 California ISO	Operating Procedure	Procedure No. 4410
		Version No. 12.3
		Effective Date 5/01/25
Emergency Assistance		Distribution Restriction: None

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Purpose

Provides guidelines for providing or requesting emergency assistance to **and/or** from other Balancing Authorities and wheeling emergency assistance.

1. Responsibilities

CAISO System Operator	Ensures reliable operation of the CAISO Controlled Grid and Balancing Authority Area. Coordinate emergency and wheeling assistance with other Balancing Authorities (BAs).
Adjacent Balancing Authority (ABA)	Have agreements for the provision of emergency assistance.
Non-Adjacent Balancing Authority (N-ABA)	Ensure the intermediary Balancing Authority, adjacent to the CAISO, has agreements for the provision of emergency wheeling assistance.

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2. Scope/Applicability

2.1. Background

The **California ISO (CAISO)**, through agreements with other Balancing Authority Areas, is authorized to take actions during System Emergencies regarding emergency assistance whether to receive or provide emergency assistance. The CAISO will not shed firm Load to provide emergency assistance to other Balancing Authorities.

2.2. Scope/ Applicability

This procedure is applicable to Balancing Authorities that may provide or receive emergency assistance or wheeling assistance to/from the CAISO. Emergency assistance may be available from the CAISO for Balancing Authorities of the WECC Interconnection that are signatories to written contractual agreements with the CAISO (e.g., Interconnected Control Area Operating Agreements, (ICAOA), or Adjacent Balancing Authority Operating Agreements (ABAOA) Service Schedule 13), or that have entered into a written/verbal contract with the CAISO by requesting such assistance in Real-Time.

3. Procedure Detail


3.1. Providing Emergency Assistance (Energy and/or Capacity)

Take the following actions for providing emergency assistance:

Note: *If a WECC entity has experienced a disturbance and system frequency is below Schedule, then take action to ensure CAISO ACE is not contributing to frequency excursion or Reliability Based Control (RBC) exceedance, but do not unilaterally adjust Generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action and Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.*

Adjacent Balancing Authority (ABA)
<p>1. Advise the CAISO System Operator of the nature of the problem, the commodity requested (Energy or Capacity), the MW amount, the start time, the delivery point, and duration of the emergency assistance.</p> <p>Note: <i>This assistance should only be until the BA experiencing the emergency can submit Schedules into HASP. Some BAs may be unable to submit Schedules into HASP; refer to CAISO Operating Procedure 4410B Prices - Emergency Assistance to the CAISO (Internal only) for exceptions.</i></p>

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Non-Adjacent Balancing Authority (N-ABA)
<ol style="list-style-type: none"> 1. Advise the CAISO System Operator of the nature of the problem, the commodity requested (Energy or Capacity), the MW amount, the start time, the ABA, the delivery point at the ABA, the Transmission Service Provider (TSP) providing transmission through the ABA, and duration of the emergency assistance. <p><i>Note: This assistance should only be until the BA experiencing the emergency can submit Schedules into HASP. Some BAs may be unable to submit Schedules into HASP; refer to CAISO Operating Procedure 4410B Prices - Emergency Assistance to the CAISO (Internal only) for exceptions.</i></p>

CAISO System Operator
<ol style="list-style-type: none"> 1. Evaluate conditions affecting the ability of the CAISO to fulfill the request for emergency assistance, such as Operating Reserve, available unloaded generating capacity, actual and forecasted load, available transmission Capacity at the requested point of delivery. 2. Verify that supplying emergency Energy/Capacity to another BA will <u>not</u> decrease CAISO Contingency Reserves below minimum NERC or WECC Standard requirements. 3. Verify that the requesting BA is in an EEA/Transmission emergency. 4. Verify whether or not the energy will be tagged as C-RE, <u>and</u> if so, notify the Generation Dispatcher.

Adjacent Balancing Authority (ABA), Non-Adjacent Balancing Authority (N-ABA), CAISO System Operator
<ol style="list-style-type: none"> 1. Verify that available transmission capacity exists to assure the CAISO's ability to deliver the Energy associated with the Capacity if subsequently called upon. 2. Agree on the following: <ul style="list-style-type: none"> • Nature of assistance (Energy or Capacity). • Maximum MW value. • Delivery Point (export). • Start time, ramp time, end time. • General Pricing terms: <ul style="list-style-type: none"> ○ The price for CAISO emergency Energy assistance will be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, plus all other charges applicable to exports from the CAISO BA Area. ○ The price for CAISO emergency Capacity assistance will be the CAISO market price for the AS product (Spin or Non-Spin), plus all other charges applicable to exports from the CAISO BA Area. See CAISO Operating Procedure 4410B Prices - Emergency Assistance to the CAISO (Internal only) for more details.

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Adjacent Balancing Authority (ABA), Non-Adjacent Balancing Authority (N-ABA), CAISO System Operator

3. **Establish** an emergency assistance Balancing Authority-to-Balancing Authority Schedule:

- **Agree** upon time and Interchange offset with BA in EMS until E-Tag is validated and confirmed in EMS NSI (E-Tag can be submitted after-the-fact, if necessary).
- Scheduling Coordinator/receiving BA **provides** the following CAISO Market Award data in the E-Tag. This **shall be included** on the last line where the CAISO is designated the responsible BAA in the SE column in the Misc. Info. field of the Physical Path on the E-Tag:

Token	Value
CAISO_CONTRACT	"NONE"
CAISO_PRODUCT	"ENGY", "SPIN", "NSPN"
CAISO_RES_ID	Registered export emergency Resource ID listed in CAISO OP 4410D Emergency Assistance Resource IDs.

4. **Ensure** a manual offset is made if the E-Tag cannot be submitted immediately.

- CAISO Operator **should agree** with the receiving BA on a simultaneous Interchange offset (Same time, same duration, same MW value but opposite signs) in EMS until E-Tag is validated and confirmed in EMS NSI.

Note: *The requesting (sink) BA should advise the RC that they are receiving emergency assistance from the CAISO.*

CAISO System Operator

1. **Record** the Emergency Assistance schedule information in the ED tool of the market software.


- Also **include** the following fields:
 - Verbal Flag = Y
 - Constraint Type = Fixed
 - Instruction Type = TEMR
 - Reason = Emergency Assistance

Notes:

For instructions on how to log using the ED tool of the CAISO market software, reference CAISO Desktop Procedure [INT-029 Manual Dispatch on the Inerties.](#)

In case the ED tool is not available, log the dispatch instruction in the operations logging tool where log "Title" is "Intertie Emergency Assistance."

This must be done to allow for correct settlements.

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CAISO System Operator
<p>2. Create a manual market award using the agreed upon emergency assistance resource ID located in CAISO Operating Procedure 4410D Emergency Assistance Resource IDs.</p> <p>Notes:</p> <p><i>For information on how to create manual market awards, reference CAISO Desktop Procedure INT-010 Creating Manual Market Reservations in ITS.</i></p> <p><i>If the request comes from a Balancing Authority that does <u>not</u> have a resource ID in CAISO Operating Procedure 4410D Emergency Assistance Resource IDs, consider requesting that an SC in the deficient or adjacent BA supply a Resource ID or previously used Transaction ID for the transaction.</i></p>


3.2. Receiving Emergency Assistance (Energy and/or Capacity)

Take the following actions to request emergency assistance for Capacity and/or Energy:

Note: *The CAISO should not be providing emergency assistance if the CAISO is requesting emergency assistance. If a WECC entity is currently receiving emergency assistance from the CAISO, the CAISO can terminate that emergency assistance.*

CAISO System Operator
<ol style="list-style-type: none"> 1. Notify the RC of the Emergency Assistance need. <ul style="list-style-type: none"> • Refer to CAISO Operating Procedure 4420B Emergency Guide. 2. Call Adjacent BAs (or N-ABA if necessary) within the Interconnection to discuss the CAISO's need for Capacity and/or Energy, the nature of the problem, the MW amount, the start time, the delivery point, and duration that the emergency assistance is required. 3. Evaluate CAISO Operating Reserve and the MW amount of emergency assistance required to meet all reliability-operating criteria for the anticipated duration of the need without having to shed firm Load. 4. Verify that receiving emergency energy/capacity from another Balancing Authority will satisfy CAISO reliability criteria and meet minimum NERC and WECC Standards. 5. Verify whether or not the energy will be tagged as C-RE, and if so, notify the Generation Dispatcher. <p>Note: <i>If the sending BA provides energy to the CAISO that is part of their contingency reserves, the sending BA shall notify the CAISO that this energy is recallable, as it is their operating reserves. If this emergency energy is recalled, the associated E-Tag is likely to be curtailed in real-time. The sending BA shall provide advance notice to the CAISO according to the recallable energy guidelines.</i></p>


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Supplying Balancing Authority, any Non-Adjacent Balancing Authority (N-ABA), CAISO System Operator

- Verify** that available transmission capacity exists to assure delivery of the Energy associated with the Capacity sale, if that Energy is subsequently called upon.
- Agree** on the:
 - Nature of assistance (Energy or Capacity)
 - Maximum MW value
 - Delivery Point (import)
 - Start time, ramp start time and duration, end time
 - Pricing terms: Refer to CAISO Operating Procedure [4410B Prices - Emergency Assistance to the CAISO \(Internal only\)](#).
- Establish** an emergency assistance Balancing Authority-to-Balancing Authority Schedule:
 - Agree** upon time and Interchange offset with BA in EMS until E-Tag is validated and confirmed in EMS NSI (E-Tag can be submitted after-the-fact if necessary).
 - Scheduling Coordinator/Providing BA **provides** the following CAISO Market Award data in the E-Tag. This **shall be included** on the first line where the CAISO is designated the responsible BAA in the SE column in the Misc. Info. Field of the Physical Path on the E-Tag:

Token	Value
CAISO_CONTRACT	"NONE"
CAISO_PRODUCT	"ENGY", "SPIN", "NSPN"
CAISO_RES_ID	Registered import emergency Resource ID listed in CAISO OP 4410D Emergency Assistance Resource IDs .
- Ensure** a manual offset is made if the E-Tag cannot be submitted immediately.
 - CAISO Operator **should agree** with the receiving BA on a simultaneous Interchange offset (Same time, same duration, same magnitude, but opposite signs) in EMS until E-Tag is validated and confirmed in EMS NSI.

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CAISO System Operator
<p>1. Record the Emergency Assistance schedule information in the ED tool of the market software.</p> <ul style="list-style-type: none"> • Also include the following fields: <ul style="list-style-type: none"> – Verbal Flag = Y – Constraint Type = Fixed – Instruction Type = TEMR – Reason = Emergency Assistance <p>Notes: For instructions on how to log in the ED tool of the market software, reference CAISO Desktop Procedure INT-029 Manual Dispatches on the Interties. In case the ED tool is <u>not</u> available, log the dispatch instruction in the operations logging tool where log “Title” is “Intertie Emergency Assistance.” This <u>must</u> be done to allow for correct settlements.</p> <p>2. Create a manual market award using the agreed upon emergency assistance resource ID located in CAISO Operating Procedure 4410D Emergency Assistance Resource IDs.</p> <p>Note: For instruction on how to create manual market awards, reference CAISO Desktop Procedure INT-010 Creating Manual Market Reservations in ITS.</p>

3.3. Wheeling Emergency Assistance

Take the following actions for wheeling emergency assistance:

Adjacent Balancing Authorities (ABA)
<ol style="list-style-type: none"> 1. Advise the CAISO System Operator of the nature of the problem, the lines affected, the MW quantity, the time, and the duration that the emergency wheeling assistance is required. 2. Verify available transmission capacity exists on both import and export sides of the wheel to assure delivery of the Energy. 3. Agree on the following: <ul style="list-style-type: none"> • Transmission service provided, pricing for the transmission service is “all applicable charges specified in the CAISO Tariff.” • MW value. • Ramp start time (if any) and duration. • Delivery (entry) and receipt (exit) points. • Start time, end time and duration of Schedule. • Integrated MWH (for first hour).


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Adjacent Balancing Authorities (ABA)									
<p>4. Establish an emergency Balancing Authority-to-Balancing Authority wheel Schedule:</p> <ul style="list-style-type: none"> • Coordinate with the source and sink BAs for them to have an agreed upon time and Interchange offset in their EMS until the E-Tag is validated and confirmed in EMS NSI (E-Tag can be submitted after-the-fact if necessary). • Scheduling Coordinator/sink BA provides the following CAISO Market Award data in the E-Tag. This shall be included on the first line for the import Resource ID and last line for the export Resource ID where the CAISO is designated the responsible BAA in the SE column in the Misc. Info. field of the Physical Path on the E-Tag: 									
	<table border="1"> <thead> <tr> <th>Token</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>CAISO_CONTRACT</td> <td>"NONE"</td> </tr> <tr> <td>CAISO_PRODUCT</td> <td>"ENGY", "SPIN", "NSPN"</td> </tr> <tr> <td>CAISO_RES_ID</td> <td>Registered emergency resource IDs (use the "_I_" for the import and the "_E_" for the export sides) listed in CAISO OP 4410D Emergency Assistance Resource IDs.</td> </tr> </tbody> </table>	Token	Value	CAISO_CONTRACT	"NONE"	CAISO_PRODUCT	"ENGY", "SPIN", "NSPN"	CAISO_RES_ID	Registered emergency resource IDs (use the "_I_" for the import and the "_E_" for the export sides) listed in CAISO OP 4410D Emergency Assistance Resource IDs .
Token	Value								
CAISO_CONTRACT	"NONE"								
CAISO_PRODUCT	"ENGY", "SPIN", "NSPN"								
CAISO_RES_ID	Registered emergency resource IDs (use the "_I_" for the import and the "_E_" for the export sides) listed in CAISO OP 4410D Emergency Assistance Resource IDs .								
<p>Note: This assistance should only be until the Balancing Authority can submit their Schedules into HASP. Some BAs may be unable to submit Schedules into HASP, refer to CAISO Operating Procedure 4410B Prices - Emergency Assistance to the CAISO (Internal Only) for exceptions.</p>									

CAISO System Operator	
<p>1. Record the wheeling transactions in the ED tool of the market software (Import and Export same magnitude and opposite direction).</p> <ul style="list-style-type: none"> • Also include the following fields: <ul style="list-style-type: none"> – Verbal Flag = Y – Constraint Type = Fixed – Instruction Type = TEMR – Reason = Emergency Assistance 	
<p>Notes:</p> <p><i>In case the ED tool is <u>not</u> available, log the dispatch instruction in the operations logging tool where log "Title" is "Intertie Emergency Assistance."</i></p> <p><i>This <u>must</u> be done to allow for correct settlements.</i></p> <p><i>For instructions on how to log in the ED tool of the market software, please reference CAISO desktop INT-029 Manual Dispatch and Emergency Assistance on the Interties.</i></p>	

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CAISO System Operator
<p>2. Create two (2) manual market awards (both Import and Export sides of the wheel, same MW value, opposite direction), using the agreed upon emergency assistance resource ID(s) located in CAISO Operating Procedure 4410D Emergency Assistance Resource IDs or as provided by wheeling parties.</p> <p>Notes:</p> <p><i>For instructions on how to create manual market awards, reference CAISO Desktop Procedure INT-010 Creating Manual Market Reservations in ITS.</i></p> <p><i>If the request comes from a Balancing Authority that does <u>not</u> have a resource ID in CAISO Operating Procedure 4410D Emergency Assistance Resource IDs, consider requesting that an SC in the deficient or adjacent BA supply a Resource ID or previously used Transaction ID for the transaction.</i></p>

4. Supporting Information

Operationally Affected Parties

Shared with the Public.

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	11.5.8, 11.11.2, 26.1.4
CAISO Operating Procedure	2510 NERC Tagging Requirements 4420 System Emergency
NERC Requirements	EOP-011-4 R2, R2.1 and Attachments 1, 2.1
WECC Criterion	
Other References	

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.

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

None.

Version History


Version	Change	Date
11.3	Section 4 References: Removed EOP-002 references; added EOP-011-1 Attachment 1, 2.1. Removed version history prior to 5-years.	5/09/19
12.0	Periodic Review: Section 3.2: Removed reference to Desktop Procedure INT-018, as it retired on 11/13/2019. Minor format changes only, no content changes.	9/25/20
12.1	Section 3.2: Added verbiage about energy sharing outreach as part of summer 2022 readiness. Updated from ISO to CAISO, where applicable throughout. Removed history prior to five years.	5/01/22
12.2	Periodic Review: Updated EOP-011 references due to standard update. Updated instances of ISO to CAISO. Minor formatting and grammar edits for procedures consistency.	7/20/23
12.3	Section 2.1: Spelled out first instance of CAISO. Added "(Internal only)" with all references to 4410B procedure. Section 3.1: Added Item 3 to verify if BA is in an EEA/Transmission emergency and Item 4 to verify whether or not the energy will be tagged as C-RE and to notify the Generation Dispatcher. Section 3.2: Added Item 5 to verify whether or not the energy will be tagged as C-RE and to notify the Generation Dispatcher. References: Updated NERC EOP-011 reference version number. Minor formatting and grammar edits. Removed history prior to five years.	5/01/25

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.

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Frequency

Every three (3) Years

Appendix

4410B Prices - Emergency Assistance to the CAISO
4410D Emergency Assistance Resource IDs
4410H Glen Canyon Emergency Assistance