	Project 2009-05 Resource Adequacy Assessments
34	Project 2010-16 Definition of System Operator
35	Project 2010-08 Functional Model Glossary Revisions
36	**Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings**
37	Standing Committee Research
38	Standards Development
39	**Time-Sensitive Projects - 3 Slots**
40	**Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Control: Reserves (ACTIVE)**
41	**Project 2010-17 Definition of BES (ACTIVE)**
42	**Project 2007-12 Frequency Response (ACTIVE)**
43	Project 2010-13.2 Phase 2 of Relay Loadability: Generation (INFORMAL)
44	Project 2008-01 Voltage and Reactive Planning and Control (INFORMAL)
45	Project 2007-11 Disturbance Monitoring (INFORMAL)
46	**Project 2010-03 Modeling Data**
47	Standing Committee Research
48	Standards Development
49	**Project 2010-04 Demand Data**
50	Standing Committee Research
51	Standards Development
52	**Project 2010-02 Connecting New Facilities to the Grid**
53	Standing Committee Research
54	Standards Development
55	**Practicality Projects - 2 Slots**
56	**Project 2010-07 Generator Requirements at the Transmission Interface (ACTIVE)**
57	**Project 2007-03 Real-time Transmission Operations (ACTIVE)**
58	Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities (INFORMAL)
59	Project 2008-12 Coordinate Interchange Standards (INFORMAL)
60	Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent (INFORM
61	Project 2012-05 ATC-Revisions - Order 729
62	**Excess Beyond Capacity for 2012-2014**
63	**Project 2007-07 Vegetation Management (ACTIVE)**
64	Project 2012-02 Physical Protection
65	Project 2012-03 PRC-004 VSLs
66	Project 2012-08 Glossary Updates
67	Project 2012-07 Obsolescence Review
68	Project 2012-09 IRO Review
69	Project 2012-11 FAC Review
70	Project 2012-12 PER Review
71	Project 2012-13 NUC Review
72	Project 2012-14 Risk Analysis
73	*2006-06.2 Phase 2 of Reliability Coordination*
74	*2012-15 Flow Limited Paths*



Appendix 3 – Regional Work Plan

The following page shows the schedule of regional work in Gantt chart format. Projects that are actively being pursued are identified with black Gantt chart bars, with blue bars representing various stages of development. Projects that are "on hold" are represented by a black diamond.

ID	Task Name
1	**PRC-002-FRCC-1 (on hold)**
2	**PRC-003-FRCC-1 (on hold)**
3	**PRC-006-FRCC-1 (on hold)**
4	**PRC-024-FRCC-1 (on hold)**
5	**PRC-006-NPCC-1**
6	Regional standard development
7	Posting of Documents for process evaluation at NERC
8	Prepare BOT Material
9	Develop Initial Draft of Regulatory Filings
10	**PRC-012-NPCC-1 (on hold)**
11	**MOD-024-RFC-01**
12	Regional standard development
13	Prepare BOT Material
14	Develop Initial Draft of Regulatory Filings
15	**MOD-025-RFC-01**
16	Regional standard development
17	Prepare BOT Material
18	Develop Initial Draft of Regulatory Filings
19	**PRC-002-RFC-01**
20	Regional standard development
21	Prepare BOT Material
22	Develop Initial Draft of Regulatory Filings
23	**PRC-006-RFC-1**
24	Regional standard development
25	Posting of Documents for process evaluation at NERC
26	Prepare BOT Material
27	Develop Initial Draft of Regulatory Filings
28	**PRC-012-RFC-1**
29	Regional standard development
30	Posting of Documents for process evaluation at NERC
31	Prepare BOT Material
32	Develop Initial Draft of Regulatory Filings
33	**PRC-006-SERC-01**
34	Regional standard development
35	Prepare BOT Material
36	Develop Initial Draft of Regulatory Filings
37	**PRC-006-SPP-01**
38	Regional standard development
39	Posting of Documents for process evaluation at NERC
40	Prepare BOT Material
41	Develop Initial Draft of Regulatory Filings
42	**IRO-006-TRE-1**
43	Regional standard development
44	Prepare BOT Material
45	Develop Initial Draft of Regulatory Filings
46	**BAL-001-TRE-1**
47	Regional standard development
48	Posting of Documents for process evaluation at NERC
49	Prepare BOT Material
50	Develop Initial Draft of Regulatory Filings
51	**BAL-002-WECC-1**
52	Regional standard development
53	Posting of Documents for process evaluation at NERC
54	Prepare BOT Material
55	Develop Initial Draft of Regulatory Filings
56	**BAL-004-WECC-1**
57	Regional standard development
58	Posting of Documents for process evaluation at NERC
59	Prepare BOT Material
60	Develop Initial Draft of Regulatory Filings
61	**VAR-001-WECC-1**
62	Regional standard development
63	Posting of Documents for process evaluation at NERC
64	Prepare BOT Material
65	Develop Initial Draft of Regulatory Filings



Project: Unified Regional Project Sche
Date: Wed 10/5/11

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Appendix 4 – Project Summaries

The following are detailed summaries of the projects discussed earlier within this plan.

DEVELOPMENT 2012

Project 2006-06 Reliability Coordination

Summary:

This project ensures that the reliability-related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable, and that this set of requirements is sufficient to maintain reliability of the Bulk Electric System. Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team is considering comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed. The drafting team is reviewing all of the requirements in this set of standards and making a determination whether to:

- Modify the requirement to improve clarity and measurability while removing ambiguity;
- Move the requirement (into another project or Standard, or to the certification process); or
- Eliminate the requirement (because it is redundant or does not support BPS reliability).

This project ranked #13 in Reliability Priority.

Standards affected:

COM-001, COM-002, IRO-001- IRO-002, IRO-005, IRO-014, IRO-015, IRO-016

Status:

This project's SAR was finalized on May 2, 2007. The draft standards have been posted several times. The NERC Board of Trustees adopted IRO-002-3, IRO-005-4 and IRO-014-2, along with a conforming change to IRO-001-1.1 associated with IRO-014-2 (creating IRO-001-2) on August 4, 2011. The Board also approved the retirement of IRO-015-1 and IRO-016-1. The drafting team is continuing development on COM-001-2, COM-002-3, and additional revisions to IRO-001, which will become IRO-001-3. It is estimated this project will complete in Q2 2012.

FUTURE CONSIDERATION

Project 2006.06.2 Phase 2 of Reliability Coordination: IRO-003

Summary:

This project will address directives from Order 693 related to the inclusion of measures in IRO-003 and the determination of "critical facilities."

Standards affected:

IRO-003

Status:

A SAR was developed and was finalized on July 14, 2010. However, no additional work has occurred for this project at this time. No estimate for starting the project has been identified.

DEVELOPMENT 2012

Project 2007-02 Operating Personnel Communication Protocols

Summary:

This project is reviewing COM-003 to ensure the standard is complete, appropriately scoped, and enforceable. The project is also considering other general improvements and stakeholder comments received during the initial development of the standards, as well as other comments received from Electric Reliability Organization (ERO) regulatory authorities. This also satisfies the NERC requirement for five-year review of the standard.

This standard will require the use of specific communication protocols, especially for communications during alerts and emergencies. The standard will be applicable to transmission operators, balancing authorities, reliability coordinators, generator operators and distribution providers. Requirements will include protocols for communicating changes to real-time operating states and protocols for issuing and responding to operating directives.

This project ranked #5 in Reliability Priority.

Standards affected:

COM-003

Status:

This project's SAR was finalized on June 8, 2007. A draft standard was posted November 20, 2009 through January 15, 2010. Due to focusing on other priorities, this team was temporarily put on hold. The project was restarted in 2011, and the team is reviewing comments and preparing to post a new version of the standard. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-03 Real-time Transmission Operations

Summary:

This project is clarifying requirements for real-time operations of the Bulk Electric System in several standards, as well as providing other general improvements. It will consider stakeholder comments received during the initial development of the standards, as well as other comments received from ERO regulatory authorities. This also satisfies the NERC requirement for five-year review of the standards.

This project ranked #5 in Practicality Priority.

Standards affected:

PER-001, TOP-001, TOP-002, TOP-003, TOP-004, TOP-004, TOP-005¸ TOP-006, TOP-007, TOP-008

Status:

This project's SAR was finalized November 1, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from May 31, 2011 through June 9, 2011. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-06 System Protection Coordination

Summary:

This project is reviewing PRC-001-1 to assure that Protection System application and performance issues are coordinated among all related entities. It will ensure the applicable entities within the standard correctly reflect the functional responsibilities, as described in the NERC Functional Model. The project will also incorporate other general improvements, address directives received from ERO regulatory authorities, and consider the observations and recommendations developed by the NERC SPCTF. As necessary, the project will coordinate the transfer of monitoring-related requirements to other standards as appropriate through coordination with project 2006-06 Reliability Coordination.

This project ranked #4 in Reliability Priority.

Standards affected:

PRC-001, PRC-027 (New)

Status:

This project's SAR was finalized on July 27, 2007. A draft standard was posted from September 9, 2009 through October 26, 2009. Several interim drafts have been developed since that time. A new results-based version of the standard is in development. It is estimated this project will complete in Q1 2013.

DEVELOPMENT 2012

Project 2007-07 Vegetation Management

Summary:

This project will address some 'fill-in-the-blank' components of the existing standard, which were created in 2006 (prior to mandatory and enforceable standards). The project also will investigate applicability to lower voltage transmission lines, address the issue of clearances for lines on both federal and non-federal lands, consider revising the definition of right of way to encompass required clearance areas, and review the suitability of the IEEE 516-2003 standard for minimum vegetation clearance. This also satisfies the NERC requirement for five-year review of the standard.

Standards affected:

FAC-003

Status:

This project's SAR was finalized June 27, 2007. The standards have been posted several times for public comment. The standards were most recently posted for Successive Ballot from February 18, 2011 through February 28, 2011. The team has drafted a revised standard and has requested it be posted for Recirculation Ballot. It is estimated this project will complete in Q1 2012.

DEVELOPMENT 2012

Project 2007-09 Generator Verification

Summary:

This project will create or modify standards to ensure that generators will not trip off-line during specified voltage and frequency excursions or as a result of improper coordination between generator protective relays and generator voltage regulator controls and limit functions. It also will ensure that generator models accurately reflect the generator's capabilities and operating characteristics.

Standards affected:

MOD-024, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024

Status:

This project's SAR was finalized June 14, 2007. The standards have been posted several times for public comment. Two of the standards were posted most recently for Initial Ballot from July 22, 2011 through August 1, 2011. Three other standards were posted for comment June 12, 2011 through July 15, 2011. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2007-11 Disturbance Monitoring

Summary:

Purpose
This project establishes and clarifies requirements for the installation of Disturbance Monitoring Equipment (DME) and reporting of disturbance data to facilitate analyses of events and verify system models. The project will review PRC-002 and each of the current regional programs developed in accordance with that standard, including any other associated programs and/or requirements related to or contained within the disturbance monitoring program documentation. The project will then determine which requirements should be continent-wide requirements and which requirements should be included in regional standards.

Standards affected:

PRC-002, PRC-018

Status:

This project's SAR was finalized May 21, 2007. An initial draft standard was posted from February 2, 2009, to March 18, 2009. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

DEVELOPMENT 2012

Project 2007-12 Frequency Response

Summary:

Purpose:
This project will modify the BAL-003 Standard to require sufficient Frequency Response from the Balancing Authority to maintain Interconnection Frequency within predefined bounds. It also will ensure the standard provides consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

This project is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

BAL-003

Status:

This project's SAR was finalized June 30, 2007. The standard has been posted once for public comment, and is expected to be posted for comment in Q4 of 2011. The project is expected to complete in Q2, 2012.

DEVELOPMENT 2012

Project 2007-17 Protection System Maintenance and Testing

Summary:

This project will modify the standards related to ensuring all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. The project will respond to various FERC directives contained in Order 693, as well as make general improvements to the standard.

This project ranked #3 in Reliability Priority.

Standards affected:

PRC-005, PRC-008, PRC-011, PRC-017

Status:

This project's SAR was finalized May 7, 2007. The standards have been posted several times for public comment. The standards were posted most recently for Initial Ballot from September 19, 2011 through September 28, 2011. It is estimated this project will complete in Q2 2012.

PENDING 2013

Project 2008-01 Voltage and Reactive Planning and Control

Summary:

This project will revise the VAR Standards to require that appropriate functional entities develop and coordinate voltage and reactive planning and operating criteria to ensure that there are sufficient reactive resources, and voltage and reactive margins, to manage the risk of voltage instability. The project will also address the FERC directives in Order 693 associated with these standards. Review and modifications to the existing VAR standards will also consider the Transmission Issues Subcommittee's "Reactive Support & Control Whitepaper" dated 05/18/2009.

This project ranked #3 in practicality.

Standards affected:

VAR-001, VAR-002

Status:

This project's SAR was finalized April of 2011. This project was moved into informal development in 2011, prior to posting any daft of the standard. It is estimated this project will begin in Q1 2013 and complete in Q2 2014.

PENDING 2012

Project 2008-02 Undervoltage Load Shedding

Summary:

This project will improve the existing standards on Under Voltage Load Shedding (UVLS) to ensure that load is shed when needed to prevent voltage collapse and voltage instability in the Bulk Electric System. The existing standards will be consolidated, and specific criteria for UVLS programs and assessments of those UVLS programs should be added. 'Fill-in-the-blank' elements should be eliminated, and concerns related to Fault-Induced Delayed Voltage Recovery will be reviewed and addressed.

This project ranked #14 in Reliability Priority.

Standards affected:

PRC-010, PRC-022

Status:

This standard has a proposed SAR that was posted for comment from January 20, 2010, through February 19, 2010. It is estimated this project will start in Q3 2012 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2008-06 Cyber Security – Order 706

Summary:

This project establishes standards to protect the critical cyber assets (including hardware, software, data, and communications networks) essential to the reliable operations of the bulk power system. Currently the project is focused on Version 5 of the standards, which is focused on addressing the remaining directives in Order 706.

This project ranked #2 in Reliability Priority.

Standards affected:

CIP-002, CIP-003, CIP-004, CIP-005, CIP-006, CIP-007, CIP-008, CIP-009, CIP-010 (New), CIP-011 (New)

Status:

This project's SAR was finalized June 9, 2008. Older versions of the standard have been posted, balloted, and approved several times. Version 5 of the standards has not yet been posted for comment. It is estimated this project will complete in Q3 2012.

PENDING 2013

Project 2008-12 Coordinate Interchange Standards

Summary:

This project will revise the set of Coordinate Interchange standards to ensure that each requirement is assigned to an owner, operator, or user of the bulk power system, and not to a tool used to coordinate interchange; to address the Interchange Subcommittee concerns related to the Dynamic Transfers and Pseudo-ties; and to address previously identified stakeholder comments. The project also will consider adding requirements to have backup capability for use when the interchange transaction tool fails.

Standards affected:

INT-001, INT-003, INT-004, INT-005, INT-006, INT-007, INT-008, INT-009, INT-010

Status:

This project's SAR was finalized December 1, 2008. An initial draft set of standards was developed and posted for comment from November 10, 2009 through December 9, 2009. However, the project was moved into informal development in 2011. It is estimated this project will start in Q2 2013 and complete in Q2 2014.

DEVELOPMENT 2012

Project 2009-01 Disturbance and Sabotage Reporting

Summary:

Purpose:

This project entails revisions to existing standards CIP-001-1 – Sabotage Reporting and EOP-004-1 – Disturbance Reporting. The project will eliminate redundancy and provide clarity on sabotage events. Additionally, EOP-004 will be reviewed to eliminate any 'fill-in-the-blank' components.

This project ranked #8 in Reliability Priority.

Standards affected:

CIP-001, EOP-004

Status:

This project's SAR was finalized August 13, 2009. The standard has been posted for comment twice, and is being prepared for Initial Ballot. It is estimated this project will complete in Q3 2012.

PENDING 2012

Project 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Summary:

This project will create new or revised standards to establish requirements for the monitoring and analysis capabilities provided to System Operators to support Real-time System Operations. The project will address availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management.

This project ranked #1 in Practicality Priority.

Standards affected:

New

Status:

This project's SAR was finalized March 31, 2010. The project team posted a White Paper created to illustrate the concepts it intends to pursue as the project unfolds. This posting solicited comments from February 16, 2011, through April 4, 2011. This project was moved to informal development in 2011. It is estimated this project will start in Q2 2012 and complete in Q1 2013.

PENDING 2012

Project 2009-03 Emergency Operations

Summary:

This project will review the EOP-001, EOP-002, and EOP-003 standards and associated interpretations to ensure the requirements are clear and unambiguous. Many of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process; suggestions for improvement have been submitted by stakeholders, other drafting teams, and FERC staff.

This project ranked #4 in Practicality Priority.

Standards affected:

EOP-001, EOP-002, EOP-003

Status:

This project's SAR was finalized November 5, 2010. Prior to the development of an initial draft standard, this project was moved to informal development. It is estimated this project will start in Q3 2012 and complete in Q4 2013.

2014 PENDING RESEARCH

Project 2009-04 Phasor Measurements

Summary:

This project will review several industry studies to determine if there should be phasor requirements developed for a NERC standard. This project is related to the North-American Synchro-Phasor Initiative, and supports a blackout recommendation.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2014 and complete in Q4 2015.

PENDING 2014

Project 2009-05 Resource Adequacy Assessments

Summary:

This project will implement certain recommendations related to resource adequacy from the *Resource and Transmission Adequacy Task Force (RTATF) Report* and the *Gas/Electricity Interdependency Task Force Report,* approved by the NERC Board on June 15, 2004. The project will create a standard with requirements to perform resource adequacy assessments, using metrics that take into account various factors (including, but not limited to, fuel deliverability). The standard would also make the results of the assessments available to the industry, NERC, and appropriate regulatory agencies.

Standards affected:

New

Status:

This project's SAR was finalized August 17. 2007. Prior to the development of an initial draft standard, this project was moved to informal development in 2011. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2013 PENDING RESEARCH

Project 2009-07 Reliability of Protection Systems

Summary:

This project will ensure Protection Systems are designed and installed with redundancy where appropriate, such that if there were a failure to a specified component of that protection system, the failure would not prevent meeting the BES performance identified in the TPL standards.

This project ranked #1 in Reliability Priority.

Standards affected:

New

Status:

This project has an initial draft of a SAR that was posted for comment January 20, 2009, through February 18, 2009. Comment responses have not been prepared, and the SAR has not been finalized. It is estimated this project will start in Q1 2013 and complete in Q1 2015.

2012 PENDING RESEARCH

Project 2010-01 Support Personnel Training

Summary:

This project will develop a standard that requires the use of a systematic approach to determining training needs of generator operators and operations planning and support staff with a direct impact on the reliable operations of the bulk power system.

This project ranked #15 in Reliability Priority.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2012 and complete in Q3 2014.

FUTURE CONSIDERATION, PENDING RESEARCH

Project 2010-02 Connecting New Facilities to the Grid

Summary:

22 - Ensure that all of the elements that should be addressed when a new facility is connected to the grid are included in the revised standard. FAC-001 and -002.

Standards affected:

FAC-001, FAC-002

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2015 and complete in Q1 2017.

2014 PENDING RESEARCH

Project 2010-03 Modeling Data

Summary:

This project will consider merging, upgrading and expanding existing requirements for entities to provide data used to model the bulk electric system. This project is related the Modeling Initiative, and supports a blackout recommendation.

Standards affected:

MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, PRC-013, PRC-015

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q2 2016.

2014 PENDING RESEARCH

Project 2010-04 Demand Data

Summary:

This project will consolidate MOD-016 through MOD-020 into a single standard, with MOD-021 remaining as a separate standard. Requirements will be made be more specific to clearly identify the format for providing data, and modifications will made in support if previously received industry comments and regulatory directives.

Standards affected:

MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, MOD-021

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q3 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-05.1 Phase 1 of Protection Systems: Misoperations

Summary:

This project addresses a key element for Bulk Electric System (BES) reliability: the correct performance of Protection Systems. Monitoring BES Protection System events to identify and correct the root causes of Misoperations will improve overall Protection System performance. The project will revise the definition of Misoperation and redraft the standard to be more clear and unambiguous.

This project ranked #7 in Reliability Priority.

Standards affected:

PRC-003, PRC-004

Status:

This project's SAR was finalized June 9, 2011. An initial draft of the standard was posted for comment from June 10, 2011 through July 11, 2011. A second draft is being prepared for posting and initial ballot. It is estimated this project will complete in Q3 2012.

2012 PENDING RESEARCH

Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS

Summary:

This project will moodily the current standards and definitions related to SPS/RAS Misoperations to support a good metric for measurement of Protection System performance and to ensure the reliability of the bulk power system. This project is related to the System Protection Initiative.

This project ranked #11 in Reliability Priority.

Standards affected:

PRC-012, PRC-014, PRC-016.

Status:

This project has a draft SAR, but it has not yet been posted for comment. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

DEVELOPMENT 2012

Project 2010-07 Generator Requirements at the Transmission Interface

Summary:

This project will develop any needed changes to the Reliability Standards to provide clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid. The project will review standard for applicability, propose changes as necessary, and ensure that requirements that should apply to all generators, regardless of interconnection configuration, are implemented effectively.

This project ranked #12 in Reliability Priority, #13 in Practicality Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

FAC-001, FAC-003, PRC-004, others as needed

Status:

This project's SAR was finalized November 30, 2010. A draft set of standards was developed and posted from June 17, 2011 through July 17, 2011. Discussion and coordination between NERC, FERC , and the members of the project team are ongoing to ensure adequate coverage of all reliability needs. It is estimated this project will complete in Q1 2013.

FUTURE CONSIDERATION

Project 2010-08 Functional Glossary Model Revisions

Summary:

This project will ensure the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria are consistent.

Standards affected:

TBD

Status:

The Functional Model Working Group (FMWG) is responding to comments received from the first posting of the SAR. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

PENDING 2012

Project 2010-13.2 Phase 2 of Relay Loadability: Generation

Summary:

This project is being created in response to directives included in FERC Order 733. The project will draft a new standard to address generator relay loadability.

Standards affected:

New

Status:

This project's SAR was finalized November 1, 2010. Prior to the development of an initial draft, this project was moved to informal development in 2011. It is estimated this project will start in Q4 2012 and complete in Q3 2014.

2014 PENDING RESEARCH

Project 2010-13.3 Phase 3 of Relay Loadability: Stable Power Swings

Summary:

This project is being created in response to directives includes in FERC Order 733. The project will draft a new standard to address protective relay operations due to power swings.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q4 2014 and complete in Q3 2016.

DEVELOPMENT 2012

Project 2010-14.1 Phase 1 of Balancing Authority Reliability-based Controls: Reserves

Summary:

This project will review the standard related to Control Performance and Disturbance control, and propose modifications or new standards as necessary. This project includes the testing and analysis of the new Balancing Authority ACE Limit (BAAL) metric, as well as the development of a continent-wide reserve policy to support BAL-01, BAL-002, and BAL-003.

This project ranked #1 in Time Sensitivity Priority, and #2 in Practicality Priority.

Standards affected:

BAL-001, BAL-002, New

Status:

This project was created by merging two existing teams. As such, there are two SARs associated with the project – one that was finalized on November 7, 2007, and one that was finalized on December 3, 2007. The combined effort was moved into informal development in 2011, but restarted to coordinate with project 2007-12 Frequency Response. It is estimated this project will complete in Q4 2012.

PENDING 2013

Project 2010-14.2 Project 2010-14.2 Phase 2 of Balancing Authority Reliability-based Control: Time Error, AGC, and Inadvertent

Summary:

This project will consider the Time Error Correction standard, AGC, standard, and Inadvertent Accounting standard to determine what changes, if any, are necessary to ensure the standards are clear and unambiguous. In some cases, the standard may no longer be necessary.

Standards affected:

BAL-004, BAL-005, BAL-006

Status:

This project is currently in informal development. Based on its priority, it has been identified in the 2012-2014 Work Plan to begin in Q2 2013 and complete in Q1 2015.

PENDING 2014

Project 2010-16 Definition of System Operator

Summary:

This project will remove the 'Generator Operator' from the current definition of System Operator. This will more accurately establish the responsibilities and expectations of the Generator Operator consistent with the current manner in which the bulk electric system is operated.

Standards affected:

TBD

Status:

A proposed SAR and revision to the definition of System Operator was posted for a 30-day formal comment period from November 3, 2010 through December 3, 2010. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

DEVELOPMENT 2012

Project 2010-17 Definition of Bulk Electric System

Summary:

This project will revise the definition of Bulk Electric System (BES) to address various Federal Energy Regulatory Commissions (FERC) concerns the definition must be modified to encompass all Elements and Facilities necessary for the reliable operation and planning of the interconnected bulk power system. These concerns have been identified in FERC Order 693 issued on March 16, 2007 and in Order 743 issued on November 18, 2010 (Order 743). The project will also consider additional modifications (beyond those established in the regulatory directives) to improve clarity, to reduce ambiguity and to establish consistency across all Regions in distinguishing between BES and non-BES Elements and Facilities.

This project ranked #10 in Reliability Priority, and is one of several that share the #2 score for Time Sensitivity Priority.

Standards affected:

Multiple

Status:

This project's SAR was finalized March 25, 2011. The draft definition has been posted twice, with the most recent posting done concurrently with an initial ballot from September 30, 2011, to October 02 2011. The first part of this project is expected to complete in Q1 of 2012. The remainder of this project is estimated to complete in Q2 2013.

2013 PENDING RESEARCH

Project 2012-01 Equipment Monitoring and Diagnostic Devices

Summary:

This project will consider the development of reliability standards for the application of major equipment monitoring and diagnostic devices and procedures, with the intent of identifying potential equipment failures prior to their occurrence. This will provide more time to address failing systems and avoid or minimize long lead times.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2013 and complete in Q1 2015.

FUTURE CONSIDERATION

Project 2012-02 Physical Protection

Summary:

This project will develop standards for the safety and protection of essential equipment, buildings, and people located in power generation, transmission, or distribution system locations in order to mitigate the associated reliability risks to the bulk power system.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-03 PRC-004 VSLs

Summary:

This project will address a problem identified in the VSLs of PRC-004. Currently, the VSLs do not address the case where a Corrective Acton Plan was developed or documented, but not fully implemented.

Standards affected:

PRC-004

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

2012 PENDING RESEARCH

Project 2012-04 Protection System Commissioning Testing

Summary:

This project will address a gap in reliability related to protection systems by creating a standard that requires commissioning testing. Improper or inadequate commissioning testing practices are a common cause of protection system Misoperation. However, the current set of approved NERC reliability standards does not address the testing of protection system equipment *before* that equipment is placed into initial service. Creating a commissioning standard would also enhance the effectiveness of the mandatory auditing program.

This project ranked #9 in Reliability Priority,

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q2 2012 and complete in Q2 2014.

PENDING 2014

Project 2012-05 ATC Revisions - Order 729

Summary:

This project will respond to the remaining directives in Order 729.

Standards affected:

MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, MOD-030

Status:

This is a new project, which will require SAR development. It is estimated this project will start in Q3 2014 and complete in Q1 2016.

2013 PENDING RESEARCH

Project 2012-06 Generator Capabilities

Summary:

This project will develop standards to ensure generator performance. The project should consider requirements that specify governor droop, frequency response, and reactive response.

This project ranked #6 in Reliability Priority

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. It is estimated this project will start in Q1 2013 and complete in Q4 2014.

FUTURE CONSIDERATION

Project 2012-07 Obsolescence Review

Summary:

This project will create a standard that requires Generator and Transmission Owners periodically review their control and protection systems to identity and electronic, electrical, or mechanical devices that have become obsolete.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-08 Glossary Updates

Summary:

This project will respond to FERC directives to either create or modify the following definitions: Transmission Operator, Generator Operator, Bulk Power System, Reliable Operation, and Reliability Standard.

Standards affected:

TBD

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-09 IRO Review

Summary:

This project will perform the five-year review of several IRO standards, pursuant to NERC's Rules of Procedure.

Standards affected:

IRO-006, IRO-006-EAST, IRO-008, IRO-009, and IRO-010

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-11 FAC Review

Summary:

This project will perform the five-year review of several FAC standards, pursuant to NERC's Rules of Procedure.

Standards affected:

FAC-010, FAC-011, FAC-014

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-12 PER Review

Summary:

This project will perform the five-year review of several PER standards, pursuant to NERC's Rules of Procedure.

Standards affected:

PER-003, PER-004, PER-005

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-13 NUC Review

Summary:

This project will perform the five-year review of the NUC standard, pursuant to NERC's Rules of Procedure.

Standards affected:

NUC-001

Status:

This is a new project, which will require SAR development. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-14 Risk Analysis

Summary:

This project will develop a standard that requires entities to have and maintain a checklist of potential threats to the power system that must be addressed by each TOP/BA. The checklist would include things like GMD, voltage collapse, and other extreme events.

Standards affected:

New

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE CONSIDERATION

Project 2012-15 Flow Limited Paths

Summary:

The MOD-029 standard includes a provision that, if left uncorrected, could in certain scenarios result in significantly over-conservative ATC values being calculated. This project will address this problem.

Standards affected:

MOD-029

Status:

This is a new project, which will require SAR development and research. At this time, no estimate for starting the project has been identified.

FUTURE DEVELOPMENT

PRC-002-FRCC-1 — FRCC Regional Disturbance Monitoring and Reporting Requirements

Summary:

FRCC plans to convert the existing handbook document, "FRCC Requirements for Disturbance Monitoring Equipment" (revision dated June, 2006) into a new Regional Reliability Standard that complies with the requirements of NERC Reliability Standard, PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements.

Standards affected:

PRC-002-1

Status:

This Regional project is currently on "hold." Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-11 Disturbance Monitoring being classified as a "Project in Informal Development," FRCC staff will be re-evaluating the current status of the regional project to determine whether to proceed with the Regional Reliability Standard development or to revise the current FRCC Regional Criteria document "FRCC Requirements for Disturbance Monitoring Equipment."

FUTURE DEVELOPMENT

PRC-003-FRCC-1 — FRCC Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems

Summary:

FRCC plans to convert the existing handbook document "FRCC Requirements for Analysis of Protection Misoperations & Corrective Actions Reporting" (revision dated October, 2003) into a new Regional Reliability Standard, that complies with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

Standards affected:

PRC-003-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2010-05.1 Protection Systems: Phase 1 (Misoperations) being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC has revised Regional Criteria documents ("FRCC Requirements for Analysis of Protection Misoperations and Corrective Actions Reporting," revision dateed December 2, 2010) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems.

FUTURE DEVELOPMENT

PRC-006-FRCC-1 — FRCC Automatic Underfrequency Load Shedding Program

Summary:

FRCC is developing a Regional Reliability Standard to provide last resort system preservation measures by implementing an Underfrequency Load Shedding (UFLS) program. Additional requirements may be needed due to FRCC peninsular geography and limited ties to the north. Operating experience and decades of studies by the FRCC and its predecessor reliability organizations have resulted in a well-developed UFLS program that is very resilient to frequency excursion resulting from severe and extreme contingencies. The standard development project will effectively use the proven high performance characteristics of the existing FRCC UFLS program and refine its requirements and coordination procedures to comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

Standards affected:

PRC-006-1

Status:

PRC-006-FRCC-1 FRCC Automatic Underfrequency Load Shedding Program has been approved by the FRCC Registered Ballot Body and the FRCC Board of Directors. Based on concerns identified by NERC standards staff and the pending Commission (FERC) approval of the NERC Continent-Wide Reliability Standard PRC-006-1 Automatic Underfrequency Load Shedding and associated Regional variances, the Regional project has been placed on “hold.” The FRCC has since revised Regional Criteria documents (FRCC Automatic Underfrequency Load Shedding Program, revision date: April 7, 2011) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-006-1 — Automatic Underfrequency Load Shedding.

FUTURE DEVELOPMENT

PRC-024-FRCC-1 — FRCC Regional Generator Performance During Frequency and Voltage Excursions

Summary:

FRCC is developing a standard to establish "ride through" requirements for generators in the FRCC Region with respect to temporary grid voltage or frequency deviations from their normal range. The Standard should address time duration limits for operation of generator protection for

1) frequencies outside of the 59.5 - 60.5 hertz range,
2) voltages outside of the 95% - 105% range, and
3) generator stator current overloads.

The Standard should address exemption criteria and mitigation measures available for resolving apparent conflicts between generator capabilities and the coordination requirements. Considerable knowledge of grid frequency and voltage excursions and the time limited capabilities of generators to sustain these conditions has been gained through operating experience and previous reliability studies. This standards development project should effectively use this knowledge to define coordination requirements and procedures that comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

Standards affected:

PRC-024-1

Status:

Based on the NERC Standards Committee reprioritization of NERC Reliability Standard Development Projects resulting in Project 2007-09 Generator Verification being classified as a "high priority" project in active development, the Regional project is currently on "hold." The FRCC is actively revising Regional Criteria documents (FRCC Generator Coordination Requirements) to ensure the procedures comply with the requirements of NERC Reliability Standard, PRC-024-1 — Generator Performance During Frequency and Voltage Excursions.

2012 DEVELOPMENT

PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding Program

Summary:

The purpose of this Standard is to establish the requirements for NPCC and its members to operate and maintain a coordinated Regional Underfrequency load shedding (UFLS) program. The NPCC's UFLS program will meet the requirements contained in NERC standards, and provide those entities to which it is applicable the guidance necessary to implement it. This standard will also mandate that coordination with neighboring Regional Underfrequency load shedding programs be developed when necessary. The unique character, dispersion, sensitivity and density of the NPCC regional loads emphasize the need for this Standard.

The NPCC regional UFLS standard shall apply to all applicable entities within the Region and sub-regional areas that are both synchronous and asynchronous to the Eastern Interconnection. Quebec UFLS has different parameters, and these are included in the standard and fully coordinated within the Region.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. NPCC expects to complete the drafting of this standard in 2011 and conduct a ballot of stakeholders in the first quarter of 2012. Submission to the NERC Board of Trustees and subsequent filing with FERC is expected to occur in 2012.

FUTURE DEVELOPMENT

PRC-012-NPCC-1 — Special Protection Systems

Summary:

To support and enhance bulk power system reliability, this Standard will establish the criteria for the minimum design objectives and practices for special protection systems (the purpose of which are to detect abnormal system conditions, and take corrective actions other than the isolation of faulted elements to maintain the stability and security of the bulk power system). This Standard will also establish the requirements for close coordination between system planning, design, operating, maintenance and protection functions to ensure that the impacts of special protection system operations do not result in a significant adverse impact.

The proposed Standard will describe the requirements for the design and approval of Special Protection Systems and the technical criteria required to support its implementation. The Standard will also identify the need for close coordination among various parties to ensure that the Special Protection Systems are implemented correctly, and triggers and resulting actions are made known and communicated in an on-line database.

Standards affected:

PRC-012-0

Status:

This Regional project is currently on “hold” pending the completion of the NERC Reliability Standard Development Project 2010-05.2 Phase 2 of Protection Systems: SPS and RAS, and the outcome of the work by the NERC SPCS on the definition of SPS.

2011 DEVELOPMENT

MOD-024-RFC-1 — Verification and Data Reporting of Generator Gross and Net Real Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Real Power capability to support NERC Reliability Standard MOD-024. The objective of the regional standard is to ensure accurate information on generator gross and net Real (MWs) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-024-1

Status:

This Regional standard has been approved by the Reliability*First* Board. Currently, VRFs and VSLs are in development. Reliability*First* expects to complete the drafting of the VRFs and VSLs in 2011, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2011 DEVELOPMENT

MOD-025-RFC-1 — Verification and Data Reporting of Gen Gross and Net Reactive Power Capability

Summary:

The purpose of this standard is to establish Reliability*First* requirements for verification and data reporting of generator gross and net Reactive Power capability to support NERC Reliability Standard MOD-025. The objective of this standard is to ensure that accurate information on generator gross and net Reactive (MVAR) Power capability is available for steady-state models used to assess Bulk Electric System reliability.

Standards affected:

MOD-025-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011 and subsequent filing with the FERC is expected to occur in 2012.

2011 DEVELOPMENT

PRC-002-RFC-1 — Disturbance Monitoring and Reporting Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for Disturbance monitoring and reporting to support NERC Reliability Standard PRC-002.

Standards affected:

PRC-002-1

Status:

Reliability*First* is currently working on the technical justification for the locational requirements for DME equipment. This Regional standard has been approved by the Reliability*First* Board. Reliability*First* expects submission of this standard to the NERC Board of Trustees and subsequent filing with the FERC to occur in 2012.

2012 DEVELOPMENT

PRC-006-RFC-1 — Automatic Under Frequency Load Shedding Requirements

Summary:

The purpose of this standard is to establish Reliability*First* requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency and assist in the recovery of frequency following underfrequency events, providing last resort system preservation measures. The standard goes beyond the NERC PRC-006-1 standard and prescribes with more certainty aspects that the Planning Coordinator's UFLS program must contain, further details on certain procedural matters with respect to how islands are addressed, and assessment of UFLS program implementation as well as program design. This standard also attempts further consolidating requirements of the Reliability*First* legacy underfrequency load shedding programs, permitting retirement of legacy documents to ensure appropriate coordination among the Reliability*First* legacy regional UFLS programs.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur later in 2012.

2012 DEVELOPMENT

PRC-012-RFC-1 — Special Protection System Requirements

Summary:

To purpose of the standard is to establish Reliability*First* requirements for the review, development and application of Special Protection Systems (SPS).

Standards affected:

PRC-012-0

Status:

This Regional project is currently in the initial drafting stage. Reliability*First* expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with the FERC to occur early in 2013.

2011 DEVELOPMENT

PRC-006-SERC-01 — Automatic Underfrequency Load Shedding Requirements

Summary:

The SERC UFLS Standard: PRC-006-SERC-1 ("SERC UFLS Standard") was developed to provide regional UFLS requirements to entities in SERC. UFLS requirements have been in place at a continent-wide level and within SERC for many years prior to implementation of federally mandated reliability compliance standards in 2007.

In 2008, SERC commenced work on PRC-006-SERC-1. NERC also began work on revising PRC-006-0 at a continent-wide level. The SERC standard has been developed to be consistent with the continent-wide UFLS standard.

PRC-006-1 clearly defines the roles and responsibilities of parties to whom the standard applies. The standard identifies the Planning Coordinator ("PC") as the entity responsible for developing UFLS schemes within their PC area. This regional standard PRC-006-SERC-1 adds specificity not contained in the NERC standard for development and implementation of a UFLS scheme in the SERC Region that effectively mitigates the consequences of an underfrequency event.

Standards affected:

PRC-006-1

Status:

This Regional standard will be submitted to the NERC Board of Trustees in November 2011, and subsequent filing with FERC is expected to occur in 2012.

2012 DEVELOPMENT

PRC-006-SPP-1 — Under Frequency Load Shedding

Summary:

PRC-006 (Development and Documentation of Regional UFLS programs) has been identified by NERC as one of the Regional "Fill-in-the Blank" Standards. At a minimum, the requirements developed in this standard need to meet the requirements for the Regional Program as identified in NERC's PRC-006-0. Operating experience and regional studies have resulted in a well developed UFLS program that is very resilient to frequency excursions resulting from severe and extreme contingencies. This standards development effort intends to effectively use the proven high performance characteristics of the existing SPP UFLS program and refine its requirements and coordination procedures through an open process as described in the SPP Standard Development Process Manual.

Standards affected:

PRC-006-1

Status:

This Regional project is currently in the standard drafting stage. SPP expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

IRO-006-TRE-1 — IROL and SOL Mitigation in the ERCOT Interconnection

Summary:

IRO-006-TRE-1 was developed to support bulk power system reliability by providing enforceable requirements associated with certain existing non-routine ERCOT congestion management procedures. This Regional Standard addresses the FERC directive in Paragraph 964 of Order 693, where FERC found that the ERCOT transmission loading relief procedures were superior to the national standard, and directed the ERO to provide Reliability Standards including Requirements, Measures and Levels of Non-Compliance corresponding to the ERCOT procedures for application in the ERCOT Region.

Standards affected:

IRO-006-5 (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of IRO-006-5.)

Status:

This Regional Standard was approved by the Texas RE Board of Directors on June 28, 2011, and it will be submitted to the NERC Board of Trustees in November 2011. Subsequent filing with FERC is expected to occur in 2012.

2011 DEVELOPMENT

BAL-001-TRE-1 — Primary Frequency Response in the ERCOT Region

Summary:

This Regional Standard is intended to support reliability by ensuring adequate primary frequency response performance in the ERCOT Interconnection. The standard addresses frequency response at the Interconnection level, as well as by individual generating units and facilities. Specific maximum governor droop and deadband settings are provided, along with primary frequency response performance standards (initial and sustained) that allow actual unit-specific performance to be measured.

In 2002, NERC approved a regional difference for ERCOT that made it exempt from Requirement R2 in BAL-001-0 (CPS2), because of ERCOT's lack of synchronous connection to other control areas and the nature of the ERCOT energy market. FERC approved the ERCOT regional difference, finding that ERCOT's practice of (a) determining the minimum frequency response needed for reliability, and (b) requiring generators to have specific governor droop, to be a more stringent practice than Requirement R2 in BAL-001-0. FERC directed NERC to file a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section 5 of the ERCOT protocols. This Regional Standard is responsive to that directive.

Standards affected:

BAL-001-0.1a (Note: This regional standard provides additional requirements; it does not alter the requirements or applicability of the continent-wide standard.)

Status:

This project has been approved by the Texas RE Board of Directors, with expected submission to the NERC Board of Trustees in 2011 and subsequent filing with FERC to occur in 2012.

2012 DEVELOPMENT

BAL-002-WECC-1 — Contingency Reserves

Summary:

On Oct. 21, 2010, FERC found that BAL-002-WECC-1 did not meet the statutory criteria for approval and remanded the regional standard to NERC/WECC for further modification (RM09-15-000; Order 740). FERC held that BAL-002-WECC-1's less stringent requirements had not been supported by the technical data provided.

On remand, the Commission instructed WECC to modify the regional reliability standard to include a number of specific items contained in Order 740. This Request is submitted with the specific and narrow purpose of addressing only those issues mandated for modification in the October 2010 Oder 740.

Standards affected:

BAL-002-WECC-1

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2012 DEVELOPMENT

BAL-004-WECC-1 — Automatic Time Error Correction

Summary:

In the order approving BAL-004-WECC-1 the FERC directed WECC to make several clarifying modifications to the standard. FERC directed WECC to use the FERC-approved Process for Developing and Approving WECC standards to make these clarifying modifications

In addition, the WECC staff has identified the opportunity to make additional modifications to the existing standard to clarify the intent without changing the requirements.

There is also confusion regarding the R3 requirement that the ACE used for NERC reports shall be the same ACE as the AGC operating mode in use. This seems to conflict with the NERC response to NOPR comments that entities may use ATEC ACE for control but should use Raw ACE for reporting. WECC is developing a proposed regional variance to BAL-001-0.1a to address this apparent conflict.

Standards affected:

BAL-004-WECC-1
BAL-001-0.1a

Status:

This Regional project is currently in the standard drafting stage. WECC expects to complete the drafting of this standard in 2012, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.

2011 DEVELOPMENT

VAR-001-WECC-1 — Voltage and Reactive Control

Summary:

The current draft has been converted from a Standard into a Regional Variance to the NERC VAR-001-2 Standard. The format incorporates the NERC Standard into the document with minor additions to address the scope of the variance. The regional variance specifics are included as Section E of the proposed document (see hyperlink above), and in this case, are intended to replace NERC VAR-001-2 requirements R3 and R4 as noted at the beginning of Section E.

The purpose of this regional variance to a NERC Reliability Standard is to ensure that voltage levels are within limits in real time to protect equipment and the reliable operation of the Western Interconnection. The "Rules of Procedure of the North American Electric Reliability Corporation" (Appendix 3A, page 31) permits the development of a regional variance to a NERC reliability standard on an Interconnection-wide basis when the Regional Reliability Organization has valid justification and when the variance is not inconsistent with or less stringent than the NERC Reliability Standard. The variance is an alternative method for obtaining the same reliability objective as the continent standard and is typically necessitated by a physical difference. A variance is embodied within a reliability standard and as such, if adopted by NERC and approved by the electric reliability organization governmental authority, shall be enforced within the applicable Regional Entity(ies) pursuant to delegated authority.

Standards affected:

VAR-001-2

Status:

This Regional project has been approved by the WECC Board of Directors. WECC expects to submit the draft for the mandatory NERC 45-day comment period in the near future, with expected submission to the NERC Board of Trustees and subsequent filing with FERC to occur later in 2012.