 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		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	3
3.1. Order of Steps	3
3.2. CAISO Communications Regarding Forecasted System Conditions.....	3
3.3. Flex Alert	3
3.4. Restricted Maintenance Operations.....	4
3.5. Transmission Emergency	5
3.6. Energy Emergencies within CAISO Balancing Authority Area.....	7
3.6.1. Alert Notice	7
3.6.2. Warning Notice	8
3.6.3. Emergency Stage 1	11
3.6.4. Emergency Stage 2	12
3.6.5. Emergency Stage 3	14
3.7. Emergency Downgrade	15
4. SUPPORTING INFORMATION	16
Operationally Affected Parties	16
References.....	16
Definitions	16
Version History.....	18
5. PERIODIC REVIEW PROCEDURE	20
Review Criteria & Incorporation of Changes.....	20
Frequency	21
APPENDIX.....	21

Purpose

This procedure outlines the steps that may be taken to prevent a System Emergency and to stabilize the system should a System Emergency occur.

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

1. Responsibilities

CAISO Shift Manager	Directs timely and appropriate Real-Time actions necessary to ensure reliable operation of the CAISO Controlled Grid and Balancing Authority Area.
CAISO System Operator	Ensures reliable operation of the CAISO Controlled Grid and Balancing Authority Area.
Participating Transmission Owner (PTO)	Maintain a single point of contact with CAISO through their Power Grid Operations Centers and are subject to Operating Instructions issued by CAISO.
Utility Distribution Company (UDC) Metered Subsystem (MSS) Company	Comply with all operating instructions from CAISO concerning the management of System Emergencies, as per the CAISO Tariff.
Scheduling Coordinator (SC) Participating Generator (PG)	Follow all operating instructions and is subject to operating instructions issued by CAISO during a System Emergency and any circumstances in which CAISO considers that a System Emergency is imminent, anticipated or threatened, as per the CAISO Tariff.

2. Scope/Applicability


2.1. Background

Power system disturbances typically occur due to the loss of generating equipment, transmission facilities, or unexpected load changes. These disturbances may affect the reliable operation of the California ISO (CAISO) Controlled Grid, CAISO Balancing Authority Area, and the WECC interconnected Bulk Electric System. Severe system disturbances generally result in critically loaded transmission facilities, significant frequency and voltage deviations, high or low voltage conditions, or stability problems.

2.2. Scope/ Applicability

This procedure outlines the steps that may be taken to prevent a System Emergency and to stabilize the system should a System Emergency occur. A System Emergency can consist of a Transmission Emergency or an Energy Emergency, and may be sudden or progressive in nature. To prevent a System Emergency and to maintain system reliability, CAISO may

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

issue a transmission emergency, restricted maintenance operations, alert, warning notice, or staged emergency declarations.

3. Procedure Detail

3.1. Order of Steps

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.

3.2. CAISO Communications Regarding Forecasted System Conditions

CAISO Grid Operations will strive to communicate forecasted system conditions with as much time as possible through a variety of methods. These include, but not limited to, D+7 to D+2 resource adequacy forecast published on CAISO public website, heat wave bulletin, and other media. System conditions can rapidly change in real-time and any forecasted conditions are estimated based on available data.

3.3. Flex Alert

Flex Alerts are part of a consumer educational and alert program for voluntary conservation of electricity during heat waves and other challenging grid conditions.


For more information visit <http://www.flexalert.org>.

A Flex Alert is most effective when issued a day or more in advance of when conservation is needed so consumers can adjust their electricity usage ahead of time (i.e., adjusting thermostats before leaving for work).

However, grid emergencies can happen suddenly, so if conservation is needed, CAISO can issue a Flex Alert with little or no advance notification. When possible, Flex Alerts are targeted to the regional or local areas where the system is stressed.

CAISO Grid Operations & CAISO Communications
<ol style="list-style-type: none"> 1. Grid Operations management will determine if a Flex Alert is a useful mechanism given the planned or current operating conditions. 2. An AWE notice will be issued using AWE Notification System. 3. If possible, Grid Operations will notify CAISO Corporate Communications at least an hour prior to issuing a Flex Alert.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

CAISO Grid Operations & CAISO Communications
4. AWE notice is issued by Shift Manager or their designee. 5. If needed, CAISO Corporate Communications will issue a Flex Alert related communications using available communications channels (Press release, social media, website, email, etc.). 6. Notify the Emergency Response Coordinator and others as needed.

3.4. Restricted Maintenance Operations


Restricted maintenance operations apply to all pre-scheduled Outages and/or any planned maintenance.

Restricted maintenance operations apply to PTO Control Centers, Scheduling Coordinators and Participating Generators, for the hours identified in the notice. Restricted maintenance operations are applied for the shortest duration necessary to meet the reliability concern.

CAISO maintains the authority to cancel or postpone any/or all work to preserve overall System Reliability, both prior to Real-Time and during Real-Time operations timeframes. CAISO will declare restricted maintenance operations when deemed necessary.

CAISO System Operator
1. Issue a Restricted Maintenance Operations or a Generation Restricted Maintenance Operations Notice using the AWE Notification System. 2. Notify the RC by phone. 3. Notify PTOs and other affected Entities as needed. 4. Notify the "ALL RELIABILITY" distribution list via the Grid Messaging System (GMS). 5. Notify CAISO Emergency Response Coordinator (ERC) regarding system conditions. 6. Consider postponing outages or returning equipment to service early. 7. Cancel outages as needed to maintain system reliability. 8. Only approve outages that will have no negative or potential negative effect on system reliability. 9. Utilize Exceptional Dispatch to mitigate as necessary. 10. Utilize Manual Dispatch on the Interties to mitigate as necessary. 11. Continue to monitor the system. 12. If conditions deteriorate, consider issuing an Alert, Warning, Transmission Emergency, or Staged Emergency notice. 13. When conditions allow, <ul style="list-style-type: none"> • Back out of each step performed, • Notify the RC by phone <u>and</u>

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

CAISO System Operator
<ul style="list-style-type: none"> • Terminate the Restricted Maintenance Operations. <p>14. Refer to other CAISO Operating Procedure 4420 System Emergency attachments as needed.</p>

Scheduling Coordinator (SC), Participating Generator (PG), Participating Transmission Owner (PTO) Control Centers
<p>1. Obtain permission from CAISO to proceed with pre-scheduled or planned work, regardless of whether prior approvals were obtained from CAISO.</p> <p><i>Note: Outages postponed due to the issuance of a restricted maintenance operations notice may be considered for re-scheduling outside of the previously pre-scheduled Outage hours and/or outside of the hours of restricted maintenance operations.</i></p>

3.5. Transmission Emergency


CAISO may declare a Transmission Emergency for any event that threatens, harms, or limits the capabilities of any element of the transmission grid and overall grid reliability. Declaration of a Transmission Emergency may be caused by events including but not limited to:

- Transmission line/path overloads or loss (including exceeding Interconnection Reliability Operating Limits (IROL) and System Operating Limits (SOL))
- Transformer overloads or loss
- Instability
- Frequency deviations or decay
- Voltage that exceeds or falls below predetermined limits
- Fires, earthquake, severe weather, sabotage, civil unrest, terrorism

The CAISO System Operator may take, but is not limited to, the following actions in any order needed, and to the extent necessary, to prevent, mitigate or otherwise manage a System Emergency:


CAISO System Operator
<ol style="list-style-type: none"> 1. Issue a Transmission Emergency notice using the AWE Notification System. 2. Notify the RC by phone; include current and projected conditions. 3. Notify PTOs and other affected entities as needed. 4. Notify the “ALL RELIABILITY” distribution list via the GMS. 5. Consider postponing outages or returning equipment to service early. 6. Cancel outages as needed to maintain system reliability. 7. Only approve outages that will have no negative or potential negative effect on system reliability.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

CAISO System Operator
<p>8. Exhaust available resources (except for Spin/Non-Spin) through the market.</p> <p>9. Utilize Exceptional Dispatch to mitigate as necessary.</p> <p>10. Utilize Manual Dispatch on the Interties to mitigate as necessary.</p> <p>11. Enable RDRRs in the market, globally or by region as needed, to make them available for dispatch through the market.</p> <p>12. Notify the PTO Transmission Control Centers that RDRR resources have been enabled and available for dispatch through the market.</p> <p>13. Consider if use of one or more State Power Augmentation Program (SPAP) resources could help mitigate a system wide or local area Transmission Emergency.</p> <ul style="list-style-type: none"> • If one or more SPAP generators can be utilized, issue Exceptional Dispatch instructions to the SCs each generator. <p>14. If 100 MW or more of emergency Demand Response is dispatched,</p> <ul style="list-style-type: none"> • Notify CAISO's ERC to file DOE OE-417. <p><i>Note: If the ERC is unavailable, CAISO Shift Manager or designee has to file the OE-417. Refer to CAISO Operating Procedure 4110A DOE, NERC and WECC Significant Event Reporting Requirements.</i></p> <p>15. Conduct a blast call with the PTOs Transmission Control Center (PG&E, SCE, and SDG&E) to quantify available Demand Response and UDC Interruptible Load (Non-Firm) programs, <u>and</u> notify the PTOs of possible implementation.</p> <p>16. Call on out-of-market Demand Response programs and UDC Interruptible Load (Non-Firm) programs (amount varies). This requires up to a 60-minute notification.</p> <ul style="list-style-type: none"> • Refer to CAISO Operating Procedure 4510 Load Management Programs and Underfrequency Load Shedding and its attachments. <p>17. Reduce participating pump load as available.</p> <p>18. Utilize Operating Reserve (Spinning and Non-Spinning Reserve).</p> <p>19. Dispatch effective Legacy RMR Units <u>and</u></p> <p>20. Notify market participants accordingly.</p> <p>21. If Legacy RMR units are assigned Operating Reserve,</p> <ul style="list-style-type: none"> • Send the following message: <p style="padding-left: 40px;"><i>“The CAISO is currently utilizing Legacy RMR units to provide additional Operating Reserve.”</i></p> <p>22. Request effective available Energy from MSS resources, if necessary.</p> <p>23. Utilize Firm Load interruption, if necessary.</p> <p>24. Issue a Transmission Emergency – Firm Load Interruptions notice using the AWE Notification System.</p> <p>25. Advise PTOs that they can take local control of Generating Resources to prevent islanding or to stabilize islands.</p> <ul style="list-style-type: none"> • This may require PTOs to suspend the FERC standard of conduct.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

CAISO System Operator
26. When conditions stabilize, <ul style="list-style-type: none"> • Back out of each step performed, • Notify the RC by phone, the “ALL RELIABILITY” distribution list via the GMS, <u>and</u> • Terminate the Transmission Emergency – Firm Load Interruptions and the Transmission Emergency.

3.6. Energy Emergencies within CAISO Balancing Authority Area

CAISO System Operators will take appropriate steps during Energy Emergencies as described below.


3.6.1. Alert Notice

CAISO issues an Alert notice by 15:00 PPT the day before when the Day-Ahead analysis is forecasting that one or more hours may be energy deficient. System conditions may indicate EEA Watch declaration is necessary.

The CAISO System Operator may take, but is not limited to, the following actions in any order needed:

CAISO System Operator
<ol style="list-style-type: none"> 1. Issue an Alert notice using the AWE Notification System. 2. Notify the RC by phone and discuss possible EEA Watch declaration. 3. Notify “ALL RELIABILITY” distribution list via the GMS. 4. Notify ERC regarding system conditions. 5. Conduct a blast call with PTOs and, if needed, all UDC/MSS entities. 6. Request through an MNS market message that SCs bid in any additional available capacity to CAISO. 7. Issue a “Flex Alert” notice using the AWE Notification System, if needed, <u>and</u> 8. Notify CAISO Communications. 9. Evaluate need for Restricted Maintenance Operations (RMO). 10. Coordinate with CAISO off-shift management to verify with PTO Transmission Control Center management whether they plan to utilize Emergency Load Reduction Program (ELRP) (only active during months May – October). 11. Coordinate with CAISO off-shift management to issue a System Status Update email to inform affected entities of detailed Operating Plan for day-ahead.

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

Utilities and Scheduling Coordinators
<p>1. CAISO Grid Operations Management will coordinate with the ELRP Board (Energy Load Reduction Program) so the utilities can consider activating ELRP for the next day.</p> <p><i>Note: If activating, the utility DR programs will provide MW estimates on their updated Daily DR Reports and will notify their respective customers prior to 17:00 to activate for the next day.</i></p> <p>2. When the Alert notice is received, prepare participating customers for a potential Stage 1 emergency on the next day for the specified time period in the Alert notice.</p> <ul style="list-style-type: none"> Should a Stage 1 be declared, those customers would be directed by the utilities and Scheduling Coordinators to utilize State Power Augmentation Program (SPAP) generators and any additional generators approved for emergency use, as well as any generators registered under the utility California State Emergency Program (CSEP) and to utilize other load reduction and Emergency Demand Response Programs. <p><i>Note: the DOE order confines the SPAP operational period to 14:00-22:00, so if the time period is outside this schedule, the generators under SPAP will NOT operate or will cease to operate.</i></p>

3.6.2. Warning Notice


CAISO issues a Warning notice 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. If not already declared, CAISO may request the Reliability Coordinator to declare an EEA 1 or EEA 2.

Note: EEA 2 will be in effect when emergency demand response programs are being utilized.

The CAISO System Operator may take, but is not limited to, the following actions in any order needed, and to the extent necessary, to prevent, mitigate or otherwise manage a System Emergency:


CAISO System Operator
<ol style="list-style-type: none"> Issue a Warning notice using the AWE Notification System. Notify the RC by phone. Request the RC to declare an Energy Emergency Alert 1 (EEA 1) for the CAISO BA area. Notify "ALL RELIABILITY" distribution list via the GMS. Conduct a blast call with the PTOs.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

CAISO System Operator
<p>6. Notify the ERC of system conditions, Flex Alert notices, and any need to file DOE OE-417 or NERC Event Reporting Form.</p> <p>7. Issue a Flex Alert notice using the AWE Notification System, as needed, and</p> <p>8. Notify CAISO Communications.</p> <p>9. Globally or by region, enable RDRRs to make them available for dispatch through the market, or force if necessary.</p> <p>10. Request the RC to declare an Energy Emergency Alert 2 (EEA 2) for the CAISO BA area.</p> <p>11. Conduct a blast call to notify the PTO Transmission control centers that RDRR resources have been enabled and are available for dispatch through the market.</p> <p>12. If 100 MW or more of emergency Demand Response is dispatched,</p> <ul style="list-style-type: none"> • Notify CAISO's ERC to file DOE OE-417. <p style="margin-left: 40px;"><i>Note: If ERC is unavailable, CAISO Shift Manager or designee has to file the OE-417. Refer to CAISO Operating Procedure 4110A DOE NERC, and WECC Significant Event Reporting Requirements.</i></p> <p>13. Exhaust available resources (except for Operating Reserve) through the market.</p> <p>14. Use Exceptional Dispatch, as needed.</p> <p>15. Reduce participating pump load as available.</p> <p>16. Dispatch, as necessary, available unloaded generation Capacity without RT Energy Bids. This can include Exceptional Dispatch on a resource subject to CPM designation.</p> <p>17. Dispatch excess Operating Reserves, including contingent only reserves, as necessary while maintaining required Contingency Reserves.</p> <p>18. Dispatch Legacy RMR Units <u>and</u></p> <p>19. Notify market participants of the use of Legacy RMR for system needs.</p> <p>20. If Legacy RMR units are assigned AS,</p> <ul style="list-style-type: none"> • Send the following MNS message: <p style="margin-left: 40px;"><i>“The CAISO is currently utilizing Legacy RMR units to provide additional Ancillary Services”.</i></p> <p>21. If Legacy RMR resources are dispatched for energy to serve load, CAISO must send the following MNS message prior to dispatching the resource:</p> <p style="margin-left: 40px;"><i>“The CAISO is going to dispatch Legacy RMR resources to meet forecast demand, the expected time of dispatch is from XX:XX to XX:XX”.</i></p> <p>22. Request the RC to issue an Energy Emergency Alert 2 (EEA 2) for the CAISO BA area, if not declared already.</p> <p>23. Conduct a blast call with the PTOs Transmission Control Center (PGAE, SCE, and SDG&E) to quantify available Demand Response and UDC Interruptible Load (Non-Firm) programs, <u>and</u></p> <p>24. Notify the PTOs of possible implementation.</p>

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

CAISO System Operator
<p>25. Call on out-of-market Demand Response programs and UDC Interruptible Load (Non-Firm) programs (amount varies). This requires up to a 60-minute notification.</p> <p>26. Refer to CAISO Operating Procedure 4510 Load Management Programs and Underfrequency Load Shedding and its attachments.</p> <p>27. Coordinate with CAISO off-shift management to issue System Status Updates email to affected entities as needed.</p> <p>28. Canvas other entities and Balancing Authorities for available Manual Dispatch Energy/Capacity on interties.</p>

Utilities and Scheduling Coordinators
<p>1. Grid Operations Management will coordinate with the ELRP Board (Energy Load Reduction Program) so the utilities can consider activating ELRP 16:00 – 21:00.</p> <p><i>Note: If activating, the ELRP Board DR programs will provide MW estimates on their updated Daily DR Reports and will notify their respective customers as soon as possible.</i></p> <p>2. When the Warning notice is received, direct participating customers to prepare to utilize Emergency Demand Response Programs during the specified time period in the Warning notice.</p> <p>3. When the EEA 2 message from RC West is received, SCs will schedule their SPAP generators to run for the time period in the EEA 2 declaration notice.</p> <p><i>Note: the DOE order confines the SPAP operational period to 14:00-22:00, so if the time period is outside this schedule, the generators under SPAP will NOT operate or will cease to operate.</i></p>

Warning Notice Actions with Emergency Stage 1 Imminent

CAISO System Operator
<p>1. Request any available interruptible programs not supplying AS.</p>


 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

3.6.3. Emergency Stage 1

CAISO issues an Emergency Stage 1 when all available resources are in use.

The CAISO System Operator may take, but is not limited to, the following actions in any order needed, and to the extent necessary, to prevent, mitigate or otherwise manage a System Emergency:

CAISO System Operator
<ol style="list-style-type: none"> 1. Issue an Emergency Stage 1 notice using the AWE Notification System. 2. Notify the RC by phone <u>and</u> 3. Request to declare an EEA 2, if not declared already. <p><i>Note: if experiencing a sudden onset event which requires an immediate Stage 1 emergency, ensure RDRR is dispatched as soon as possible, ahead of or to coincide with, the SPAP and CSEP being directed by the utilities and Scheduling Coordinators for the Stage 1 time period.</i></p> <ol style="list-style-type: none"> 4. Request the RC to issue a notice that Emergency Assistance may be required by CAISO. 5. Maintain hourly updates to the RC until Alert 0 – Terminated is issued. 6. Evaluate the impacts of any in-progress Time Error Correction <u>and</u> 7. Request the RC to terminate Time Error Correction if it is contributing to resource deficiency. 8. Notify the “ALL RELIABILITY” distribution list via the GMS. 9. Request that other Balancing Authorities determine the amount of assistance they are able to provide. 10. Notify ERC of system conditions, Flex Alert notices, and any need to file DOE OE-417 or NERC Event Reporting Form. <p><i>Note: If the ERC is unavailable, CAISO Shift Manager or designee has to file the OE-417. Refer to CAISO Operating Procedure 4110A DOE, NERC and WECC Significant Event Reporting Requirements.</i></p> <p><i>Note: If there are 2+ consecutive days of Stage 1, 2, or 3 events, ERC will coordinate with CalOES to request load reduction at the Ports for the time period in the Stage 1, 2 or 3 notice.</i></p> <ol style="list-style-type: none"> 11. Request that CAISO Communications Issue a Flex Alert notice using the AWE tool, as needed. 12. Issue System Status Updates email to affected entities as needed.

 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

Utilities and Scheduling Coordinators
1. When the Stage 1 notice is received, for the time period specified in the Stage 1 notice, <ul style="list-style-type: none"> • Direct participating customers to utilize generators approved for emergency use and/or reduce load under the California State Emergency Program (CSEP) and other load reduction and Emergency Demand Response programs.


3.6.4. Emergency Stage 2

CAISO will issue an Emergency Stage 2 when it anticipates it can no longer meet expected energy requirements for the specified time period and is energy deficient.

The CAISO System Operator may take, but is not limited to, the following actions in any order needed, to the extent necessary, to prevent, to mitigate, or otherwise manage a System Emergency:

CAISO System Operator
1. Issue an Emergency Stage 2 notice using the AWE Notification System. <ul style="list-style-type: none"> • Notify the RC <u>and</u> • Request the RC to issue an Energy Emergency Alert 3 (EEA 3) for the CAISO BA area. This allows CAISO to count firm load as Contingency Reserve after verifying the firm load shed is available within 10 minutes.
2. Maintain hourly updates to the RC until Alert 0 – Terminated is issued.
3. Evaluate the impacts of any in-progress Time Error Correction <u>and</u>
4. Request the RC to terminate Time Error Correction if it is contributing to resource deficiency.
5. Notify the “ALL RELIABILITY” distribution list via the GMS.
6. Conduct a blast call with PTOs and UDC/MSS entities.
7. Canvas PTOs for available firm load to be armed and counted towards Operating Reserves requirements (load that can be shed within 10 minutes).
8. Issue an operating instruction to arm available load.
9. Notify the ERC of system conditions, Flex Alert notices, and any need to file DOE OE-417 or NERC Event Reporting Form.
<p><i>Note: If the ERC is unavailable, CAISO Shift Manager or designee has to file the OE-417. Refer to CAISO Operating Procedure 4110A DOE, NERC and WECC Significant Event Reporting Requirements.</i></p>
10. Issue a 1-Hour Probability notice using the AWE Notification System to notify utilities of anticipated Stage 3 event that may occur if anticipated in the next 90-minutes.
11. Coordinate with CAISO off-shift management to issue System Status Updates email to affected entities as needed.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None


CAISO System Operator
<p>12. Procure Legacy RMR and any other available Out-of-Market Operating Reserve as available.</p> <p>13. If Legacy RMR units are assigned AS,</p> <ul style="list-style-type: none"> • Send the following MNS message: <i>“The CAISO is currently-utilizing Legacy RMR units to provide additional Operating Reserve.”</i>

Utilities and Scheduling Coordinators
<p>1. If a sudden onset event has occurred, and no Stage 1 notice was issued by CAISO, when the Stage 2 notice is received, for the time period specified in the Stage 2 notice,</p> <ul style="list-style-type: none"> • Direct participating customers to utilize State Power Augmentation Program (SPAP) generators and any additional generators approved for emergency use, as well as any generators registered under the California State Emergency Program (CSEP) and other load reduction and Emergency Demand Response programs. <p>Note: <i>the DOE order confines the SPAP operational period to 14:00-22:00, so if the time period is outside this schedule, the generators under SPAP will NOT operate or will cease to operate.</i></p>

Emergency Stage 2 Actions with Stage 3 Imminent

CAISO System Operator
<ol style="list-style-type: none"> 1. Procure Emergency Assistance per CAISO Operating Procedure 4410 Emergency Assistance. 2. Maintain hourly updates to the RC until Alert 0 – Terminated is issued. 3. Conduct a blast call to pre-arrange (whenever possible) firm load dropping with UDC/MSS in order to minimize any time-lag in dropping load, at the direction of the CAISO Shift Manager. <i>Example: On a peak-load day where it is anticipated that Stage 3 Emergency Firm load reductions are needed, there will be an early morning reliability blast call to advise the PTOs, MSS and UDC entities to attend stations and/or standby at facilities, as required, to support immediate load dropping at the direction of the CAISO Shift Manager.</i> 4. Coordinate with CAISO off-shift management to issue a System Status Updates email to affected entities as needed.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

3.6.5. Emergency Stage 3


CAISO issues an Emergency Stage 3 when CAISO is unable to meet minimum Contingency Reserve requirements and firm load interruption is imminent or in progress.

The CAISO System Operator may take, but is not limited to, the following actions in any order needed, and to the extent necessary, to prevent, mitigate or otherwise manage a System Emergency:

CAISO System Operator
<ol style="list-style-type: none"> 1. Issue an Emergency Stage 3 notice using the AWE Notification System. 2. Notify the RC and 3. Request the RC to issue an Energy Emergency Alert 3 (EEA 3) for CAISO (If not previously issued). 4. Notify the “ALL RELIABILITY” distribution list via the GMS. 5. Conduct a blast call with PTOs, UDCs and MSSs as needed. 6. Maintain hourly updates to the RC until Alert 0 – Terminated is issued. 7. Initiate Firm Load Interruptions. 8. Provide the megawatt quantity to be interrupted to each UDC/MSS. <p><i>Note: Interruptions should be coordinated with CAISO, may occur in rotating blocks under the direction of the PTO’s Transmission Control Center, and are dependent on Operating Reserve requirements and/or ACE and frequency.</i></p> <ol style="list-style-type: none"> 9. Refer to CAISO Operating Procedure 4510A Load Shed Calculation Guideline. 10. Issue a Stage 3 System Emergency – Firm Load Interruptions notice using the AWE Notification System. 11. Using MNS, notify Market Participants of the total amount of load interruptions requested, in MW, for the CAISO BA. 12. Coordinate with CAISO off-shift management to issue a System Status Updates email to affected entities as needed.

Utilities and Scheduling Coordinators
<ol style="list-style-type: none"> 1. If a sudden onset event has occurred, and no Stage 1 or 2 notice was issued by CAISO, when the Stage 3 notice is received, for the time period specified in the Stage 3 notice, <ul style="list-style-type: none"> • Direct participating customers to utilize State Power Augmentation Program (SPAP) generators and any additional generators approved for emergency use, as well as any generators registered under the California State Emergency Program (CSEP) and other load reduction and Emergency Demand Response programs. <p><i>Note: the DOE order confines the SPAP operational period to 14:00-22:00, so if the time period is outside this schedule, the generators under SPAP will NOT operate or will cease to operate.</i></p>

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None


3.7. Emergency Downgrade

CAISO will make notifications and downgrade (step down) to necessary level of emergency as conditions improve, or cancel the System Emergency and return to normal operations.

CAISO System Operator
<ol style="list-style-type: none"> 1. Conduct a blast call with affected entities to provide updated system information and when preparing to restore firm load. 2. Issue System Status Updates email to affected entities as needed. 3. Whenever possible, restore firm load before interruptible load and /or Schedules. 4. Terminate the Stage 3 System Emergency - Load Interruptions notice using the AWE Notification System. 5. Downgrade the emergency stage when possible by backing out of each step that was performed for that stage. 6. Issue a cancellation notice for the current emergency stage. <p><i>Note: there is no need to reissue an implementation notice for downgraded emergency stage if still in effect. (i.e., when cancelling a Stage 2 no reissue needed if Stage 1 was issued previously and is still in effect).</i></p> <ol style="list-style-type: none"> 7. If no lower stage emergency is still in effect, <ul style="list-style-type: none"> • Issue a new notice with the lower current stage. 8. If Non-Market resources are still required to maintain Contingency Reserve requirements, <ul style="list-style-type: none"> • Issue a Warning notice. 9. Coordinate with CAISO off-shift management to issue System Status Updates email to affected entities as needed.

Utilities and Scheduling Coordinators
<ol style="list-style-type: none"> 1. As the declared emergency stages are cancelled and downgraded, once CAISO is no longer in an EEA 2 /Stage 1, <ul style="list-style-type: none"> • Direct participating customers to end their use of State Power Augmentation Program (SPAP) generators and any additional emergency use generators and/or their load reductions per the terms of their agreements and the California State Emergency Program (CSEP) and other load reduction and Emergency Demand Response programs. <ul style="list-style-type: none"> ○ SC for SPAP resources contact CAISO to confirm when the resources are planning to shut down. <p><i>Note: the DOE order confines the SPAP operational period to 14:00-22:00, so if the time period is outside this schedule, the generators under SPAP will cease to operate.</i></p> 2. While CAISO is preparing to cancel the Warning period, CAISO will coordinate with the utility grid control centers to end the RDRR dispatch.

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 California ISO	Operating Procedure	Procedure No. 4420
		Version No. 13.2
		Effective Date 10/21/2021
System Emergency		Distribution Restriction: None

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	7.7.1, 7.7.2, 7.7.3
CAISO Operating Procedure	4410 Emergency Assistance 4420E Allowable Transmission Maintenance Activities During Restricted Maintenance Operations 4510 Load Management Programs and Underfrequency Load Shedding 4510A Load Shed Calculation Guideline 4510B Demand Response and UDC Interruptible Programs
NERC and WECC Requirements	BAL-002-WECC-3 R1 (effective 6/28/2021), R3, R4 EOP-011-1, R1, R2, R2.2.1, R2.2.2, R2.2.4, R2.2.8


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:


Operating Reserve (Tariff)	The combination of Spinning and Non-Spinning Reserve required to meet NERC and WECC reliability standards and any requirements of the NRC for reliable operation of the CAISO Balancing Authority Area.
Contingency Only (Tariff)	A resource providing Operating Reserve capacity that may be dispatched by CAISO only in the event of a Contingency or an imminent or actual System Emergency.

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

Contingency Reserve (NERC)	<p>The provision of capacity that may be deployed by the Balancing Authority to respond to a Balancing Contingency Event and other contingency requirements (such as Energy Emergency Alerts as specified in the associated EOP standard).</p> <p>A Balancing Authority may include in its restoration of Contingency Reserve readiness to reduce Firm Demand and include it if, and only if, the Balancing Authority:</p> <ul style="list-style-type: none"> • Is experiencing a Reliability Coordinator declared Energy Emergency Alert level, and is utilizing its Contingency Reserve to mitigate an operating emergency in accordance with its emergency Operating Plan. • Is utilizing its Contingency Reserve to mitigate an operating emergency in accordance with its emergency Operating Plan
Emergency Load Reduction Program (ELRP)	<p>Investor Owned Utilities may trigger ELRP events when CAISO declares an Alert, Warning or Stage emergency. ELRP events generally 16:00 – 21:00 timeframe, minimum 1 hour (max 5 hours). Program runs May to October in the years 2021 to 2025.</p>
Reliability Demand Response Resource (RDRR)	<p>May be dispatched in conjunction with a Transmission Emergency, Warning and Stage 1, 2, 3 emergencies. Cannot have a minimum run time of greater than one (1) hour. Must have sustained response period or maximum run time of at least four (4) hours.</p>
State Power Augmentation Program (SPAP)	<p>The California Governor’s emergency proclamation issued on July 30, 2021 directed CDWR to work with the California Energy Commission (CEC) to develop projects to expand energy and supply storage to respond to energy shortages caused by climate change. Temporary power generators have been placed at existing power generation sites so that they can feed directly into the grid as needed during an EEA 2 or 3 emergency between 14:00 – 22:00, or a transmission emergency at any time.</p>
California State Emergency Program (CSEP)	<p>Related to California Governor’s emergency proclamation allowing for use of emergency generation, load reduction and emergency demand response programs during a CAISO declared emergency. https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf</p>

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

	CSEP events limited 15:00 to 22:00, minimum 1 hour (max 7 hours), cannot start after 20:45. This temporary program ends October 31, 2021.
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Version History


Version	Change	Date
10.0	Periodic Review- Section 3.1 – added new section 3.1 for Flex Alert and renumbered all sections Section 3.3 – clarified EEAs under Transmission Emergency conditions Section 3.3 Step 15- removed reference “if used for System or Competitive Path mitigation. Throughout procedure: Added clarity to maintain hourly updates to the peak RC until alert 1/ 2/ 3 is terminated. Replaced all references to WECCNet with new tool Reliability Messaging Tool (RMT). Removed references to “CA Hotline Aka. 137 Intertie.” Removed Flex Alert steps from each section to consolidate in new section 3.1 Definitions: added Reliability Messaging Tool (RMT).	8/26/16
11.0	Annual Review - Page 15 & 16 Added Restricted Maintenance Operations to Definitions Section. Replaced references to CAISO with ISO except when referring to the tariff. Replaced references to Shift Supervisor with Shift Manager. Replaced “Transmission Operator Directive” with “Transmission Operator Operating Instruction”, pursuant to IRO-001-4. Updated all NERC and WECC references.	4/1/17
11.1	Formatting and grammar corrections. Minor update to bold content.	6/22/17
11.2	Section 3.4: Added new Step 3 and added “up to” in Step 15 for clarification. Section 3.5.1, Step 7: Removed step Section 3.5.2, Step 5, 6: Removed “Flex Alert Notices.” Step 7: Removed. Step 19: Added “up to” for clarification. Section 3.5.3, Step 7: Added “Request that ISO Communications.” Removed “Flex Alert Notices.” Sections 3.5.4 & 3.5.5: Corrected labeling of section title. Removed references to “Flex Alert Notices”	9/18/17

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

Version	Change	Date
	References: Updated WECC Criterion. Minor grammar and formatting updates throughout.	
11.3	<p>Added new Section 3.2 for Flex Alert.</p> <p>Section 3.4, Step 15: Minor update.</p> <p>Section 3.5.1: New Step 7 added for Flex Alert.</p> <p>Section 3.5.2: Updated Step 5 and added new Step 6 regarding Flex Alert notice. Minor update to Step 20 regarding notification.</p> <p>Section 3.5.3: Minor update to first paragraph. Updated Step 5 and added new Step 7 regarding Flex Alert notice.</p> <p>Section 3.5.4: Minor update to Section title and first paragraph. Updated Step 5 for Flex Alert notices.</p> <p>Replaced Peak RC with the RC in most instances.</p> <p>Replaced A/S with AS.</p> <p>Updated NERC standard BAL reference</p> <p>Minor format and grammar updates throughout.</p> <p>Removed version history prior to 3-years.</p>	8/28/18
12.0	<p>Annual Review:</p> <p>Section 3.4: Removed Steps 19, 20, 22 & 23 to remove declaration of EEA2 and EEA3 per updated RC procedures.</p> <p>Section 3.5: Updated BAL-002 reference.</p> <p>Section 3.5.2: Moved Steps 15, 16, and 17 to Steps 7, 8 and 9.</p> <p>Sections 3.5.2, 3.5.3 & 3.5.4: Updated Step 5 note to be consistent with other notes regarding Shift Manager or designee to file OE-417 if ERC is unavailable.</p> <p>Replaced Reliability Messaging Tool (RMT) with Reliability messaging system throughout.</p> <p>Replaced Peak RC with the RC under Operationally Affected Parties.</p> <p>References Section: Removed BAL-004 reference from NERC Requirements.</p> <p>Minor format and grammar updates.</p>	6/11/19
12.1	<p>Updated procedure per changes to 4420B EOP-011-1 EEA levels with BAL-002 WECC 2A in sections Warning, Emergency Stage 1, 2 & 3.</p> <p>Removed "WECC" from Notify the "All Reliability" distribution list. Section 3.5.3 Emergency Stage 1 removed Step 6.</p> <p>Section 3.5.5 Emergency Stage 3 changed "Spinning Reserve" to "Contingency Reserve". Removed Public Relations from section. Removed Public Relations from issuing a Flex Alert notification, as no longer performing this notification.</p>	10/31/19

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	


Version	Change	Date
13.0	Annual Review: Changed all references of 'RMR' to 'Legacy RMR' to align with Operating Procedure 2310. Replaced Staged Emergency with Energy Emergency. Replaced System Operations with Grid Operations. Updated Warning section. Added Metered Subsystem (MSS) to Responsibilities section. Changed "call" and "conference call" to "conduct a blast call" throughout. Added new Operating Procedure 4420H Customer Agreements to Appendix section. Added Section 3.2 CAISO Communications Regarding Forecasted System Conditions. Updated Tariff references. Replaced ISO with CAISO and minor format and grammar updates for consistency. 6/25/21 - Errata Change: Section 3.6.1: Updated first paragraph to include "...by 1500 PPT the day before...", as this was removed in error.	6/15/21
13.1	Updated the following sections to include ELRP and CSEP: Alert, Warning, Stage 1, Stage 2, Stage 3 and Emergency downgrade. Added Definitions for ELRP, RDRR and CSEP. Added reference to new Procedure Attachment 4420I in Appendix Section.	8/20/21
13.2	Updated with State Power Augmentation Program (SPAP) references through sections for Transmission Emergency, Alert, Warning, Stage 1, Stage 2, Stage 3, Emergency Downgrade and Definitions.	10/21/21

5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

This procedure 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.

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 California ISO	Operating Procedure	Procedure No.	4420
		Version No.	13.2
		Effective Date	10/21/2021
System Emergency		Distribution Restriction: None	

Frequency

Annual

Appendix

- 4420B Alert/Warning/Emergency (AWE) Guide
- 4420C System Emergency Notice Templates
- 4420E Allowable Transmission Maintenance Activities During Restricted Maintenance Operations
- 4420H Alert/Warning/Emergency (AWE) and Customer Agreements
- 4420I Emergency MW