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Appendix **14**

Purpose

Provides guidance for issuing Exceptional Dispatches (ED), making notifications, and logging of ED.

1. Responsibilities

CAISO Generation Dispatcher	• Maintains adequate Operating Reserves and enters ED Instructions into RTM. • Communicates resource requirements for any Manual Dispatch on the Interties to the Transmission Dispatcher.
CAISO Manager, Balancing Authority (BA) Operations	• Responsible for final decisions that regard the requirements for EDs.

2. Scope/Applicability

2.1. Background

The California ISO (CAISO) will make every effort to use ED only as necessary for conditions described in Section 3.1. During emergency operations, or when the CAISO is unable to maintain System Reliability by using resources available to the CAISO market, the CAISO Tariff authorizes the CAISO to arrange ED for Energy transactions with Scheduling Coordinators and Non-Scheduling Coordinators. This may include, but is not limited to, forced Shutdowns, or forced Start-Ups of Generation, Dynamic System Resources, and Participating Load. The CAISO may also enter agreed-upon transactions with Interchange Resources (Imports and Exports).

CAISO System Operators hold authority, as delegated by the Executive Officers of the CAISO, to take or direct timely and appropriate Real-Time (RT) actions necessary to ensure reliable operation of the CAISO Controlled Grid; up to and including shedding of Firm Load to prevent or alleviate System Operating Limit or Interconnection Reliability Operating Limit exceedances, and comply with NERC (North American Electric Reliability Corporation) and WECC (Western Electricity Coordinating Council) Control Performance and Disturbance Control Standards. These actions may be performed without obtaining approval from higher-level personnel within the CAISO.

2.2. Scope/ Applicability

This procedure applies to cases where an Exceptional Dispatch is necessary.

3. Procedure Detail

3.1. Exceptional Dispatch (ED)

The following provides guidance for issuing an ED in Real-Time:

An ED is a commitment or Dispatch Instruction by CAISO Operators that is not a result of the market optimization in the IFM, RUC or RTM. To the extent possible, the CAISO utilizes market solutions before issuing ED. ED to Start-Up, Shut-Down, increment or decrement a resource may only be issued (per the CAISO Tariff Section 34.11) for the following reasons:

Refer to CAISO Operating Procedure 2330C Exceptional Dispatch Instruction Type Codes for instruction type codes.

1. During a System Emergency
2. To prevent an imminent System Emergency
3. To prevent a situation that threatens System Reliability that cannot be addressed by the RTM optimization and system modeling in the required period.
4. Commitment of Long-Start Strategic Reserve Resources (LS-SRR).

   Note: *This may include future-dated EDs that verify that the LS-SRR resource can start-up, run through PMin and PMax tests as defined in Operating Procedure 5330 Resource Testing Guidelines, and return to PMin to hold there until the start of the event period when Day-Ahead bids are present to dispatch economically. See Operating Procedure 4420 System Emergency for more details.*
5. To perform AS Testing (not subject to CPM)
6. To perform pre-commercial operations testing for Generating Units (not subject to CPM)
7. To perform PMax testing (not subject to CPM)
8. To Mitigate for Overgeneration (not subject to CPM)
9. To provide for Black Start
10. To provide for Voltage Support
11. To accommodate TOR or ETC Self-Schedule changes after market close of HASP
12. To reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC (not subject to CPM)

13. In the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption

14. To reverse the operating mode of a Pumped-Storage Hydro Unit

15. Any FNM modeling limitations that arises from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which PTOs have the primary responsibility.

16. Any system conditions including threatened or imminent reliability conditions for which the timing of the RTM optimization and system modeling are either too slow, or incapable of bringing the CAISO controlled grid back to reliable operations in an appropriate time-frame, based on the timing and physical characteristic of available resources to the CAISO.

17. To perform SC initiated post-outage testing (not subject to CPM)

18. To perform SC initiated certification testing (not subject to CPM)

19. To keep a Long-Start resource (cycle time greater than 255) online to prevent a Terminal Condition.

20. To charge or hold a battery storage resource State-of-Charge (SOC) where projected peak or net peak system conditions require manual intervention to ensure high-levels of SOC is available.

    ***Note**: SOC Hold EDs must be of FIXED Instruction Type and GoTo equal to 0 MWs.*

    Additional Notes:

    - *To ensure proper settlement Start-up cost and Bid Cost Recovery (BCR) for all Exceptional Dispatches in either the Day-Ahead or Real-Time period, the ED period shall be entered as the maximum of either:*
      - *ED period length required for Operations and reliability needs*
      - *The length of Minimum Online registered in the MasterFile*
    - *The ED Tool is also utilized for other purposes. See CAISO Operating Procedure 2330C Exceptional Dispatch Instruction Type Codes for more details.*

3.1.1. ED Commitment Decision Timeframe

Reason	Prior HASP	STUC	HASP & STUC
To keep from cycling units	Yes	Yes	Yes
Flow based issues (modeled) or (not modeled)	Based on reliability needs	Based on reliability needs	Based on reliability needs
Voltage (single or multiple resource choices)	Yes, if Start-Up time requires	Yes, if Start-Up time requires	Yes, if Start-Up time requires
Stability (single or multiple resource choices) Voltage	Yes, if Start-Up time requires	Yes, if Start-Up time requires	Yes, if Start-Up time requires
Change of conditions Stability (single or multiple resource choices)	Yes, if Start-Up time requires	Yes, if Start-Up time requires	Yes, if Start-Up time requires
Change of conditions	Yes, if Start-Up time requires	Yes, if Start-Up time requires	Yes, if Start-Up time requires

3.1.2. After DAM Publishes

Take the following actions after the DAM publishes:

CAISO Manager of BA Operations, CAISO Generation Dispatcher
1. After the DAM, • **Review** the DAM results. • If additional capacity is required to meet a reliability need that is not committed in the DAM, ○ **Utilize** ED Tool to **commit** resources that meet reliability need.

3.1.3. RT ED

The following provides guidance for issuing an ED in real-time:

CAISO Generation Dispatcher

1. If an ELC resource start up is required for readiness testing,
   - **Verbally dispatch** the resource online instructions **including** start time, end time, MWs, and testing instructions.
   - **Create** an ED in the market if the start or end dates do not exceed the end of the next operating day.
   - **Utilize** the instruction-type = TEST, which indicates to the subsequent Day-Ahead run that the resource was online for readiness testing, and its initial condition should not be updated.
   - If the start or end dates exceed the end of the next operating day and the ED cannot be created in the market yet,
     - **Track** the ED details in the Generation Dispatch Turnover until the ED is created in the market.
     - **Create** a SLIC log of type "EDE Instruction for Generators" **with** the resource name, start and end periods, MWs, and testing instructions.
2. If specific resources are identified as deviating from Schedule/DOP and are contributing to the problem causing the need to **consider** an ED,
   - **Issue** an Operating Instruction to the resources that are contributing to the problem to cease uninstructed deviation, and to comply with CAISO Dispatch Instructions, and
   - **Log** the event in the Operations log.

   Note: *Directing resources to cease uninstructed deviation does not constitute an ED Instruction.*

HASP/RTM:

3. If reliability needs are not immediate or if it is expected, the resource may be picked up in a HASP run,
   - Do not **issue** Start-Up ED to units that have a start time of 60 minutes or less.
   - **Wait** for the HASP/RTM to **run** first to see if they are offered and cleared in the HASP/RTM.
4. If RT conditions dictate an ED is needed without using the RTM optimization software,
   - **Determine** if the ED is needed internal to the CAISO Balancing Authority or not.
     - If yes, **continue** to Step 5.

CAISO Generation Dispatcher

- If not, but there is a need for an Interchange resource (either an Import or Export),
  - **Communicate** with Transmission Dispatcher and
  - **Refer** to CAISO Operating Procedure 2530 Manual Dispatch on Interties.

5. **Follow** the priority in Section 3.2, Exceptional Dispatch Priority.
6. **Determine** if a Verbal or Non-Verbal ED is required.

Note: *Verbal EDs are primarily for system emergency conditions that require the SC to follow the ED instruction immediately upon verbal confirmation. A Non-Verbal ED may or may not be communicated via phone call to the SC and the ED start time is reflected in the ADS dispatch.*

Verbal ED Communication - State the following:

Verbal ED Dispatch: "The CAISO is issuing a min/max/fixed MW Verbal/ADS Exceptional Dispatch for resource X starting at XX:XX and ending at XX:XX. Please also follow all subsequent ADS instructions."

Note*: Upon completion of the verbal communication, the ED is considered issued by the CAISO for the exact start time given.*

Additional Note*: At the point of initial contact, the dispatcher may not yet know the desired end time of the instruction in this instance, the end time will be communicated via subsequent contact with the SC.*

Enter ED into RTM for the entire ED period.

Non-Verbal ED Communication:

Enter ED into RTM for the entire ED period.

If time permits, a verbal communication may be **given** as follows:
"The CAISO is informing [SC] of an Exceptional Dispatch for resource X which is forthcoming or visible in ADS. Please follow your ADS instruction."

7. If an ED needs to be edited up to T+7,
   - **Correct** the data in RTM.
   - **Create** a Generation Notes Log **with** the trade date, ED#, resource and data edited.
8. If an ED needs to be edited after T+7,
   - **Create** Log Type: Generation Desk Log and Log Title: EDE Instructions for Generators/ Corrections 96-hour **with** the trade date, ED#, resource and data edited.
9. If there is no longer a need for an ED,
   - **Contact** the SC to **inform** them to follow ADS dispatches.

CAISO Generation Dispatcher
• **Update** the end time in the RTM ED tool. 10. **Record** all Exceptional Dispatch in the ED Tool of the market application **using** the appropriate instruction type. 11. For pre-planned scheduled testing, • **See** CAISO Operating Procedure 5330 Resource Testing Guidelines. 12. If the Market Software is unavailable, • **Log** the Exceptional Dispatch Instruction in the operations logging tool (SLIC) **using** the appropriate instruction type. ***Note:*** *For pre-commercial test and resource testing guidelines, see CAISO Operating Procedure 5320 Resource Trial Operations and Test Energy Process and* 5330 Resource Testing Guidelines.

3.1.4. SOC Hold and SOC Charge ED

During projected high-load conditions of reliability concerns, EDs may be created as a last-resort to ensure a high-level of battery fleet SOC is available across peak time periods. SOC Charge EDs will efficiently charge battery resources to a target SOC by the desired end-time. If an SOC Charge ED reaches the target SOC before the desired end-time, a subsequent SOC Hold ED is created.

3.1.5. Terminal Condition

The term "Terminal Condition" describes a unique situation where a long-start resource (cycle time greater than 255 minutes) with Day-Ahead awards is economically kept online in the Real-Time Market (RTM) but must remain online until its forthcoming Day-Ahead awards to avoid violating a minimum down time. The RTM decision to economically keep the resource online may result in hours of potentially unintended and uneconomical operation of the unit.

For example, suppose a long-start resource is scheduled to shut down approaching midnight, has a Day-Ahead start-up at 07:00, and has a seven-hour Minimum Down Time. If RTM economically keeps the resource online after midnight, the Short-Term Unit Commitment (STUC) and Real-Time Pre-Dispatch (RTPD) must keep the resource online until 07:00 to honor the Minimum Down Time and forthcoming Day-Ahead start-up.

To prevent the Terminal Condition for long-start resources with Day-Ahead awards, RTM shall treat the shut-downs as binding. If the operator requires a resource to remain online, an Exceptional Dispatch would be issued with a Minimum Generation Output (MinGoto) at PMin through the period allowing the market to dispatch the unit based on economics and system needs.

3.2. ED Priority

3.2.1. Unit Commitment Priority

Take the following actions when a resource is required to meet area reliability Capacity requirements, prior to issuing an ED:

CAISO Generation Dispatcher, CAISO Manager of BA Operations
1. **Warning**: • If an ED commitment is needed, ○ Real-Time Operations personnel have decision-making authority to commit non-RA units as required to maintain system reliability. 2. **Commit** a full RR unit or partial RR unit, as appropriate, • **Considering** Capacity and/or Energy needs, economics, and/or effectiveness **with** preference to full RR if all other criteria are equal. ***Note**: Multiple units should be considered, based on Start-Up and min-Load costs.* • **If** there are no RR units available and time permits, ○ **Discuss** with the RT Operations Management Team, the need to commit a non-RA unit to meet the reliability requirement. • **If** need is immediate, ○ **Take** all necessary actions to **ensure** reliability up to and including **committing** units subject to CPM.

3.2.2. RT Generation Dispatch

The following describes RT Dispatch of RR Generation resources for the various types of units:

Type of Unit	Dispatch Description
Full RR Units (up to NQC) and Partial RR Resources	**ED** RR Capacity as required for Energy, congestion mitigation, and reserve Capacity.
Unit with RR less than its PMin	**Can be ED'd** to PMin as required for Energy, Congestion mitigation, ramping, and reserve Capacity and will not be subject to CPM designation.
Non-RR Units	**ED** Capacity that has a Day-Ahead award. (ED Capacity with Energy, AS or RUC awards from Day-Ahead is not eligible for CPM designation, ED above Day-Ahead awards is eligible for CPM designation.)

***Note**: Notwithstanding any of the above, in an emergency, or to ensure grid reliability, the Generation Dispatcher has authority to deviate from the above approval requirements and Dispatch non-RR units as required to preserve the integrity of the bulk electric system and Interconnection.*

3.2.3. Energy, Reserves and Congestion Mitigation

The following describes dispatching of Energy, reserves, and Congestion management:

Reason	Dispatch Description
Energy	• RA, partial RA, non-RA, or CPM unit Capacity dispatched as Energy in RT is done through the market application (RTM). Dispatches otherwise are through ED and any non-RA or RMR Capacity is eligible for CPM, unless the non-RA has been subject to a self-schedule or market-based commitment (i.e., DA award) or Spin/Non-Spin market award at the time of the Exceptional Dispatch.
Reserves	• RA, Partial RA, or non-RA unit Capacity dispatched as Energy in RT is done through the market application. Dispatches otherwise would be through ED. Non-RA RMR Capacity is eligible for CPM, unless the non-RA RMR Capacity has been subject to a self-schedule or market-based commitment (i.e., DA award) or Spin/Non-Spin market award at the time of the Exceptional Dispatch. • Non-RA RMR Capacity committed and/or dispatched through ED for reserve Energy will be eligible for CPM designation, unless the resource has a self-schedule or market-based commitment (i.e., DA or FMM award) at the time of the Exceptional Dispatch.
Congestion Management	• All resources can be dispatched through the market application as required for Congestion mitigation. • RA unit capacity with an effectiveness factor or determined effective by Operating Engineer (OE) study can be dispatched as needed through ED for Congestion mitigation outside of the market. • Partial RA unit Capacity greater than the RA Capacity should be dispatched through ED only after all available RA Capacity with an effectiveness factor or determined effective by OE study has been dispatched. (As conditions allow RA/RR capacity should be utilized prior to non-RA capacity.) • RA unit Capacity that has a minimal effectiveness equal to or less than 1% can be dispatched to redistribute or change Energy patterns based upon operator experience and OE studies if it does not jeopardize system security or reliability.

Reason	Dispatch Description
	• Non-RA Capacity committed and/or dispatched for Congestion mitigation through ED with an effectiveness factor or determined effective by OE study can be subject to CPM designation, unless the Capacity is on a resource, which has been subject to a self-schedule or market-based commitment (i.e., DA award) or Spin/Non Spin market award at the time of the Exceptional Dispatch; attempts should be made to utilize RUC awarded Capacity before any unit commitment of non-RA awarded Capacity. ***Note**: Effort should be utilized to determine the least cost basis for Congestion mitigation as circumstances allow. (The Market Bid Overview information and generation shift factors should be utilized as circumstances allow to determine lease cost) In Emergency Conditions, for example, decisions must be made in real-time.*

4. Supporting Information

Operationally Affected Parties

Shared with the Public.

References

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

CAISO Tariff	
CAISO Operating Procedure(s)	2330C Exceptional Dispatch Instruction Type Codes 2530 Manual Dispatch on Interties 5320 Resource Trial Operations and Test Energy Process 5330 Resource Testing Guidelines
NERC Requirements	
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.

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

Resource Adequacy (RA)	Resource Adequacy Resource: A resource that is required to offer Resource Adequacy Capacity. The criteria for determining the types of resources that are eligible to provide Qualifying Capacity may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.
RR	Reliability Requirement (RR) Capacity is the sum of RA and CPM Capacity and is required to be offered to the CAISO.
System Unit	One or more individual Generating Units and/or Loads within a Metered Subsystem controlled to simulate a single resource with specified performance characteristics, as mutually determined and agreed to by the MSS Operator and the CAISO. The Generating Units and/or Loads making up a System Unit must be in close physical proximity to each other, such that the operation of the resources comprising the System Unit does not result in significant difference in flows on the CAISO Controlled Grid.
Dynamic System Resource	A System Resource that has satisfied the CAISO's contractual and operational requirements for submitting a Dynamic Schedule, and for which a Dynamic Schedule has been submitted, including a Dynamic Resource-Specific System Resource.
CPM	Capacity Procurement Mechanism. The CPM enables the CAISO to acquire Generation Capacity through Exceptional Dispatches to: • Maintain grid reliability if Load Serving Entities fail to meet Resource Adequacy requirements. • Procured Resource Adequacy Resources are insufficient. • Unexpected conditions, i.e., significant events, create the need for additional Capacity. The CPM replaces the Interim Capacity Procurement Mechanism.

Version History

Version	Change	Date
14.0	Periodic Review: Minor format and grammar changes and removed history prior to 5-years.	12/04/20
14.1	Removed reference of 2330F, as it retired 5/14/21. Updated to CAISO in most instances and spelled out first instance. Removed history prior to five years.	10/06/22
14.2	Section 3.1: Updated Tariff section reference to 34.11. References section: Included all procedure references.	1/12/23
14.3	Periodic Review: Added information on charging or holding battery State-of-Charge (SOC). Removed history prior to five years and minor formatting.	7/01/23
14.4	Updated from Generation Desk to Generation Dispatcher, from Market Operator Desk to Market Operator, and from Shift Manager to Manger, Real-Time Operations or Manager of Real-Time Operations. Updated one instance of ISO to CAISO.	9/11/23
14.5	Removed Legacy RMR and changed reference to Non-Legacy RMR to just RMR. Note that the Oakland Units 1 and 3 remain Legacy RMR until 1/1/24. Added note that SOC Hold EDs be of FIXED Instruction Type and GoTo of 0 (zero) MWs.	11/09/23
14.6	Section 3.1: Added new #4 with “Note” including detail on LS-SRR ED commitment and removed “Note” below for Non-Legacy RMR, as it is no longer applicable.	1/25/24
14.7	Section 2.1: Removed “Legacy RMR Generating Units” since this is no longer applicable. Section 3.1: Minor update to Item 3. Section 3.1.1: Updated decision table. Minor formatting and/or grammar edits.	2/22/24
14.8	Section 3.1.3: Updated Task 6 to Determine if a Verbal or Non-Verbal ED is required and included clarification between verbal and non-verbal EDs.	5/02/24
14.9	Added new Section 3.1.5 on Terminal Condition and requirement to ED. Added Item 19 in Section 3.1 for keeping a Long-Start resource online to prevent a Terminal Condition. Minor formatting and grammar edits and removed history prior to five years.	5/22/25
15.0	Replaced Manger, Real-Time Operations or Manager of Real-Time Operations with Manager, BA Operations or Manager of BA Operations. Defined various terms, minor formatting, and grammar edits, and removed history prior to five years.	12/18/25

Version	Change	Date
15.1	Periodic Review: Section 3.1.2: Removed Market Operator from task table since CAISO BA performs these tasks and no longer applicable for the Market Operator. Minor format and grammar edits.	5/01/26

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

2330C Exceptional Dispatch Instruction Type Codes