 California ISO	Operating Procedure	Procedure No. 4410
		Version No. 12.0
		Effective Date 9/25/2020
Emergency Assistance		Distribution Restriction: None

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Purpose

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

1. Responsibilities

ISO System Operator	Ensures reliable operation of the ISO 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 ISO, has agreements for the provision of emergency wheeling assistance.

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2. Scope/Applicability

2.1. Background

The ISO, 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 ISO 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 ISO. Emergency assistance may be available from the ISO for Balancing Authorities of the WECC Interconnection that are signatories to written contractual agreements with the ISO (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 ISO 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 ISO 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 ISO 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 ISO Operating Procedure 4410B Prices - Emergency Assistance to the ISO for exceptions.</i></p>

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Non-Adjacent Balancing Authority (N-ABA)

- Advise** the ISO 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.

***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 ISO Operating Procedure [4410B Prices - Emergency Assistance to the ISO](#) for exceptions.*


ISO System Operator

- Evaluate** conditions affecting the ability of the ISO 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.
- Verify** that supplying emergency Energy/Capacity to another BA will not decrease ISO Contingency Reserves below minimum NERC or WECC Standard requirements.

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

- Verify** that available transmission capacity exists to assure the ISO's ability to deliver the Energy associated with the Capacity if subsequently called upon.
- Agree** on the following:
 - Nature of assistance (Energy or Capacity).
 - Maximum MW value.
 - Delivery Point (export).
 - Start time, ramp time, end time.
 - General Pricing terms:
 - The price for ISO 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 ISO BA Area.
 - The price for ISO emergency Capacity assistance will be the ISO market price for the AS product (Spin or Non-Spin), plus all other charges applicable to exports from the ISO BA Area. See ISO Operating Procedure [4410B Prices - Emergency Assistance to the ISO](#) for more details.
- 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).

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

- Scheduling Coordinator/receiving BA provides the following ISO Market Award data in the E-Tag. This shall be included on the last line where the ISO 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 ISO OP 4410D Emergency Assistance Resource IDs.

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

- ISO 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 ISO.*

ISO 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 ISO market software, reference ISO Desktop Procedure [INT-029 Manual Dispatch on the Interties.](#)

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

ISO 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 ISO Operating Procedure 4420B Alert/Warning/Emergency (AWE) Guide. 2. Call Adjacent BAs (or N-ABA if necessary) within the Interconnection to discuss the ISO'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 ISO 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 ISO reliability criteria and meet minimum NERC and WECC Standards.


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

1. **Verify** that available transmission capacity exists to assure delivery of the Energy associated with the Capacity sale, if that Energy is subsequently called upon.
2. **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 ISO Operating Procedure [4410B Prices - Emergency Assistance to the ISO](#).
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/Providing BA **provides** the following ISO Market Award data in the E-Tag. This shall be included on the first line where the ISO 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 ISO OP 4410D Emergency Assistance Resource IDs .

4. **Ensure** a manual offset is made if the E-Tag cannot be submitted immediately.
 - ISO 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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ISO 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:</p> <p><i>For instructions on how to log in the ED tool of the market software, reference ISO Desktop Procedure INT-029 Manual Dispatches on the Interties.</i></p> <p><i>In case the ED tool is not available, log the dispatch instruction in the operations logging tool where log “Title” is “Intertie Emergency Assistance.”</i></p> <p><i>This must be done to allow for correct settlements.</i></p> <p>2. Create a manual market award using the agreed upon emergency assistance resource ID located in ISO Operating Procedure 4410D Emergency Assistance Resource IDs.</p> <p>Note: For instruction on how to create manual market awards, reference ISO 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 ISO 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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Emergency Assistance

Distribution Restriction: None

Adjacent Balancing Authorities (ABA)

4. **Establish** an emergency Balancing Authority-to-Balancing Authority wheel Schedule:
- **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 ISO 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 ISO 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 emergency resource IDs (use the "_I_" for the import and the "_E_" for the export sides) listed in ISO OP 4410D Emergency Assistance Resource IDs.

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 ISO Operating Procedure [4410B Prices - Emergency Assistance to the ISO](#) for exceptions.

ISO System Operator


1. **Record** the wheeling transactions in the ED tool of the market software (Import and Export same magnitude and opposite direction).
- Also **include** the following fields:
 - Verbal Flag = Y
 - Constraint Type = Fixed
 - Instruction Type = TEMR
 - Reason = Emergency Assistance

Notes:

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.

For instructions on how to log in the ED tool of the market software, please reference ISO desktop [INT-029 Manual Dispatches on the Interties.](#)

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ISO System Operator
<p>2. Create two 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 ISO 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 ISO Desktop Procedure INT-010 Creating Manual Market Reservations in ITS.</i></p> <p><i>If the request comes from a Balancing Authority that does not have a resource ID in ISO 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
ISO Operating Procedure	2510 NERC Tagging Requirements 4420 System Emergency
NERC Requirements	EOP-011-1 R2 EOP-011-1 R2.1 EOP-011-1 Attachment 1, 2.1
WECC Criterion	
Other References	

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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
10.0	Periodic Review - Minor changes for clarification.	6/30/2015
10.1	<p><u>Sections 3.1, 3.2, 3.3</u> - Updated manual Market Award sections, added e-Tagging and Interchange offset information, clarified emergency wheeling section and other minor clarifications for consistency.</p> <p><u>Sections 3.1 and 3.3</u> - Added to notes about submitting Schedules into HASP.</p>	6/20/2016
10.2	<ul style="list-style-type: none"> • Minor formatting and grammar updates. • Updated roles and titles to the new assigned roles and titles. • Section 3.1, ISO Interchange Scheduling Desk Actions: Added Steps 2 and 3. • Section 3.2, ISO Interchange Scheduling Desk Actions: Added Step 3. 	2/24/2017
11.0	Updated and verified NERC Standards and content of procedure.	4/1/2017
11.1	<p>Removed 4410C from Appendix Section, as it was retired on January 18, 2018.</p> <p>Formatting and grammar updates.</p> <p>Replaced A/S with AS.</p> <p>Replaced Peak RC with the RC.</p> <p>Replaced e-Tag with E-Tag.</p>	3/22/2018

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Version	Change	Date
11.2	Updated Sections 3.1 and 3.2 with manual offset instructions. Updated Sections 3.1 and 3.3 with instructions on what to do if unable to use resource IDs in 4410D. Updated Sections 3.1, 3.2 and 3.3 to include reference to the market software ED (Exceptional Dispatch) tool for recording Emergency Assistance schedule information, added 4410B Prices- Emergency Assistance to the ISO for more details. Added Non-Adjacent BA role and reference throughout. Clarified who should inform the RC throughout. Changed "...available transmission service..." to "...available transmission capacity..." throughout, per operator request. Minor format and grammar updates.	12/21/2018
11.3	Section 4 References: Removed EOP-002 references; added EOP-011-1 Attachment 1, 2.1. Removed version history prior to 5-years.	5/09/2019
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.	9/25/2020

5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

There are no specific criteria for reviewing or changing this document, follow instructions in Procedures 5510.

Frequency

Every **three (3)** Years

Appendix

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

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