



## **SCE&G Interchange Procedures**

**SOP-212**

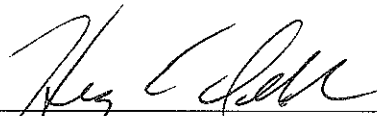
**This is a NERC Reliability Standards Compliance Procedure. This procedure contains elements addressing, in whole or in part, NERC Reliability Standards INT-001, 003, 004, 005, 006, 007, 008, 009, and 010.**


**Revision/Review History**

Revision/Review	Date	Developed/Revised By:	Comments/Details of Revision
1	2/26/07	Lee Xanthakos	Formal documentation of process
2	9/23/08	Gene Delk/ Steve Hebert	Revised to include all INT Standards. Revised 7.1.2.

**Document Review Requirements:**

The currency of this document is the responsibility of the Manager of System Control. This document shall be reviewed and revised as necessary.

APPROVED:  Date: 9/23/08  
Manager  
System Control

APPROVED:  Date: 9/23/08  
Vice President  
SCE&G Electric Transmission

## **1.0 Purpose**

This procedure establishes the processes for ensuring that System Controllers perform interchange operations in compliance with applicable NERC Reliability Standards:

- 1.1 To ensure that Interchange information is submitted to the NERC-identified reliability analysis service;
- 1.2 To ensure that the each Arranged Interchange is checked for reliability before it is implemented;
- 1.3 To communicate approvals and denials of Tags and final composite status of tags;
- 1.4 To confirm Interchange Schedules with Adjacent Balancing Authorities before implementing the schedules in Area Control Error (ACE) equations;
- 1.5 To ensure Confirmed Schedules are incorporated into the SCE&G ACE equation;
- 1.6 To allow certain types of Interchange Schedules to be initiated or modified by reliability entities, and to be exempt from compliance with other Interchange Standards under abnormal operating conditions; and
- 1.7 To ensure Dynamic Transfers are adequately tagged to determine their reliability impacts.

## **2.0 Applicability**

This procedure applies to all System Control personnel involved in Interchange activities.

## **3.0 Performance Requirements**

This procedure is required to be performed:

- 3.1 For each Interchange Transaction; and
- 3.2 When a Reliability Event requires modification to Interchange Transactions.

## **4.0 References**

- 4.1 NERC Reliability Standard INT-001-2, *Interchange Information*
- 4.2 NERC Reliability Standard INT-003-2, *Interchange Transaction Implementation*
- 4.3 NERC Reliability Standard INT-004-1, *Interchange Transaction Modifications*
- 4.4 NERC Reliability Standard INT-005-2, *Interchange Authority Distributes Arranged Interchange*

- 4.5 NERC Reliability Standard INT-006-2, *Response to Interchange Authority*
- 4.6 NERC Reliability Standard INT-007-1, *Interchange Confirmation*
- 4.8 NERC Reliability Standard INT-008-2, *Interchange Authority Distributes Status*
- 4.9 NERC Reliability Standard INT-009-1, *Implementation of Interchange*
- 4.10 NERC Reliability Standard INT-010-1, *Interchange Coordination Exemptions*

## **5.0 Documentation Requirements**

Successful completion of this procedure for each Interchange Transaction shall be evidenced by

- 5.1 Tag or Tags for the Interchange Transaction;
- 5.2 Specific documentation of performance in Systems Control Room logs; or
- 5.3 Other documentation as relevant to specific Interchange Transactions.

## **6.0 Discussion**

A number of NERC Standards have been developed to assure proper consideration, communication and implementation of transmission transactions. SCE&G System Controllers have an important role in each of these tasks through careful evaluation of system conditions and transaction requirements. To properly document and communicate planned and existing transmission requests, SCE&G subscribes to the OATI E-tagging Service that provides Tags and any modifications via a secure network to

- Sink and Source Balancing Authority for the Transaction
- Intermediate Balancing Authorities on the Schedule Path
- Transmission Service Provider(s) on the Schedule Path
- Reliability analysis services (IDC or other regional reliability tools)
- Transmission Operators and Reliability Coordinators who may receive the information through Reliability analysis services

## **7.0 Procedure**

### **7.1 Interchange Information Submission**

- 7.1.1 SCE&G System Controllers shall ensure that all Dynamic Schedule sinking in the SCE&G Balancing Authority Area will be E-tagged at the expected average MW profile for each hour. [INT-001-2 R1]

7.1.2 The SCE&G System Controller is responsible for scheduling transactions that a PSE is not a party to, including, for example: [INT-001-2 R2]

7.1.2.1 Delivery from a jointly owned generator [INT-001-2 R2.1] and

*This step is not applicable to SCE&G because the only jointly owned generator (V.C. Summer Nuclear Station) is considered to be in the SCE&G's metered balancing area and SCPSA's 1/3 share is delivered directly to SCPSA's transmission system.*

7.1.2.2. Each bilateral Inadvertent Interchange payback. [INT-001-2 R2.2]

*This step is not applicable because SCE&G only utilizes unilateral inadvertent payback.*

**7.2 Interchange Transactions** SCE&G is subscribed to the Open Access Technologies International (OATi) suite of scheduling products, including webTrans, webTag and webOASIS. These products are used for all transactions on the SCE&G system.

7.2.1 SCE&G System Controllers shall assess and approve or deny Interchange Transactions based on existing system conditions and reliability considerations, including the following:

7.2.1.1 Valid OASIS reservation number or transmission contract identifier;

7.2.1.2 Valid Transmission priority on the Tag;

7.2.1.3 Valid Energy profile;

7.2.1.4 OASIS reservation accommodates all Interchange Transactions;

7.2.1.5 Valid PORs and PODs; and

7.2.1.6 Loss accounting.

*Note: SCE&G utilizes OATI webTrans Service to automatically check for items such as those listed above.*

7.2.2 For transactions to which the SCE&G Balancing Authority is on the Scheduling Path, SCE&G System Controllers shall assess and confirm the Interchange Schedule has agreed upon: [INT-003-2 R1.1]

7.2.2.1 Transaction start and end time; [INT-003-2 R1.1.1]

7.2.2.2 Energy profile; [INT-003-2 R1.1.2]

7.2.2.3 Ramp start time and duration; and

7.2.2.4 Scheduling Path.

- 7.2.3 If a high voltage direct current (HVDC) tie is on the Scheduling Path, SCE&G System Controllers shall coordinate the Interchange Schedule with the Transmission Operator of the HVDC tie. [INT-003-2 R1.2]

*This step is not applicable to SCE&G because there are no HVDC ties near the SCE&G Balancing Area.*

- 7.2.4 For transactions to which the SCE&G Balancing Authority is on the Scheduling Path or SCE&G is the Transmission Service Provider, SCE&G System Controllers shall respond to a request from an Interchange Authority to transition an Arranged Interchange to a Confirmed Interchange within the appropriate time period defined Attachment 1, Column B. [INT-006-2 R1]
- 7.2.5 For transactions in which SCE&G is the Interchange Authority, System Controllers shall verify that the Arranged Interchange is balanced and valid before transitioning to Confirmed Interchange by ensuring: [INT-007-1 R1]
- 7.2.5.1 Source Balancing Authority megawatts equal sink Balancing Authority megawatts (adjusted for losses, if appropriate); [INT-007-1 R1.1]
  - 7.2.5.2 All reliability entities involved in the Arranged Interchange are currently in the NERC registry; [INT-007-1 R1.2]
  - 7.2.5.3 Generation source and load sink are defined; [INT-007-1 R1.3.1]
  - 7.2.5.4 Megawatt profile is defined; [INT-007-1 R1.3.2]
  - 7.2.5.5 Ramp start and stop times are defined; [INT-007-1 R1.3.3]
  - 7.2.5.6 Interchange duration is defined; [INT-007-1 R1.3.4] and
  - 7.2.5.7 Each Balancing Authority and Transmission Service Provider that received the Arranged Interchange information from the Interchange Authority for reliability assessment has provided approval. [INT-007-1 R1.4]
- 7.2.6 For transactions in which SCE&G is the Interchange Authority, System Controllers shall distribute via OATI E-tag to all Balancing Authorities, Transmission Service Providers and Purchasing-Selling Entities involved in the Arranged Interchange whether or not the Arranged Interchange has transitioned to a Confirmed Interchange. This shall be done

before the expiration of the time period defined in the Standard in Column C of the Timing Table. [INT-008-2 R1]

7.2.6.1 For Confirmed Interchange, System Controllers shall also communicate via OATI E-tag: [INT-008-2 R1.1]

7.2.6.1.1 Start and stop times, ramps, and megawatt profile to Balancing Authorities [INT-008-2 R1.1.1] and

7.2.6.1.2 Necessary Interchange information to NERC-identified analysis services. [INT-008-2 R1.1.2]

7.2.7 For Transactions in which SCE&G is the Balancing Authority, System Controllers shall evaluate the Arranged Interchange with respect to: [INT-006-2 R1.1]

7.2.7.1 Energy profile; [INT-006-2 R1.1.1]

7.2.7.2 Ramp; [INT-006-2 R1.1.2] and

7.2.7.3 Scheduling path [INT-006-2 R1.1.3]

7.2.8 SCE&G System Controllers shall distribute via OATI E-tag the Arranged Interchange information for reliability assessment to all reliability entities involved in the Interchange before the expiration of the time period defined in the Standard in Column C of the Timing Table. [INT-005-2 R1]

7.2.9 SCE&G System Controllers shall utilize OATI E-tags to confirm that the transmission service arrangements associated with the Arranged Interchange have adjacent Transmission Service Provider connectivity, are valid and prevailing transmission system limits will not be violated. [INT-006-2 R1.2]

7.2.10 When SCE&G as the Balancing Authority receives an Interchange Schedule, the System Controllers shall use the OATI checkout page to confirm the Interchange Schedule with the Sending Balancing Authority prior to implementation. This may also be followed up with hourly phone calls to verify any changes in Interchange Schedules. [INT-003-2 R1]

7.2.11 SCE&G System Controllers shall only implement Confirmed Interchange Schedules with Adjacent Balancing Authorities. [INT-009-1 R1]

7.2.12 SCE&G as the Balancing Authority shall operate such that Interchange Schedules do not knowingly cause any other system to violate established operating criteria.

### **7.3 Dynamic Interchange Transaction Modifications [INT-004-1]**

- 7.3.1 SCE&G System Controllers may modify an Interchange Transaction due to loss of generation or Load.
  - 7.3.1.1 When the loss of a generator in the SCE&G Balancing Area necessitates curtailing Interchange Transactions, the System Controller shall coordinate the modifications to the appropriate E-tags. This shall include directing the PSE to make adjustments to Interchange Schedules.
  - 7.3.1.2. When a loss of load within the SCE&G Balancing Area necessitates curtailing Interchange Transactions, SCE&G System Controllers shall coordinate the modifications to the appropriate tags. This shall include directing the PSE to make adjustments to Interchange Schedules.
- 7.3.2 When SCE&G is responsible for tagging a Dynamic Interchange Schedule, SCE&G System Controllers shall ensure that the tag is updated for the next available scheduling hour and future hours when any one of the following occur: [INT-004-1 R2]
  - 7.3.2.1. The average energy profile in an hour is greater than 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than  $\pm 10\%$ ; [INT-004-1 R2.1]
  - 7.3.2.2 The average energy profile in an hour is less than or equal to 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than  $\pm 25$  megawatt-hours; [INT-004-1 R2.2] or
  - 7.3.2.3 if SCE&G determines the deviation, regardless of magnitude, is a reliability concern and notifies the PSE of that determination and the reasons, consistent with the SERC Standards of Conduct. [INT-004-1 R2.3]
- 7.3.3 When a reliability event allows for the reloading of a transaction, SCE&G System Controllers will release the limit on the Interchange Transaction tag to allow reloading the transaction and shall communicate the release of the limit to the other Balancing Authorities. [INT-004-1 R1]
- 7.3.4 When SCE&G as the Balancing Authority initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the

Arranged Interchange information shall be distributed for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority. [INT-005-2 R1.1]

#### **7.4 Interchange Coordination Exemptions [INT-010-1]**

7.4.1 The following conditions are exempt from Interchange Schedule compliance.

7.4.1.1 Modifications to an existing Interchange Schedule directed by the Reliability Coordinator. NOTE: A Tag is required within 60 minutes of the modification request. [INT-010-1 R2]

7.4.1.3 A new Interchange Schedule directed by the Reliability Coordinator. NOTE: A Tag is required within 60 minutes of the Reliability Coordinator direction. [INT-010-1 R3]

#### **8. Review and Retention**

8.1 The Manager of System Control or his designee shall periodically observe System Controllers performing transaction activities and review Tags to ensure compliance with procedure requirements.

8.2 The reviewer shall forward any original documents created to document compliance [Title] within [7 business days], retaining local copies of the evidence of performance as necessary.

8.3 SCE&G System Control shall maintain evidence of compliance within the OATI E-tag System for at least three years.