 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	


Table of Contents

Purpose	1
1. Responsibilities	2
2. Scope/Applicability	2
2.1. Background.....	2
2.2. Scope/ Applicability	2
3. Procedure Detail	4
3.1. Emergency Preparation and Mitigation	4
3.1.1. Capacity and Energy Emergencies	6
3.1.2. Adverse Operating Conditions.....	7
3.1.3. Fuel Supply	8
3.1.4. Environmental Constraints	9
3.1.5. Notification Protocols	10
3.2. Emergency Assistance	10
3.3. Load Management Programs.....	11
3.3.1. Public Appeals.....	12
3.3.2. Government Energy Reductions.....	13
3.3.3. Reduction of CAISO Energy Use	13
4. Supporting Information	13
Operationally Affected Parties	13
References.....	13
Definitions	14
Version History	14
5. Periodic Review Procedure	15
Review Criteria & Incorporation of Changes.....	15
Frequency.....	16
Appendix	16

Purpose

This document describes the actions, roles, responsibilities, and communications for System Operator response to reasonably foreseeable emergency events.

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

1. Responsibilities

CAISO System Operator	All CAISO System Operators have dispatch authority for the CAISO Balancing Authority and the Transmission Operating area, as delegated by the Executive Officers of the CAISO, to take or direct timely and appropriate real-time actions necessary to ensure reliable operation of the CAISO Controlled Grid, up to and including shedding of Firm Load to prevent or alleviate System Emergencies. These actions may be performed without obtaining approval from higher-level personnel within the CAISO. ¹
Participating Transmission Owner (PTO)	In the context of this EOP-011-2 Emergency Plan, Participating Transmission Owners (PTOs) which are also NERC Registered Transmission Operators (TOPs) have agreed to certain responsibilities through a Coordinated Functional Registration (CFR) agreement with the CAISO. In the CFR, the PTO is designated the Transmission Entity (TE). ²

2. Scope/Applicability

2.1. Background


In accordance with NERC standard EOP-011-2, each Transmission Operator and Balancing Authority has developed Operating Plan(s) to mitigate operating emergencies and have coordinated these plans within the Reliability Coordinator area.

2.2. Scope/ Applicability

This document fulfills requirements specified by EOP-011-2, which must be included in an Emergency Operating Plan. Throughout this plan, actions contained in other CAISO operating procedure documents may be cross-referenced. This has been done to fulfill the EOP-011-2 requirements in an overarching plan while minimizing duplication between procedure documents.

¹ EOP-011-2 R1.1, R2.1

² EOP-011-2 R1.1

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	


In accordance with the Coordinated Functional Registration (CFR) agreements that the CAISO has with several TOPs in its area, the Transmission Entities (TEs) (LST, PG&E, SCE, SDG&E, TBC and VEA) and the CAISO will each develop and maintain the EOP-011-2 requirements in their respective plans as follows:

- R1 - CAISO and TE each have an operating plan, which shall include, to the extent applicable, the R1 sub-requirements.
 - R1.1 - CAISO and TE each identify roles and responsibilities for activating the plan.
 - R1.2 - CAISO and TE each have processes to prepare for and mitigate Emergencies.
 - R1.2.1 - CAISO is solely responsible for notifying the RC when communications are normal. When communications at the CAISO are unavailable, the TEs will communicate directly with the RC.
 - R1.2.2 - Split - CAISO and TE each have processes for cancellation or recall of transmission outages, the CAISO has a process for cancellation or recall of generation outages.
 - R1.2.3 - CAISO and TE each have processes to coordinate transmission system reconfiguration.
 - R1.2.4 - CAISO is solely responsible for generation redispatch.
 - R1.2.5 - TEs are solely responsible for operator-controlled manual Load shedding.
 - R1.2.6 - CAISO and TEs each have processes to address reliability impacts of cold weather conditions and any other extreme weather conditions.

- R2 - BA only, N/A to the TOPs under the CFR.

- R4 - CAISO and TE each shall address RC feedback regarding their respective EOP-011-2 plans.

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

3. Procedure Detail

3.1. Emergency Preparation and Mitigation

The CAISO's Emergency planning includes preparing for and mitigating both system-wide and local emergencies. Actions include, but are not limited to, steps taken to prevent emergencies as well as minimize impacts, stabilize affected areas and recover. Emergencies may be sudden or progressive in nature.³

To prevent an emergency, and to maintain system reliability, the CAISO may issue a notice in accordance with CAISO Operating Procedure [4420 System Emergency](#) for its BA and/or TOP area or a local area. The CAISO may request the RC to issue an Energy Emergency Alert (EEA), and the RC may declare whatever EEA level is necessary given the current or anticipated operating conditions. These notices may include Restricted Maintenance Operations (RMO), Transmission Emergency, Energy Emergency Alert (EEA) Watch, EEA 1, EEA 2, or EEA 3.


Emergencies by nature occur in real-time operations. However, it is possible for an anticipated or real-time event to affect next day and/or future operations. Operations are planned to assure that all transmission facilities follow the RC's SOL Methodology. Regardless of the time frame, if conditions call for it, action plans will be developed to minimize impacts and sufficiently mitigate to not cause a burden on the interconnection. The action plans will be shared with the RC and other affected parties via phone, the CAISO's **Operations Notification System (ONS)** and/or the RC's Grid Messaging System (GMS). If needed, the CAISO would make requests for Emergency Assistance, activate Load Management programs, and implement Emergency Manual Load Shedding as warranted to maintain reliability criteria.

To declare and implement emergency conditions for the CAISO's BA and/or TOP area, the CAISO System Operators shall follow a checklist related to the 4420 procedure called [4420B Emergency Guide](#). This checklist details steps that may need to be taken to prevent and/or mitigate an emergency. The order of the actions taken may vary due to system conditions or other operational issues. It may be necessary to skip actions due to the severity of the situation. To the extent possible, and when prudent, actions that were skipped may be implemented at a later time or date. For example, the CAISO may take one or more of the following actions in accordance with procedures 4420/ 4420B:

- Notify the RC when current or anticipated conditions could have/ have had significant impacts to Bulk Electric System operations, including a Capacity or Energy Emergency.⁴
- Issue applicable notices via the CAISO's **ONS** and the RC's GMS.

³ EOP-011-2 R1.2, 2.2

⁴ EOP-011-2 R1.2.1, R2.2.1

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

- Cancel or recall outages, or reconfigure transmission system.⁵
 - In anticipation of marginal system conditions, either system-wide or within local areas served by specific transmission or generation facilities, declare Restricted Maintenance Operations (RMO) periods to limit the risk to remaining Bulk Electric System facilities.
 - The CAISO maintains the authority to cancel or postpone any or all or work to preserve overall System Reliability, both prior to Real-Time and during Real-Time operations.
 - The CAISO will coordinate with PTOs to reconfigure the transmission system, if necessary.
- In addition to declaring RMO periods, the CAISO will also manage generating resources through the following types of activities:⁶
 - Coordinating with Scheduling Coordinators and gas companies or manage fuel supply and inventory concerns, per CAISO Operating Procedure [4120 Gas Transmission Pipeline System Limitations or Outages](#).⁷
 - Redispatch generation⁸
 - Exhaust available resources (except for Spin/Non-Spin) through the market.
 - Utilize Exceptional Dispatch (out of market) to mitigate as necessary.
 - Utilize Manual Dispatch on the Interties to mitigate as necessary.
 - Utilize Spinning and Non-Spinning Reserve resources.
 - Request effective available Energy from Metered Sub System (MSS) resources, if necessary.
- Utilize load management programs⁹
 - Utilize Demand Response resources.
 - Utilize emergency Utility Distribution Company (UDC) Interruptible Load (Non-Firm) programs.
 - Reduce participating pump load as available.
 - Coordinate with Investor Owned Utilities and Privately Owned Utilities, which may trigger their Emergency Load Reduction Programs (ELRP) and California State Emergency Programs (CSEP) to reduce load based on CAISO emergency declarations.


⁵ EOP-011-2 R1.2.2, R1.2.3

⁶ EOP-011-2 R2.2.3

⁷ EOP-011-2 R2.2.3.2

⁸ EOP-011-2 R1.2.4

⁹ EOP-011-2 R1.2.5


 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

- In order to maintain Contingency Reserves, coordinate with Load Serving Entities to determine if firm load that can be removed in 10 minutes can be counted as Contingency Reserves.
- If manual load shedding may be required, then request that the RC declare Energy Emergency Alert 3 (EEA 3) for the CAISO, either 1) due to local Transmission Emergency or 2) CAISO BA deficiency.
- Utilize Firm Load interruption, if necessary.
- Request emergency assistance¹⁰
 - If transmission is available to the affected area, request that the RC
 - Declare Energy Emergency Alert 2 (EEA 2) for the CAISO due to either 1) local Transmission Emergency for the affected area or 2) the CAISO BA, and
 - Issue a notice that Emergency Assistance may be required by the CAISO to mitigate conditions in the affected area, and
 - Request that interconnected Balancing Authorities determine the amount of assistance they are able to provide to the affected area.
 - If transmission is available, request emergency assistance from adjacent Balancing Authority Areas as necessary to mitigate conditions in the affected area. Refer to CAISO Operating Procedure [4410 Emergency Assistance](#) for appropriate steps.
- Maintain hourly updates to the RC until EEA 2 or 3 is ended.
- When conditions stabilize, the CAISO will back out of each step performed and notify the RC and other entities via the **ONS** and/or GMS.

3.1.1. Capacity and Energy Emergencies

The CAISO maintains and, in case of deployment, restores Contingency Reserves to the levels specified in WECC Standard BAL-002-WECC-3. Insufficient generating capacity may be experienced in real-time or recognized in the operations planning time frames. Regardless of the time frame, both require an action plan be developed with sufficient mitigation as to not cause a burden on the interconnection. Additionally, adequate reserves must be maintained to adhere to Control Performance Standard (CPS), while at the same time being prepared to adequately recover from loss of resources due to Balancing Contingency Events and while not overloading transmission elements or facilities. During a system emergency, the CAISO System Operators shall immediately take action to restore the real and reactive power balance.

¹⁰ EOP-011-2 R2.2.2

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

In accordance with CAISO Operating Procedure [4420 System Emergency](#), in anticipation of marginal generating capacity, the CAISO will take action to preclude insufficient generating capacity with declarations of Restricted Maintenance Operations periods, thereby limiting the activities that may put resources at greater risk. In the Day-Ahead timeframe by 1500, the CAISO may request Reliability Coordinator to issue an EEA Watch declaration if necessary.

The CAISO may request Reliability Coordinator to issue an EEA 1 or 2, depending upon the circumstances, when the real-time analysis is forecasting that one or more hours may be energy deficient with all available resources in use or forecasted to be in use, and is concerned about sustaining its required Contingency Reserves. Such declaration will also allow the CAISO to trigger emergency demand response programs and other out-of-market programs.

The CAISO will notify the Reliability Coordinator if all available resources are committed or are in use. The CAISO will take actions as detailed in CAISO Operating Procedure [4420 System Emergency](#) and the checklist [4420B Emergency Guide](#) to restore or maintain required Contingency Reserves. The RC will determine the EEA alert level depending upon the circumstances.


The CAISO will notify the Reliability Coordinator when it has taken all actions listed above and can no longer provide its expected energy requirements and is energy deficient. The CAISO will take actions as detailed in Operating Procedure [4420 System Emergency](#) and the checklist [4420B Emergency Guide](#) to restore or maintain required Contingency Reserves. The RC will determine the EEA alert level depending upon the circumstances.

The CAISO will notify the Reliability Coordinator when CAISO is unable to meet minimum Contingency Reserve requirements, forecasting an energy deficiency with all available resources in use for the specified time period when firm load interruption is imminent or in progress. Manual load shedding may be imminent or may already be underway. The CAISO will take actions as detailed in Operating Procedure [4420 System Emergency](#) and the checklist [4420B Emergency Guide](#) to mitigate or otherwise manage the Emergency. The RC may consider declaring an EEA 3, depending upon the circumstances. If time allows, the CAISO will utilize a Load Shedding Tool to calculate pro rata load shedding shares across the entire CAISO Balancing Authority or only for an affected area. The fixed pro rata percentages and calculation methodology are included in CAISO Operating Procedure [4510A Load Shed Calculation Guideline](#).

3.1.2. Adverse Operating Conditions

In accordance with CAISO Operating Procedure [4110 Operations Emergency Preparation Notifications and Reporting](#), the CAISO System Operators will take steps to prepare whenever a potential adverse operating condition exists. Preparation and actions related to cold weather and any other extreme weather conditions are similar to those considered for other natural disasters such as fires, floods, earthquakes and tsunamis.¹¹

¹¹ EOP-011-2 R1.2.6, 2.2.9

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

In collaboration with appropriate personnel, the CAISO System Operators will assess the potential risk to the Bulk Electric System based on the information available. During the assessment, they will consider the following:

- Lines or equipment that may be threatened
- Location impacted
- Estimated time the event will occur
- Ability to sustain the loss / recover
- Condition of the BES
- Damage to the BES
- Resource availability for dispatch, estimated time to return (ETR) for generation tripped or forced offline

The CAISO will communicate with the RC and affected parties, and will prepare for credible BES failures identified in the risk evaluation or in response to a request or instructions from the RC. The CAISO will monitor available information regarding the status of the event and continue to evaluate the risk and take appropriate actions as needed. The CAISO will take mitigating actions as needed in accordance with CAISO Operating Procedure [4420 System Emergency](#) by utilizing the checklist [4420B Emergency Guide](#), and other area specific procedures as applicable.


3.1.3. Fuel Supply

The primary fuel supply and inventory concern in California is natural gas. Water for hydro-generation can also be a concern seasonally and during drought years.

Gas supplies and inventory are managed by the respective Generator Operator (GOP) and gas transmission operator, along with the Scheduling Coordinator (SC) in communication with the CAISO. The CAISO runs a Day-Ahead Market Analysis that helps predict fuel usage. The CAISO shares the output of this hourly report to the respective gas transmission operators to manage burns in their pre-defined gas transmission zone. The CAISO is in ongoing communication with the gas transmission operator concerning fuel supply or inventory. CAISO Operating Procedure [4120 Gas Transmission Pipeline System Limitations or Outages](#) describes roles, communications and actions related to gas transmission reductions or curtailments and impacts to the electric system in planned and immediate timeframes.

Natural gas transmission pipelines are not subject to the jurisdiction or authority of CAISO, but are primarily regulated by state and/or federal regulatory agencies. Therefore, Natural Gas System Operator cooperation with CAISO procedures is voluntary, does not operate as a waiver or consent to CAISO jurisdiction. In accordance with CAISO Operating Procedure

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

[4120 Gas Transmission Pipeline System limitations or Outages](#), the CAISO will coordinate with the applicable Natural Gas Transmission Pipeline System Operator concerning gas limitations imposed on generation resources to ensure both gas and electric reliability to the greatest extent possible. This shall include coordination of necessary limitations and contingency plans development during projected extreme weather conditions to ensure the availability of the natural gas-fired generation resources.¹²

Fuel for generators (either from normal or from remote sources) systems is the responsibility of and arranged by the GOP. The GOP, through coordination with their SC, is also responsible to advise the CAISO should fuel availability become a concern. In that case, the CAISO may assist in coordinating dispatch of resources to conserve fuel. When there is a natural-gas limitation in a region, which requires reduction of fuel supply generator resource(s), the Natural Gas Transmission Pipeline System Operator will communicate with the GOP. The Natural Gas Transmission Pipeline System Operator will normally also communicate with the CAISO to provide the same information as well as availability of gas supply to the extent known. The CAISO can work with SCs to determine if a different generation output pattern is necessary due to new gas limitations. If multiple resources are impacted in an area, and if specific generators may need to reduce gas consumption, then the CAISO will take actions to redispatch generation in other areas.¹³

Two generators in the CAISO BA have dual fuel capabilities. They have the option to utilize this fuel switching ability in times of low fuel supply or inventory as defined by the GOP. A list of dual fuel capable units is maintained in CAISO Operating Procedure attachment [4610A Black Start and Dual Fuel Units](#).¹⁴

3.1.4. Environmental Constraints

During emergencies, including insufficient generating capacity, regional reserve deficiencies, or other system emergencies, Real-Time Operations will issue Emergency Operating Instructions to generator(s) as needed to maintain system reliability.


When consecutive high load - short supply days are anticipated, the CAISO will coordinate with regulatory agencies, including CEC, CPUC CA Governor’s office, and the DOE to assess which resources may have additional energy, which is not normally available for CAISO dispatch. For example, some generators have limited output under normal conditions, but may be allowed to operate at higher output levels if there is a DOE 202 Order or a Governor’s Office Executive Order to relax these requirements. The CAISO Regulatory Contracts, Regulatory Affairs and Legal teams will work with CAISO Operations to coordinate these types of orders and with generators to arrange this type of additional emergency energy.¹⁵

¹² EOP-011-2 R 2.2.9.

¹³ EOP-011-2 R2.2.3.2

¹⁴ EOP-011-2 R2.2.3.3

¹⁵ EOP-011-2 R2.2.3.4

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

3.1.5. Notification Protocols

Information regarding current or anticipated emergency operations will be disseminated as soon as practicable to the RC, affected parties, adjacent BAs, and TOPs. Notifications should not delay the urgent stabilization of dynamic conditions. Therefore, in extreme circumstances, actions required due to the nature and extent of the emergency may dictate how quickly notification can be made.¹⁶

Notifications to applicable operating entities may be made through various methods:

- The CAISO **ONS** Messaging System notifies all subscribing entities simultaneously of emergency declarations through email, a mobile application, and the Market Notification System (MNS), and are posted on OASIS.
- The GMS tool may be used to send applicable emergency communications to adjacent BAs and TOPs. Merchants also have the option to subscribe to the RC West public email notices, which include EEA declarations.
- Notifications may also be made directly by telephone.


Within the CAISO BA and TOP area, Participating Transmission Owners (PTO), Utility Distribution Companies (UDC), and Metered Sub-Systems (MSS) maintain a single point of contact with the CAISO through which routine and emergency communications will take place. The single point of contact for the UDC is through the responsible Transmission Operator (TOP). Unless specifically indicated otherwise, emergency communications between the CAISO and the UDC will be through the TOP. Routine and emergency contact with Generator Operators (GOP) is through their assigned Scheduling Coordinators (SC). In emergencies, in instances when communication cannot be established through the SC, the CAISO may contact the GOP directly.

Notification to the North American Electric Reliability Corporation (NERC), Federal Energy Regulatory Commission (FERC), Department of Energy (DOE), and other interested parties will be accomplished within defined timelines as per CAISO Operating Procedure [4110 Operations Emergency Preparation Notifications and Reporting](#).

3.2. Emergency Assistance

At times, the need to supply or receive emergency assistance may arise. After assuring sufficient energy and capacity is available for current and forecasted loads, reserve margins, and mitigation efforts the CAISO shall make every attempt to supply Emergency Assistance to energy deficient entities. Likewise, after exhausting all possible internal resources the CAISO shall request Emergency Assistance from adjacent Balancing Authorities (BA).

¹⁶ EOP-011-2 R1.2.1, 2.2.1

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

To facilitate Emergency Assistance, the CAISO and adjacent BAs have mutually agreed upon and signed agreements called Interconnected Control Area Operating Agreements (ICAOAs) or Adjacent Balancing Authority Operating Agreements (ABAOA). A list of these agreements is located on the CAISO's public website at:

[http://www.caiso.com/Documents/Guide-InterconnectedControlAreaorInterconnectedBalancingAuthorityAreaOperatingAgreements_ICAOAorIBAOA .pdf](http://www.caiso.com/Documents/Guide-InterconnectedControlAreaorInterconnectedBalancingAuthorityAreaOperatingAgreements_ICAOAorIBAOA.pdf).

To implement Emergency Assistance the CAISO System Operators will follow Operating Procedure [4410 Emergency Assistance](#), which contains detailed provisions for how the CAISO provides Emergency Assistance to other BAs, and for how the CAISO receives Emergency Assistance from other BAs.

3.3. Load Management Programs

The PTOs each have the responsibility to plan for operator-controlled manual Load shedding within their areas that minimizes the overlap with automatic Load shedding and is capable of being implemented in a timeframe adequate for mitigating an Emergency. The CAISO coordinates with the PTOs to plan and implement Load shedding.

Load shedding may occur automatically or manually. Automatic load shedding may be further categorized as underfrequency or undervoltage, while manual load shedding may include interruptible or firm load. Automatic Load shedding may occur, and depending on the severity of the conditions, additional manual load shedding may be required. The nature and magnitude of the event causing the load shed, manually or automatically, may greatly influence additional load shedding and subsequent restoration actions.

Automatic Load Shedding


For underfrequency Load shedding, the CAISO subscribes to the WECC Off-Nominal Frequency Load Shedding and Restoration Plan specifications. The CAISO will coordinate and facilitate development of undervoltage load shedding for identified load pockets within the CAISO BA as needed.

Manual Load Shedding

Interruptible Loads

Reliability Demand Response Resources (RDRR) are use-limited demand resources that can participate economically in the Day-Ahead market and as emergency demand response resources in the Real-Time Energy market. RDRR resources that participate economically in the Day-Ahead must make any remaining capacity not committed in the Day-Ahead available to the CAISO in real-time to alleviate System Emergencies. Once the System Emergency has

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

been resolved, RDRRs are deactivated from real-time participation in the market (until the next emergency), and can only participate economically in the Day-Ahead until then.

The UDC Interruptible Load programs were developed through arrangements with subscribing end-use customers taking service under special UDC tariffs approved by the California Public Utilities Commission (CPUC). These programs may be called by the UDCs per their retail program rules or by CAISO System Operators in the Day-Ahead, and/or in Real-Time upon entering an EEA or a Transmission Emergency. UDC Interruptible Load programs may require 30 minutes or more to fully implement, and therefore are most effective when their anticipated use is coordinated with the UDC in advance.

Operator Controlled Manual Load Shedding

If an IROL is exceeded, the CAISO will coordinate with the RC. The CAISO System Operators will dispatch sufficient effective generation resources to prevent SOL exceedances. During an emergency, if there are not sufficient resources available to mitigate the identified IROL, the CAISO System Operators will implement a load reduction plan in sufficient amount and time before system separation or collapse occurs. Depending on the time available to act, the CAISO will implement Interruptible load reduction programs and/or Emergency Manual Load Shedding to prevent an IROL violation.


CAISO Operating Procedure [4510 Load Management Programs and Underfrequency Load Shedding](#) provides more background information about these programs. If underfrequency load shedding has occurred or when system conditions require manual load shedding, the CAISO System Operators will take actions in accordance with Operating Procedure [4420 System Emergency](#) and utilize the checklist [4420B Emergency Guide](#).

3.3.1. Public Appeals

Flex Alerts are part of an educational and alert program that informs consumers about how and when to conserve electricity during heat waves and other challenging grid conditions. A Flex Alert is most effective when issued a day in advance of when conservation is needed so consumers can adjust their electricity usage ahead of time such as adjusting thermostats before leaving for work.

However, grid emergencies can happen suddenly, so if conservation is needed, the CAISO will issue a Flex Alert with little or no advance notification. When possible, Flex Alerts are targeted to the local areas where the system is stressed. Real-Time Operations will determine if a Flex Alert would be a useful mechanism given the planned or current operating conditions, and will coordinate with the CAISO External Affairs Joint Information Center (JIC) Lead to communicate externally. If needed, the CAISO will issue a “Flex Alert” notice using available communications channels (ONS, social media, website, email, etc.).¹⁷

¹⁷ EOP-011-2 R2.2.4

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

3.3.2. Government Energy Reductions

When a Flex Alert is called, state governmental agencies have a plan in place to reduce energy consumption in facilities. The CAISO will issue a Flex Alert notice as per CAISO Operating Procedure [4420B Emergency Guide](#), which is consistent with its parent procedure [4420 System Emergency](#). In turn, the External Affairs Joint Information Center (JIC) Lead, Public Information Officer and Government Affairs representatives will coordinate with government agencies to notify the public through the media.

In addition, during certain energy emergency conditions, the California State government, through the Department of General Services, has plans in place to reduce electrical usage in state offices and facilities to a minimum, including dimming lights, reducing heating and cooling load, reducing pumping, curbing various electrical processes, and reducing nonessential computer use.¹⁸

3.3.3. Reduction of CAISO Energy Use

During operations of insufficient generating capacity, the CAISO facilities will reduce electrical usage to a minimum including dimming lights, reducing heating and cooling load, and reducing nonessential computer use.¹⁹

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	Tariff Section 7
--------------	------------------

¹⁸ EOP-011-2 R2.2.5

¹⁹ EOP-011-2 R2.2.6

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

CAISO Operating Procedure	4110 Operations Emergency Preparation Notifications and Reporting 4120 Gas Transmission Pipeline System Limitations or Outages 4410 Emergency Assistance 4420 System Emergency 4420B Emergency Guide 4610A Black Start and Dual Fuel Units
NERC Requirements	EOP-011-2 R1, R2, R4 and all sub requirements TOP-001-5 R8
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:

None.

Version History

Version	Change	Date
8.0	Annual Review: Section 3.1.4: Replaced entire paragraph. Minor grammar and format updates. Updated references of Peak RC to RC.	8/20/18
9.0	Annual Review: Section 3.3.3: In last paragraph, replaced WECC Operating Reserve requirement with ISO Spinning Reserve requirement. Replaced all instances of RMT with Reliability messaging system. Minor format and grammar updates. Added document control statement in footer.	7/18/19

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

Version	Change	Date
10.0	Annual Review - Section 2.2: Added LST to list of TEs under CFR. Section 3.1.1: Updated for consistency with OP 4420B. Section 3.3.1: Updated Flex Alert coordination. References: Clarified NERC requirements.	7/07/20
10.1	Section 3.3.2: Minor updates made for State plans to reduce. Minor format and grammar updates.	8/10/20
11.0	Annual Review: Added references to EEA Watch and EEA Alerts throughout, added ELRP and CSEP programs. Moved NERC references into footnotes. Updated references to 4610A procedure title. Removed all references of procedure 4120C, as it retired 12/18/20. Replaced ISO with CAISO throughout. Removed history prior to five years.	10/14/21
11.1	Removed references to Alert, Warning, and Staged Emergencies. Updated procedure references throughout. Removed history prior to five years. 7/14/22 - Errata Changes: Version 11.1 update should be noted as “Annual Review” and correction made to incorrect link in Section 3.2.	5/01/22
11.2	Annual Review: Minor formatting only, no content changes.	11/03/22
11.3	Adding additional details for cold weather preparedness and updating EOP-011 references.	4/01/23
11.4	Annual Review: Replaced ERC with External Affairs JIC Lead, removed ERC from Government Reduction section. Removed history prior to five years. Minor format and grammar edits.	9/05/23
11.5	Replaced AWE notification system with Operations Notification System (ONS).	11/01/23


5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

This Plan is reviewed no less frequently than once per calendar year, no later than 15 months from last update. The review may be conducted through a collaborative process including Operationally Affected Parties. The process includes an appropriate review of the NERC and WECC mandatory Reliability standards.

- In accordance with EOP-011-2 R1 and R2, the CAISO must submit this plan to the RC for review whenever it is updated.

*This document is controlled when viewed electronically.
When downloaded or printed, this document becomes UNCONTROLLED.*

 California ISO	Operating Procedure	Procedure No.	4100
		Version No.	11.5
		Effective Date	11/01/23
System Operations Emergency Plan		Distribution Restriction: None	

- Per R3, the RC shall review the plan within 30 calendar days of receipt. The RC will notify the CAISO of the results of the review, specifying any time frame for resubmittal if revisions are identified.
- Per R4, the CAISO shall address any revisions identified by the RC pursuant to R3 and resubmit the plan to the RC within the specified time period.

Frequency

Annual

Appendix

No references at this time.