 California ISO	Operating Procedure	Procedure No.	2340
		Version No.	3.4
		Effective Date	4/23/24
Ancillary Service Availability Validation		Distribution Restriction: None	

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Purpose

Provides guidelines for Ancillary Services that are not procured from resources that are out of service due to Forced Outages.

1. Responsibilities

CAISO Generation Dispatcher	Communicate with SCs/Participating Generators regarding Forced Outages
Transmission Dispatcher (TD) Participating Generator (PG)	Communicate with the CAISO Generation Dispatcher regarding Forced Outages

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2. Scope/Applicability

2.1. Background

Describes the availability of Ancillary Services.

2.2. Scope/ Applicability

This procedure applies to the availability of Ancillary Services.

3. Procedure Detail

3.1. Contingency Reserve (Operating Reserve - Spinning & Operating Reserve - Supplemental)

The following describes the steps that are taken to meet the NERC contingency reserve requirements and Control Performance Standards in Real-Time:


Sufficient contingency reserves are procured in the Day-Ahead Market (DAM) to meet 100% of the contingency reserve Ancillary Service (AS) requirement associated with the CFCD to satisfy Current NERC Standards. If additional contingency reserves are necessary after the DAM then the additional contingency reserves are purchased through the RTM. The contingency reserve requirement is calculated by taking the greater of the:

1. Most Severe Single Contingency (MSSC)

This requirement refers to the hourly MSSC determination which may include loss of the largest online generator (e.g., Diablo), loss of import schedules across one transmission service (e.g., PDCI), or the loss numerous generating resources connected via a RAS scheme or single transmission line.

2. The sum of three percent of hourly integrated Load (generation minus station service minus net actual Interchange) plus three percent of hourly integrated generation (generation minus station service).

- For Day-Ahead procurement purposes, the three percent Load plus three percent Generation NERC requirement may be substituted with a larger percentage value, based upon the load forecast and greater than or equal to 6.0 percent of the Day-Ahead load forecast.

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3. Online Photovoltaic Solar

- This requirement is based upon the loss of some solar resources with earlier-based inverters in certain voltage fluctuation situations. Based upon the studied and observed occurrences, this AS procurement target may be equal to or greater than **10%** of the hourly sum of all the solar resources at-risk forecast.


3.2. Ancillary Services Availability Validation

3.2.1. Forced Outages

Forced resource Outages are tracked to help determine AS availability through the following methods:

Transmission Dispatcher (TD), Participating Generator (PG)
1. If a resource is not able to provide its AS award, <ul style="list-style-type: none"> • Inform the CAISO Generation Dispatcher by submitting an Outage Request via the outage management system.

CAISO Generation Dispatcher
1. If monitoring indicates that a resource is unable to provide AS award and an Outage Request or a phone call is not received from the SC or Participating Generator, <ul style="list-style-type: none"> • Contact the responsible party to determine if the separation is due to a Forced Outage.

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CAISO Generation Dispatcher, Transmission Dispatcher (TD), Participating Generator (PG)
<p>1. Create an Outage entry via the outage management system for resources that are forced out of service. The record includes the following information:</p> <ul style="list-style-type: none"> • Resource • SC/Participating Generator • Amount of resource unavailable • Time the resource is unavailable • Estimated time of return • Time the resource was available • Reported cause <p><i>Note: The Outage Scheduler is automatically updated to reflect the time duration of the Forced Outage whenever an Outage entry is submitted via the outage management system. The Outage Scheduler is updated to reflect the return of the resource at such time when the SC declares the resource available by updating the Outage entry in the outage management system. Out of service resources are blocked from Day-Ahead AS procurement.</i></p>

4. Supporting Information

Operationally Affected Parties


Shared with the Public

References

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

CAISO Tariff	
NERC Requirements	BAL-002-3 R2; BAL-002-WECC-3 R1, R2
WECC Criterion	
Other References	WECC-0115 BAL-002-WECC-3, Requirement R2, Compliance Waiver Extension

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Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have that meaning when capitalized in this Operating Procedure.


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

None

Version History

Version	Change	Date
2.3	Section 1: Changed Interchange Scheduler (IS) to Transmission Dispatcher (TD) Section 3.2.1: In tables 1 & 3 changed Interchange Scheduler (IS) to Transmission Dispatcher (TD). Minor formatting and grammar updates.	4/15/19
3.0	Periodic Review: Removed references of 2340A, including Appendix, as it retired 3/31/20. Removed history prior to 5-years.	9/15/20
3.1	Updated NERC standards references. Replaced instances of ISO with CAISO.	1/14/21
3.2	Removed requirement to procure 50% spin in Section 3.1. Updated Standard versions in References section.	4/01/23
3.3	Periodic Review: Updated from Generation "Desk" to "Dispatcher". Removed history prior to five years.	12/11/23
3.4	Section 3.1: Updated Item with for Solar contribution to contingency reserves to 10% and minor edit to second paragraph above. Removed history prior to five years.	4/23/24

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5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

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

Frequency

Every three (3) Years.

Appendix

No references at this time.