

# Reference Identifying the Standard in each Project Sorted by Project Number

## **Project 2006-02 Assess Transmission Future Needs**

- TPL-001-0 — System Performance Under Normal Conditions
- TPL-002-0 — System Performance Following Loss of a Single BES Element
- TPL-003-0 — System Performance Following Loss of Two or More BES Elements
- TPL-004-0 — System Performance Following Extreme BES Events
- TPL-005-0 — Regional and Interregional Self-Assessment Reliability Reports
- TPL-006-0 — Assessment Data from Regional Reliability Organizations

## **Project 2006-06 Reliability Coordination**

- COM-001-1 — Telecommunications
- COM-002-2 — Communications and Coordination
- IRO-001-1 — Reliability Coordination — Responsibilities and Authorities
- IRO-002-1 — Reliability Coordination — Facilities
- IRO-005-2 — Reliability Coordination — Current-Day Operations
- IRO-014-1 — Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
- IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
- IRO-016-1 — Coordination of Real-time Activities Between Reliability Coordinators

## **Project 2006-08 Transmission Loading Relief**

- IRO-006-3 — Reliability Coordination — Transmission Loading Relief
- IRO-006-4 — Reliability Coordination — Transmission Loading Relief

## **Project 2007-01 Underfrequency Load Shedding**

- PRC-006-0 — Development and Documentation of Regional UFLS Programs
- PRC-007-0 — Assuring Consistency with Regional UFLS Program Requirements
- PRC-009-0 — UFLS Performance Following an Underfrequency Event

## **Project 2007-02 Operating Personnel Communications Protocols**

- COM-003-1 — Operating Personnel Communications Protocols

## **Project 2007-03 Real-time Operations**

- PER-001-0 — Operating Personnel Responsibility and Authority
- TOP-001-1 — Reliability Responsibilities and Authorities
- TOP-002-2 — Normal Operations Planning
- TOP-003-0 — Planned Outage Coordination
- TOP-004-1 — Transmission Operations
- TOP-004-2 — Transmission Operations
- TOP-005-1 — Operational Reliability Information
- TOP-006-1 — Monitoring System Conditions
- TOP-007-0 — Reporting SOL and IROL Violations
- TOP-008-1 — Response to Transmission Limit Violations

## **Project 2007-04 Certifying System Operators**

- PER-003-0 — Operating Personnel Credentials

## **Project 2007-05 Balancing Authority Controls**

- BAL-002-0 — Disturbance Control Performance
- BAL-004-0 — Time Error Correction
- BAL-004-1 — Time Error Correction
- BAL-005-0 — Automatic Generation Control
- BAL-005-0b — Automatic Generation Control
- BAL-006-1 — Inadvertent Interchange

**Project 2007-06 System Protection Coordination**

- PRC-001-1 — System Protection Coordination

**Project 2007-07 Vegetation Management**

- FAC-003-2 — Transmission Vegetation Management Program

**Project 2007-09 Generator Verification**

- MOD-024-1 — Verification of Generator Gross and Net Real Power Capability
- MOD-025-1 — Verification of Generator Gross and Net Reactive Power Capability
- MOD-026-1 — Verification of Models and Data for Generator Excitation System Functions
- MOD-027-1 — Verification of Generator Unit Frequency Response
- PRC-019-1 — Coordination of Generator Voltage Regulator Controls with Unit Capabilities and Protection
- PRC-024-1 — Generator Performance During Frequency and Voltage Excursions

**Project 2007-11 Disturbance Monitoring**

- PRC-002-1 — Define Regional Disturbance Monitoring and Reporting Requirements
- PRC-018-1 — Disturbance Monitoring Equipment Installation and Data Reporting

**Project 2007-17 Protection System Maintenance and Testing**

- PRC-005-1 — 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
- PRC-017-0 — Special Protection System Maintenance and Testing

**Project 2007-18 Reliability-based Control**

- BAL-001-0 — Real Power Balancing Control Performance
- BAL-001-0a — Real Power Balancing Control Performance
- BAL-003-0a — Frequency Response and Bias
- EOP-002-2 — Capacity and Energy Emergencies
- IRO-005-2 — Reliability Coordination — Current-Day Operations

**Project 2008-01 Voltage and Reactive Control**

- VAR-001-1 — Voltage and Reactive Control
- VAR-001-1a — Voltage and Reactive Control
- VAR-002-1 — Generator Operation for Maintaining Network Voltage Schedules
- VAR-002-1a — Generator Operation for Maintaining Network Voltage Schedules

**Project 2008-02 Undervoltage Load Shedding**

- PRC-010-0 — Assessment of the Design and Effectiveness of UVLS Program
- PRC-022-1 — Under-Voltage Load Shedding Program Performance

**Project 2008-06 Cyber Security — Order 706**

- CIP-002-2 — Critical Cyber Asset Identification
- CIP-003-2 — Security Management Controls
- CIP-004-2 — Personnel and Training

- CIP-005-2 — Electronic Security Perimeter(s)
- CIP-006-2a — Cyber Security — Physical Security
- CIP-007-2 — Systems Security Management
- CIP-008-2 — Incident Reporting and Response Planning
- CIP-009-2 — Recovery Plans for Critical Cyber Assets

#### **Project 2008-08 EOP VSL Revisions**

- EOP-001-0 — Emergency Operations Planning
- EOP-002-2 — Capacity and Energy Emergencies
- EOP-003-1 — Load Shedding Plans

#### **Project 2008-12 Coordinate Interchange Standards**

- INT-001-3 — Interchange Information
- INT-003-2 — Interchange Transaction Implementation
- INT-004-1 — Dynamic Interchange Transaction Modifications
- INT-005-2 — Interchange Authority Distributes Arranged Interchange
- INT-006-2 — Response to Interchange Authority
- INT-007-1 — Interchange Confirmation
- INT-008-2 — Interchange Authority Distributes Status
- INT-009-1 — Implementation of Interchange
- INT-010-1 — Interchange Coordination Exemptions

#### **Project 2009-01 Disturbance and Sabotage Reporting**

- CIP-001-1 — Sabotage Reporting
- EOP-004-1 — Disturbance Reporting

#### **Project 2009-02 Real-time Tools**

- BAL-002-0 — Disturbance Control Performance
- BAL-005-0 — Automatic Generation Control
- BAL-005-0b — Automatic Generation Control
- COM-001-1 — Telecommunications
- EOP-003-1 — Load Shedding Plans
- EOP-005-1 — System Restoration Plans
- IRO-002-1 — Reliability Coordination — Facilities
- IRO-003-2 — Reliability Coordination — Wide-Area View
- IRO-004-1 — Reliability Coordination — Operations Planning
- IRO-005-2 — Reliability Coordination — Current-Day Operations
- PRC-001-1 — System Protection Coordination
- TOP-001-1 — Reliability Responsibilities and Authorities
- TOP-002-2 — Normal Operations Planning
- TOP-003-0 — Planned Outage Coordination
- TOP-004-1 — Transmission Operations
- TOP-004-2 — Transmission Operations
- TOP-005-1 — Operational Reliability Information
- TOP-006-1 — Monitoring System Conditions
- VAR-001-1 — Voltage and Reactive Control
- VAR-001-1a — Voltage and Reactive Control

#### **Project 2009-05 Resource Adequacy Assessments**

- New Standard

#### **Project 2009-06 Facility Ratings**

- FAC-008-1 — Facility Ratings Methodology

FAC-009-1 — Establish and Communicate Facility Ratings

#### **Project 2010-02 Connecting New Facilities to the Grid**

- FAC-001-0 — Facility Connection Requirements
- FAC-002-0 — Coordination of Plans for New Facilities

#### **Project 2010-03 Modeling Data**

- MOD-010-0 — Steady-State Data for Transmission System Modeling and Simulation
- MOD-011-0 — Regional Steady-State Data Requirements and Reporting Procedures
- MOD-012-0 — Dynamics Data for Transmission System Modeling and Simulation
- MOD-013-1 — RRO Dynamics Data Requirements and Reporting Procedures
- MOD-014-0 — Development of Interconnection-Specific Steady State System Models
- MOD-015-0 — Development of Interconnection-Specific Dynamics System Models
- PRC-013-0 — Special Protection System Database
- PRC-015-0 — Special Protection System Data and Documentation

#### **Project 2010-04 Demand Data**

- MOD-016-1 — Actual and Forecast Demands, Net Energy for Load, Controllable DSM
- MOD-017-0 — Aggregated Actual and Forecast Demands and Net Energy for Load
- MOD-018-0 — Reports of Actual and Forecast Demand Data
- MOD-019-0 — Forecasts of Interruptible Demands and DCLM Data
- MOD-020-0 — Providing Interruptible Demands and DCLM Data
- MOD-021-0 — Accounting Methodology for Effects of Controllable DSM in Forecasts

#### **Project 2010-05 Protection Systems**

- PRC-003-1 — Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems
- PRC-004-1 — Analysis and Mitigation of Transmission and Generation Protection System Misoperations
- PRC-012-0 — Special Protection System Review Procedure
- PRC-014-0 — Special Protection System Assessment
- PRC-016-0 — Special Protection System Misoperations

## Reference Identifying the Standard in each Project Sorted by Standard Number

Standard	Standard Name	Project Number
<b>Resource and Demand Balancing (BAL) Standards</b>		
BAL-001-0a	Real Power Balancing Control Performance	Project 2007-18
BAL-002-0	Disturbance Control Performance	Project 2007-05, Project 2009-02, and Project 2007-18
BAL-003-0a	Frequency Response and Bias	Project 2007-12
BAL-004-0	Time Error Correction	Project 2007-05
BAL-004-1	Time Error Correction	Project 2007-05
BAL-005-0b	Automatic Generation Control	Project 2007-05 and Project 2009-02
BAL-006-1	Inadvertent Interchange	Project 2007-05
<b>Critical Infrastructure Protection (CIP) Standards</b>		
CIP-001-1	Sabotage Reporting	Project 2009-01
CIP-002-2	Critical Cyber Asset Identification	Project 2008-06
CIP-003-2	Security Management Controls	Project 2008-06
CIP-004-2	Personnel and Training	Project 2008-06
CIP-005-2	Electronic Security Perimeter(s)	Project 2008-06
CIP-006-2	Physical Security	Project 2008-06
CIP-006-1a	Cyber Security — Physical Security	Project 2008-06
CIP-007-2	Systems Security Management	Project 2008-06
CIP-008-2	Incident Reporting and Response Planning	Project 2008-06
CIP-009-2	Recovery Plans for Critical Cyber Assets	Project 2008-06
<b>Communications (COM) Standards</b>		
COM-001-1	Telecommunications	Project 2006-06 and Project 2009-02
COM-002-2	Communications and Coordination	Project 2006-06 and Project 2007-02
<b>Emergency Preparedness and Operations (EOP) Standards</b>		
EOP-001-0	Emergency Operations Planning	Project 2006-04, Project 2008-08 (VSLs only), and Project 2009-03
EOP-002-2	Capacity and Energy Emergencies	Project 2007-18, Project 2008-08 (VSLs only) and Project 2009-03
EOP-003-1	Load Shedding Plans	Project 2008-08 (VSLs only), Project 2009-02, and Project 2009-03
EOP-004-1	Disturbance Reporting	Project 2008-08 (VSLs only) and Project 2009-01
<b>Facilities Design, Connections, and Maintenance (FAC) Standards</b>		
FAC-001-0	Facility Connection Requirements	Project 2010-02
FAC-002-0	Coordination of Plans for New Facilities	Project 2010-02
FAC-003-1	Transmission Vegetation Management Program	Project 2007-07

Standard	Standard Name	Project Number
FAC-008-1	Facility Ratings Methodology	Project 2009-06
FAC-009-1	Establish and Communicate Facility Ratings	Project 2009-06
FAC-010-2	System Operating Limits Methodology for the Planning Horizon	Project 2008-04
FAC-011-1	System Operating Limits Methodology for the Operations Horizon	Project 2008-05
FAC-011-2	System Operating Limits Methodology for the Operations Horizon	Project 2008-05 and Project 2008-04
FAC-012-1	Transfer Capability Methodology	Project 2006-07
FAC-013-1	Establish and Communicate Transfer Capabilities	Project 2006-07
FAC-014-2	Establish and Communicate System Operating Limits	Project 2008-04
<b>Interchange Scheduling and Coordination (INT) Standards</b>		
INT-001-3	Interchange Information	Project 2008-12
INT-003-2	Interchange Transaction Implementation	Project 2008-12
INT-004-1	Dynamic Interchange Transaction Modifications	Project 2008-12
INT-005-1	Interchange Authority Distributes Arranged Interchange	Project 2008-12 and Project 2010-03
INT-005-2	Interchange Authority Distributes Arranged Interchange	Project 2008-12
INT-006-2	Response to Interchange Authority	Project 2008-12
INT-007-1	Interchange Confirmation	Project 2008-12
INT-008-1	Interchange Authority Distributes Status	Project 2008-12
INT-008-2	Interchange Authority Distributes Status	Project 2008-12
INT-009-1	Implementation of Interchange	Project 2008-12
INT-010-1	Interchange Coordination Exemptions	Project 2008-12
<b>Interconnection Reliability Operations and Coordination (IRO) Standards</b>		
IRO-001-1	Reliability Coordination — Responsibilities and Authorities	Project 2006-06 and Project 2009-03
IRO-002-1	Reliability Coordination — Facilities	Project 2006-06 and Project 2009-02
IRO-003-2	Reliability Coordination — Wide-Area View	Project 2009-02
IRO-004-1	Reliability Coordination — Operations Planning	Project 2009-02
IRO-005-2	Reliability Coordination — Current-Day Operations	Project 2006-06, Project 2007-18, and Project 2009-02
IRO-006-4	Reliability Coordination — Transmission Loading Relief	Project 2006-08
IRO-014-1	Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators	Project 2006-06
IRO-015-1	Notifications and Information Exchange Between Reliability Coordinators	Project 2006-06
IRO-016-1	Coordination of Real-time Activities Between Reliability Coordinators	Project 2006-06
<b>Modeling, Data, and Analysis (MOD) Standards</b>		
MOD-010-0	Steady-State Data for Transmission System Modeling and Simulation	Project 2010-03
MOD-011-0	Regional Steady-State Data Requirements and Reporting Procedures	Project 2010-03
MOD-012-0	Dynamics Data for Transmission System Modeling and Simulation	Project 2010-03
MOD-013-1	RRO Dynamics Data Requirements and Reporting Procedures	Project 2010-03
MOD-014-0	Development of Interconnection-Specific Steady State System Models	Project 2010-03

Standard	Standard Name	Project Number
MOD-015-0	Development of Interconnection-Specific Dynamics System Models	Project 2010-03
MOD-016-1	Actual and Forecast Demands, Net Energy for Load, Controllable DSM	Project 2010-04
MOD-017-0	Aggregated Actual and Forecast Demands and Net Energy for Load	Project 2010-04
MOD-018-0	Reports of Actual and Forecast Demand Data	Project 2010-04
MOD-019-0	Forecasts of Interruptible Demands and DCLM Data	Project 2010-04
MOD-020-0	Providing Interruptible Demands and DCLM Data	Project 2010-04
MOD-021-0	Accounting Methodology for Effects of Controllable DSM in Forecasts	Project 2010-04
MOD-024-1	Verification of Generator Gross and Net Real Power Capability	Project 2007-09
MOD-025-1	Verification of Generator Gross and Net Reactive Power Capability	Project 2007-09
MOD-026-1	Verification of Models and Data for Generator Excitation System Functions	Project 2007-09
MOD-027-1	Verification of Generator Unit Frequency Response	Project 2007-09
<b>Personnel Performance, Training, and Qualifications (PER) Standards</b>		
PER-001-0	Operating Personnel Responsibility and Authority	Project 2007-03
PER-003-0	Operating Personnel Credentials	Project 2007-04
<b>Protection and Control (PRC) Standards</b>		
PRC-001-1	System Protection Coordination	Project 2007-06 and Project 2009-02
PRC-002-1	Define Regional Disturbance Monitoring and Reporting Requirements	Project 2007-11
PRC-003-1	Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems	Project 2010-05
PRC-004-1	Analysis and Mitigation of Transmission and Generation Protection System Misoperations	Project 2010-05
PRC-005-1	Transmission and Generation Protection System Maintenance and Testing	Project 2007-17
PRC-006-0	Development and Documentation of Regional UFLS Programs	Project 2007-01
PRC-007-0	Assuring Consistency with Regional UFLS Program Requirements	Project 2007-01
PRC-008-0	Underfrequency Load Shedding Equipment Maintenance Programs	Project 2007-17
PRC-009-0	UFLS Performance Following an Underfrequency Event	Project 2007-01
PRC-010-0	Assessment of the Design and Effectiveness of UVLS Program	Project 2008-02
PRC-011-0	UVLS System Maintenance and Testing	Project 2007-17
PRC-012-0	Special Protection System Review Procedure	Project 2010-05
PRC-013-0	Special Protection System Database	Project 2010-03
PRC-014-0	Special Protection System Assessment	Project 2010-05
PRC-015-0	Special Protection System Data and Documentation	Project 2010-03
PRC-016-0	Special Protection System Misoperations	Project 2010-05
PRC-017-0	Special Protection System Maintenance and Testing	Project 2007-17
PRC-018-1	Disturbance Monitoring Equipment Installation and Data Reporting	Project 2007-11
PRC-019-1	Coordination of Generator Voltage Regulator Controls with Unit Capabilities and Protection	Project 2007-09
PRC-020-1	Under-Voltage Load Shedding Program Database	Project 2010-03
PRC-021-1	Under-Voltage Load Shedding Program Data	Project 2010-03

<b>Standard</b>	<b>Standard Name</b>	<b>Project Number</b>
PRC-022-1	Under-Voltage Load Shedding Program Performance	Project 2008-02
PRC-024-1	Generator Performance During Frequency and Voltage Excursions	Project 2007-09
<b>Transmission Operations (TOP) Standards</b>		
TOP-001-1	Reliability Responsibilities and Authorities	Project 2007-03
TOP-002-2	Normal Operations Planning	Project 2007-03
TOP-003-0	Planned Outage Coordination	Project 2007-03
TOP-004-2	Transmission Operations	Project 2007-03
TOP-005-1	Operational Reliability Information	Project 2007-03
TOP-006-1	Monitoring System Conditions	Project 2007-03
TOP-007-0	Reporting SOL and IROL Violations	Project 2007-03
TOP-008-1	Response to Transmission Limit Violations	Project 2007-03
<b>Transmission Planning (TPL) Standards</b>		
TPL-001-0	System Performance Under Normal Conditions	Project 2006-02
TPL-002-0	System Performance Following Loss of a Single BES Element	Project 2006-02
TPL-003-0	System Performance Following Loss of Two or More BES Elements	Project 2006-02
TPL-004-0	System Performance Following Extreme BES Events	Project 2006-02
TPL-005-0	Regional and Interregional Self-Assessment Reliability Reports	Project 2006-02
TPL-006-0	Assessment Data from Regional Reliability Organizations	Project 2006-02
<b>Voltage and Reactive (VAR) Standards</b>		
VAR-001-1a	Voltage and Reactive Control	Project 2008-01 and Project 2009-02
VAR-002-1a	Generator Operation for Maintaining Network Voltage Schedules	Project 2008-01