 California ISO	Operating Procedure	Procedure No.	4110A
		Version No.	8.3
		Effective Date	9/11/23
DOE, NERC and WECC Significant Event Reporting Requirements		Distribution Restriction: None	

Purpose

Provides guidelines to summarize and clarify the assignments for reporting significant events to the Department of Energy (DOE), the North American Electric Reliability Corporation (NERC), and the Western Electricity Coordinating Council (WECC).

Background

DOE, WECC, and NERC require certain mandatory reports for electric emergency incidents and disturbances in the United States.

DOE requires that the Electric Utility that operates a Balancing Area and/or Reliability Coordinators and other Electric Utilities report incidents using DOE [Form OE-417](#), “Electric Emergency Incident and Disturbance Report”.

NERC Standard EOP-004-4, “Event Reporting”, requires that Reliability Coordinators, Balancing Authorities, Transmission Operators, Transmission Owners, Generator Operators, Generator Owners and Distribution Providers shall file the required reports to NERC and other organizations such as WECC, the Reliability Coordinator, law enforcement, or governmental authority. Reporting requirements are met by filing a DOE Form OE-417, report or the NERC Event Reporting Form.

The shorter version of the DOE OE-417 form to aid in filing urgent 1-hour and 6-hour reports was developed and is located at this link: [Short DOE OE-417](#).


The table of reportable events is listed within this procedure and each corresponding type of event references the organization that should report the incident, additional guidance, and clarification of responsibilities.

General Principles

In general, the organization that operates an asset should report operational incidents; whereas, the organization that owns the asset should report physical damage (e.g., the CAISO is probably best suited to report transmission events, especially those across multiple service territories; whereas utilities are best suited to report damage or destruction of transmission equipment, etc.).

To the extent that time allows, collaborate, especially when multiple organizations have critical data and information about an incident. Error on the side of over-reporting. The DOE does allow submittals by several organizations for a single incident.

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Reporting Responsibility

<p>As the Balancing Authority, the CAISO Manager of Real-Time Operations must be notified of all events that may meet the reporting criteria listed in the following tables.</p>
<p>In general, the reporting responsibility belongs to the organization identified in the tables below. Where multiple organizations have pertinent data or information or where responsibility is unclear, Manager of Real-Time Operations or managers from the respective organizations shall contact one another to reach agreement on who submits reporting.</p>
<p>After evaluating each event, the CAISO may determine a report is necessary and file one even if the responsible reporting entity decides not to file a report.</p>
<p>When an entity, other than the CAISO, submits an OE-417 or EOP-004 report, send a copy to the Operations Compliance mailbox at OperationsCompliance@caiso.com.</p> <p>Note: For the purpose of meeting the requirements under EOP-004-4 R2, the CAISO Director of Operational Readiness is the primary point of contact.</p>
<p>Under certain adverse conditions (e.g., severe weather, multiple events), it may not be possible to report the damage caused by an event and issue a written Event Report within the timing in the NERC EOP-004-4 standard. In such cases, the affected entity shall notify the parties that require notification via phone or other methods to provide as much information as is available until such time that a written report can be filed.</p>
<p>NERC will accept the DOE OE-417 form, in lieu of the NERC Event Reporting form, if the entity is required to submit an OE-417 report. If an OE-417 report <u>is</u> filed, WECC and NERC must receive a copy of the reports at time of filing.</p>


Events that Require DOE OE-417 Report

Refer to the following table for events and requirements.

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DOE OE-417 Incident (per current OE-417 form)	Reporting Responsibility By Contract (NERC function)	Notes
Note: Boxes 1 – 9 below, if any of these scenarios apply the DOE OE-417 form, must be <u>filed within one (1) hour</u> of the incident:		
1) Physical attack that causes major interruptions or impacts to critical infrastructure facilities or to operations.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	Reported by organization physically attacked. For attacks impacting multiple organizations, each attacked/infected system owner shall submit report. Note: EOP-004 applicability RC, BA, TOP
2) Reportable Cyber Security Incident.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	NERC definition of reportable Cyber Security Incident states the following. A malicious act or suspicious event that: <ul style="list-style-type: none"> – For a high or medium impact BES Cyber System, compromises or attempts to compromise (1) an Electronic Security Perimeter, (2) a Physical Security Perimeter, or (3) an Electronic Access Control or Monitoring System; or – Disrupts or attempts to disrupt the operation of a BES Cyber System. Reported by attacked/infected systems owner. For attacks impacting multiple organizations, each attacked/infected system owner shall submit report.
3) Cyber event that is not a Reportable Cyber Security Incident that causes interruptions of electrical system operations.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	Reported by attacked/infected systems owner. For attacks impacting multiple organizations, each attacked/infected system owner shall submit report.
4) Complete operational failure or shutdown of the transmission and/or distribution electrical system.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	CAISO will report Transmission Failure/Shutdown in collaboration with Transmission Operator. Any Distribution Failure/ Shutdown reported by UDC/MSS.
5) Electrical System Separation (Islanding) where part or parts of a power grid remain(s) operational in an otherwise blacked out area or within the partial failure of an integrated electrical system.	<input checked="" type="checkbox"/> CAISO <input type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	Note: EOP-004-4 requirement ≥ 100 MW CAISO will report for Balancing Area event. UDC/MSS will report for local events in their service territories. Note: EOP-004 applicability RC, BA, TOP

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DOE OE-417 Incident (per current OE-417 form)	Reporting Responsibility By Contract (NERC function)	Notes
Note: Boxes 1 – 9 below, if any of these scenarios apply the DOE OE-417 form, must be <u>filed within one (1) hour</u> of the incident:		
6) Uncontrolled loss of 300 Megawatts or more of firm system loads for 15 minutes or more from a single incident.	<input type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP) *	Reported by the organization that experiences the loss of firm load *Generators who have 300 MW or more of generation dedicated to one or more end-use customers (e.g., retail or industrial customers) are required to file the form under criteria number 5. Note: EOP-004 applicability BA, TOP, DP
7) Firm load shedding of 100 Megawatts or more implemented under emergency operational policy.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	CAISO reports if CAISO initiates manual firm load shedding, UDC/PTO/MSS reports if they initiate load shedding. Note: EOP-004 applicability initiating RC, BA, TOP
8) System-wide voltage reductions of 3 percent or more.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	(Interpreted to suggest a purposeful reduction for managing loads rather than low voltage caused by high loads.) CAISO reports if CAISO initiates reduction, UDC/PTO/MSS reports if they initiate reduction. Note: EOP-004 applicability TOP
9) Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the Bulk Electric System.	<input checked="" type="checkbox"/> CAISO <input type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	CAISO reports if CAISO issues appeal, UDC reports if UDC issues appeal or MSS reports if MSS initiates. Separate reports shall be made from each if multiple appeals are made. Note: The only public appeal that requires reporting for #9 is when 100 MW or more of emergency demand response (RDRR) is dispatched under emergency conditions in order to maintain reliability. This type of demand response is only allowed to be dispatched under a declared Transmission Emergency or an EEA 2. Demand response dispatched for economic purposes, Flex Alert, EEA Watch, RMO, Transmission Emergency, EEA 1, 2 or 3 on their own without the dispatch of 100 MW or more of emergency demand response (RDRR) does not require OE-417 reporting. Note: EOP-004 applicability BA

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DOE OE-417 Incident (per current OE-417 form)	Reporting Responsibility By Contract (NERC function)	Notes
Note: Boxes 10-13 below, if any of these scenarios apply AND none of the above 1-9 scenarios apply, then the DOE OE-417 form must be <u>filed within six (6) hours</u> of the incident:		
10) Physical attack that could potentially impact electric power system adequacy or reliability; or vandalism, which targets components of any security systems.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	Reported by organization physically attacked. For attacks impacting multiple organizations, each attacked/infected system owner shall submit report. Note: EOP-004 applicability TO, TOP, GO, GOP, DP
11) Cyber event that could potentially impact electric power system adequacy or reliability.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	Reported by attacked/infected systems owner. For attacks impacting multiple organizations, each attacked/infected system owner shall submit report.
12) Loss of electric service to more than 50,000 customers for 1 hour or more.	<input type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	Reported by the organization that experiences interruption to customers.
13) Fuel supply emergencies that could impact electric power system adequacy or reliability.	<input checked="" type="checkbox"/> CAISO <input type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	CAISO would also report if fuel supply emergency affected bulk electric system supply and was known to the CAISO.
Note: Box 14 below, if this scenario AND none of the above 1-13 scenarios apply, then the DOE OE-417 form must be <u>filed within one (1) Day</u> (by the end of the next calendar day after the determination of the attempted cyber compromise):		
14) Cyber Security Incident that was an attempt to compromise a High or Medium Impact Bulk Electric System Cyber System or their associated Electronic Access Control or Monitoring Systems.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	ATTEMPTED CYBER COMPROMISE: Within 1 calendar day of determination of the attempted cyber compromise: Schedule 1 and lines N-S and the Cyber Attributes on line T of Schedule 2 must be filed if the following criterion is met and none of the Emergency Alert or Normal Report criteria apply.
Note: Box 15 – 26 below, if any of these scenarios apply AND none of the above 1-14 scenarios apply, then the DOE OE-417 form must be filed by the later of <u>24 hours after the recognition</u> of the incident OR <u>by the end of the next business day</u> . (By 4:00 pm local time):		
15) Damage or destruction of a Facility within its RC Area, BA Area or TOP Area that results in action(s) to avoid a Bulk Electric System Emergency.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	Collaboration between CAISO and the PTO may be necessary in order to assess actions taken to avoid a BES Emergency. Note: EOP-004 applicability RC, BA, TOP

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Note: Box 15 – 26 below, if any of these scenarios apply AND none of the above 1-14 scenarios apply, then the DOE OE-417 form must be filed by the later of 24 hours after the recognition of the incident OR by the end of the next business day. (By 4:00pm local time):		
16) Damage or destruction of its Facility that results from actual or suspected intentional human action.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	It is not necessary to report theft unless it degrades normal operation of its Facility. The entity that owns/operates the Facility is responsible for reporting unless the event impacts multiple entities within the CAISO control area. Note: EOP-004 applicability BA, TO, TOP, GO, GOP, DP
17) Physical threat to its Facility excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the Facility. Or suspicious device or activity at its Facility.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the Facility is responsible for reporting unless the threat impacts multiple entities within the CAISO control area. Note: EOP-004 applicability BA, TO, TOP, GO, GOP, DP
18) Physical threat to its Bulk Electric System control center, excluding weather or natural disaster related threats, which has the potential to degrade the normal operation of the control center. Or suspicious device or activity at its Bulk Electric System control center.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the BES control center is responsible for reporting. If the threat impacts multiple entities within the CAISO control area, CAISO is responsible for reporting. Note: EOP-004 applicability RC, BA, TOP
19) Bulk Electric System Emergency resulting in voltage deviation on a Facility \geq 10% of nominal voltage sustained for \geq 15 continuous minutes.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the Facility is responsible for reporting. If the event impacts multiple entities within the CAISO control area, CAISO is responsible for reporting. Note: EOP-004 applicability TOP
20) Uncontrolled loss of 200 Megawatts or more of firm system loads for 15 minutes or more from a single incident for entities with previous year's peak demand \leq 3,000 Megawatts.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input checked="" type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	EOP-004 requirement: Uncontrolled loss of firm load resulting from a BES Emergency. Uncontrolled loss of firm load for \geq 15 minutes from a single incident: \geq 300 MW for entities with previous year's peak demand \geq 3,000 MW OR \geq 200 MW for all other entities Note: EOP-004 applicability BA, TOP, DP

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DOE OE-417 Incident (per current OE-417 form)	Reporting Responsibility By Contract (NERC function)	Notes
Note: Box 15 – 26 below, if any of these scenarios apply AND none of the above 1-14 scenarios apply, then the DOE OE-417 form must be filed by the later of <u>24 hours after the recognition</u> of the incident OR <u>by the end of the next business day.</u> (By 4:00pm local time):		
21) Total Generation loss, within one minute \geq 2000 Megawatts in the Western Interconnection.	<input checked="" type="checkbox"/> CAISO <input type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input checked="" type="checkbox"/> SC/ PG OWNER (GO/GOP)	The CAISO is responsible for reporting. Note: EOP-004 applicability BA, GOP
22) Complete loss of off-site power (LOOP) affecting a nuclear generating station per the Nuclear Plant Interface Requirements (NPIRS).	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The PTO is primarily responsible, but the CAISO may report, depending on the nature of the event that causes the loss of off-site power. Note: EOP-004 applicability TO, TOP
23) Unexpected Transmission loss within its area, contrary to design, of 3 or more Bulk Electric System facilities caused by a common disturbance (Excluding successful automatic reclosing).	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The PTO in whose area the transmission loss occurred is responsible for reporting unless the event impacts multiple entities within the CAISO control area. Note: EOP-004 applicability TOP
24) Unplanned evacuation from its Bulk Electric System control center facility for 30 continuous minutes or more.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the BES control center is responsible for reporting. Note: EOP-004 applicability RC, BA, TOP
25) Complete loss of Interpersonal Communication and Alternative Interpersonal Communication capability affecting its staffed Bulk Electric System control center for 30 continuous minutes or more.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the BES control center is responsible for reporting. Note: EOP-004 applicability RC, BA, TOP
26) Complete loss of monitoring or control capability at its staffed Bulk Electric System control center for 30 continuous minutes or more.	<input checked="" type="checkbox"/> CAISO <input checked="" type="checkbox"/> PTO (TOP) <input type="checkbox"/> UDC/ MSS/ LSE (DP) <input type="checkbox"/> SC/ PG OWNER (GO/GOP)	The entity that owns/operates the BES control center is responsible for reporting. For example, CAISO complete loss of EMS requires a report, but loss of RTCA alone is not reportable. Note: EOP-004 applicability RC, BA, TOP

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Supporting Information

Operationally Affected Parties

Shared with the Public.


Definitions

CAISO	California Independent System Operator (CAISO) is the Balancing Authority with Reporting Responsibilities under EOP-004-4.
Electric Utility	As defined by the DOE, a corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Included are investor-owned electric utilities, municipal and State utilities, Federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and corporately aligned with companies that own distribution facilities are also included.
PTO	Participating Transmission Owner.
UDC	Utility Distribution Company.
MSS	Metered Subsystem (Operator).
RC	Reliability Coordinator.
SC/ PG OWNER	SC/ PG Owner Scheduling Coordinator.

Version History

Version	Change	Date
6.0	Periodic Review: Updated reporting requirements to be consistent with OE-417 form effective 6/4/18. Removed version history prior to 3-years. Minor format and grammar updates.	7/12/18
7.0	Periodic Review: Removed a section on NERC reporting due to the EOP-004-4 Attachment 1 changes. Removed approvals sections. Added Operationally Affected Parties section and document controlled statement in footer. Minor format and grammar updates.	8/01/19
8.0	Periodic Review: Added new #2 & #14 to the Events that Require DOE OE-417 Report section and updated various language to match DOE Report form. Updated from ISO to CAISO and	10/28/21

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	removed history prior to 5-years. Minor formatting and punctuation edits.	
8.1	Clarified notes under item 9.	9/09/22
8.2	Removed ERC references. Updated links to the DOE OE-417 template, added Short DOE OE-417 form link. Added OperationsCompliance@caiso.com for DOE OE-417 distribution. Removed history prior to five years. Minor formatting and grammar edits.	9/05/23
8.3	Replaced Shift Manager with Manager of Real-Time Operations.	9/11/23

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