

 California ISO	Operating Procedure	Procedure No.	2520
		Version No.	9.1
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Purpose

Provides guidance for reviewing, correcting and confirming hourly, daily and monthly, Net Scheduled Interchange (NSI) and Net Actual Interchange (NAI) data with adjacent Balancing Authorities (BAs). Ensures compliance with NERC Reliability Standards and WECC Criteria regarding Arranged Interchange.

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1. Responsibilities

CAISO Transmission Dispatcher	<ul style="list-style-type: none"> • Performs hourly and daily checkout with all adjacent Balancing Authorities. • Validates Arranged Interchange against the WIT. • Uses the electronic confirmation process provided by the Reliability Assurer WIT as the primary means to confirm NSI for next hour checkout (from current operating hour), current operating hour checkout upon change, and to acknowledge agreement of NAI for past hour checkout in the current day. • Assures that Net Scheduled Interchange (NSI) does not exceed the Total Transfer Capability of the path prior to implementation of Arranged Interchange for the next hour. • Performs a comparative check of daily totals of Scheduled Interchange and daily totals of Actual Telemetered Interchange. • Reviews Accumulated Inadvertent Interchange (All) totals from hourly checks, using the Interchange transaction scheduler (ITS). • Ensures all E-Tags are within their market awards. • Provides an audit trail of electronic confirmation using the WIT hourly and daily checkout boxes. • Logs any disagreements with and any discrepancies to the electronic confirmation process in SLIC (Scheduling Logging in California). • Maintains/Reports All totals to WECC, directly and via WIT. • Performs next day checkout process. • Uses the electronic confirmation procedure provided by the Reliability Assurer WIT as the primary means to confirm NSI and NAI for past day checkout. • Provides an audit trail of electronic confirmation using WIT hourly and daily checkout boxes.
CAISO System Operations Specialist	<ul style="list-style-type: none"> • Resolves any residual NSI or NAI inconsistencies from Real-Time. • Confirms final NSI and NAI with WIT. • Performs month end checkout process. • Logs any disagreements with and any discrepancies to the electronic confirmation process and any abnormal after-the-fact changes made and the monthly End of the Month checkout in SLIC.

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2. Scope/Applicability

2.1. Background

The CAISO checks the NSI and telemetered NAI for each Intertie point, each hour, with the respective adjacent BAs, such that NSI does not exceed the Total Transfer Capability of the path prior to implementation of Arranged Interchange for the next hour. The CAISO validates Arranged Interchange against the WIT Checkouts with WIT and each adjacent BA are conducted in the Real-Time (RT) and ATF timeframes per NERC Interchange Standards and WECC Criteria. Any Scheduled or actual Interchange related discrepancies are resolved with the respective BAs prior to the Operating Hour. If significant deviations in NAI are detected during RT, the CAISO EMS group will be advised to investigate and take corrective actions.

2.2. Scope/ Applicability

This procedure applies to the Transmission Dispatcher and System Operations Specialist.

3. Procedure Detail

3.1. RT Schedule Validation and Implementation

The following describes the RT Schedule validation and implementation:

1. The WECC uses WIT as the single E-Tag authority for WECC. Accordingly, all RFI and, subsequently, Arranged Interchange are validated via WIT. BAs confirm Arranged Interchange with each other, and with WIT, during the pre-scheduling check-out process and again just prior to RT.
2. WIT is used to validate all Arranged Interchange prior to implementation as NSI is reflected in the CAISO EMS/AGC system for each Operating Hour. WIT serves as the definitive Arranged Interchange validation tool for both (NSI) and (NAI) between BAs and inadvertent for the WECC.
3. The CAISO Interchange transaction scheduler is used to approve and manage Interchange Scheduling between adjacent BAs and WIT for grid reliability purposes. NERC E-Tag Interchange Schedules are received from the E-Tag authority into the CAISO operating systems, via ITS.
4. The ITS application compares CAISO market awards which result from CAISO Market Participants submitted bids and Self-Schedules into the CAISO's market system (SIBR), with Interchange Schedules (E-Tags) submitted by the Market Participants and Purchasing Selling Entity (PSE), to assure that each Interchange Schedule has a valid corresponding CAISO transmission market reservation.

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5. The ITS functionality is used to assure implementation of accurate NSI via EMS/AGC, predicated upon this Arranged Interchange, such that the NSI for each tie point does not exceed the Total Transfer Capability of the path. The ITS functionality is used to assure that accurate NAI is checked out with adjacent BAs and published to WIT and to CAISO Settlements.

3.2. RT Hourly Check-out

3.2.1. Before Each Hourly Ramp

Take the following actions before the hourly ramp:

CAISO Transmission Dispatcher
<ol style="list-style-type: none"> 1. Verify Schedules with adjacent BAs and WIT prior to the start of the hourly ramp. 2. Prior to implementing Interchange Schedules into the ACE equation, using ITS, use ITS to: <ul style="list-style-type: none"> • Confirm that Arranged Interchange Schedules do not exceed market awards. • Confirm Arranged Interchange Schedules between the sending and receiving BAs. • Confirm that NSI is within System Operating Limits for each tie point. • Agree with the sending/receiving BA on the Arranged Interchange Schedules start and end times and the Energy profile. • Cross check Interchange transaction scheduler RT Arranged Interchange against WIT to validate NSI: <ul style="list-style-type: none"> ○ If a discrepancy exists prior to the start of the ramp, the Transmission Dispatcher may contact the adjacent BA and/or Purchasing Selling Entity to resolve the discrepancy. ○ Use the electronic confirmation process provided by the Reliability Assurer WIT as the primary means to confirm NSI for next hour check-out (from current operating hour). ○ Provide an audit trail of electronic confirmation using the WIT hourly check-out boxes.

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3.2.2. After the Close of Each Hour

Take the following actions after the close of each hour:

CAISO Transmission Dispatcher
<ol style="list-style-type: none"> 1. If the disagreement cannot be resolved: <ul style="list-style-type: none"> • Contact the involved Scheduling Coordinator (SC/PSE) responsible for the Interchange transaction. • Verify the Schedule, <u>and</u> • Implement any necessary ATF E-Tag or ITS changes.

3.3. Final Daily Schedules and NAI Totals Comparison

Take the following actions daily, after midnight, for prior Operating Day:

CAISO Transmission Dispatcher
<ol style="list-style-type: none"> 1. Perform a comparative check of daily totals of Net Scheduled Interchange and daily totals of telemetered Net Actual Interchange. 2. Check-out with each of the 11 adjacent BAs using the electronic confirmation process provided by the Reliability Assurer WIT as the primary means to confirm NSI and NAI. 3. Confirm actual daily Arranged Interchange with adjacent BAs using WIT to verify final daily NSI and NAI using the electronic confirmation process provided by the Reliability Assurer WIT as the primary means to confirm NSI and NAI. 4. Provide an audit trail of electronic confirmation using WIT hourly and daily check-out boxes. 5. Log any unresolved NSI and NAI disagreements in SLIC, including Dynamic Schedules.

3.4. RT Scheduling or System Tagging Failure

Take the following actions if ITS or WIT are unavailable:

CAISO Transmission Dispatcher
<ol style="list-style-type: none"> 1. If the CAISO Interchange transaction scheduler system is not able to produce net Scheduled Interchange Schedule data for use in EMS AGC control, <ul style="list-style-type: none"> • Use WIT <u>and</u> agree with adjacent BAs on the total amount of implemented E-Tags in WIT.

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CAISO Transmission Dispatcher
<ul style="list-style-type: none"> • If both ITS and WIT are unavailable to communicate NSI with BAs: <ul style="list-style-type: none"> ○ Use an NSI value, as agreed upon between the CAISO and each adjacent BA Area. ○ Hold to the last NSI, unless changed by mutual agreement.

3.5. Monthly Checks

Take the following actions monthly:

CAISO System Operations Specialist
<ol style="list-style-type: none"> 1. Perform final monthly Schedules NSI and NAI checks.

3.6. Discrepancies and Final Resolution

Take the following actions in the event of any unresolved NSI or NAI issues:

CAISO System Operations Specialist
<ol style="list-style-type: none"> 1. Coordinate final resolution, as appropriate, with Settlements and the adjacent Balancing Authorities: <ul style="list-style-type: none"> • If by the 15th calendar day of the following month NAI or NSI quantities have not been resolved, <ul style="list-style-type: none"> ○ Submit a report to the WIT Survey Contact. 2. Log any disagreements with any discrepancies to the electronic confirmation process, any abnormal after-the-fact changes made, and the monthly End of the Month check-out in SLIC.

4. Supporting Information

Operationally Affected Parties

Shared with the Public.

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References

Resources studied in the development of this procedure and that may have an effect upon some steps taken herein include but are not limited to:

CAISO Tariff	
CAISO Operating Procedure	
NERC Requirements	BAL-004-WECC-3 R4.2 BAL-005-1 R11
WECC Criterion	INT-001-WECC-CRT-4.1 R2 INT-003-WECC-CRT-3.2 R1 INT-021-WECC-CRT-2.2
Other References	WECC Interchange Tool (WIT)

Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have that meaning when capitalized in this Operating Procedure.

The following additional terms are capitalized in this Operating Procedure when used as defined below:

None

Version History

Version	Change	Date
8.5	Eliminated Section 3.5.1 on "ATF Recheck of Prior Operating Day's Totals," as it was already performed in Section 3.3 Final Daily Schedules and NAI Totals Comparison. Minor format and grammar updates.	11/21/17
8.6	Section 2.2: Changed Interchange Scheduler to Transmission Dispatcher. Section 3.2.1: Changed Interchange Scheduler to Transmission Dispatcher and Interchange Scheduler Desk to Transmission Desk. Sections 3.2.2, 3.3 and 3.4: Changed Interchange Scheduler Desk to Transmission Desk. Replaced the Peak RC with the RC. Minor format and grammar updates.	4/15/19

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Version	Change	Date
9.0	Periodic Review: Minor edits for consistency, format and grammar updates, and removed history prior to 5-years.	12/04/20
9.1	Periodic Review: Updated from check-out to checkout, updated instances of ISO to CAISO, updated from Transmission "Desk" to "Dispatcher". Updated NERC Standards and WECC Criterion. Removed history prior to five years and minor edit under Review Criteria for procedures consistency.	1/18/24

5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

There are no specific criteria for reviewing or changing this document, follow instructions in **CAISO Operating** Procedure 5510.

Frequency

Every three (3) Years.

Appendix

No references at this time.