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Responsibilities

CAISO Generation Dispatcher

CAISO Transmission Dispatcher

CAISO Manager, Real-Time Operations

CAISO Director of Real-Time Operations

CAISO Market Operator

CAISO Operations Planning

CAISO Operations Planning Engineer

CAISO Day-Ahead Operations Engineer

CAISO Power Systems Technology Operations (PSTO)

CAISO Critical Systems Support (CSS)

Scheduling Coordinator (SC)

A. Running the Day-Ahead Market Procedures

A.1. Purpose

This procedure provides guidelines for and describes:

- Preparing for and running the Day-Ahead Market (DAM) activities;
- Manual Commitment and Dispatch of Reliability Must Run (RMR) Units to meet local reliability needs, manage Congestion on on-competitive paths, provide Ancillary Services (AS), and provide Voltage Support, if necessary;
- Issuing Exceptional Dispatches (ED), making notifications and logging of ED in the Post-Day-Ahead timeframe (prior to Real-Time);
- Procurement and availability validation of Ancillary Services and makes reference to Ancillary Services that are not procured from resources that are out of service due to planned Outages.
- Procurement and availability of Ancillary Services.
- Identify and track metrics for continuing review and improvement, to increase confidence in overall market LMP quality and resulting Schedules (covering Energy, Ancillary Services, and RUC Capacity), and to identify and provide feedback on operational issues requiring policy level considerations.
- Suspend or intervene in the Day-Ahead Market.

A.2. Scope/Applicability

A.2.1. Background

The policy for the Day-Ahead Market can be found in the Business Practice Manual for Market Operations. The CAISO procures Regulation, Spinning Reserve, and Non-Spinning Reserve in the DAM and Real-Time Market (RTM), so that the total procurement meets or exceeds the WECC Operating Reserve Requirements and NERC Control Performance Standards. Ancillary Services are procured at the lowest overall cost, while maintaining the competitiveness of the markets.

RMR Units may be manually committed and dispatched by the CAISO to meet certain local area operating constraints, address local reliability issues, mitigate Congestion on non-competitive paths, meet shortfalls in the AS market, provide Voltage Support, or Supply needs that cannot be met solely by the available market resources.

The CAISO will make every effort to use ED only as necessary for conditions described in Section C.3.1.2 Day-Ahead Exceptional Dispatch. During emergency operations, or when the CAISO is unable to maintain System Reliability by using resources available to the CAISO market, the CAISO is authorized by the CAISO Tariff to arrange ED for Energy transactions with Scheduling Coordinators and Non-Scheduling Coordinators. This may include, but is not limited to, forced shut-downs or forced start-ups of Generation, Dynamic System Resources, and Participating Load. The CAISO may also enter into agreed upon transactions with Interchange Resources (Imports and Exports).

Note: *A Day-Ahead RMR dispatch is not considered an Exceptional Dispatch; however, the ED tool is utilized. See Section B.3 Day-Ahead Reliability Must Run Unit Commitment and Dispatch for more details.*

The CAISO intervenes in the operation of the Day-Ahead Market (DAM) if it is determined that such intervention is necessary to correct the Day-Ahead Market inputs to better align with Real-Time conditions. These interventions may occur on a Balancing Authority Area-wide basis or with respect to islanded portions of the Balancing Authority Area.

The CAISO does not intervene or suspend the operation of the Day-Ahead Market unless there has been a total or major collapse of all or part of the CAISO Controlled Grid and the CAISO is in the process of restoring it or if the CAISO anticipates that it will not publish DAM results for any reason.

Through a progressive process over a rolling three day period the Validation and Review Team attempts to validate the quality of market solutions for each day as necessary.

Primary daily objectives of the validation of the quality of market solutions for each day are:

- Validate the overall market run is correct and consistent.
- Review the feasibility of the market outcome and its reliability implications.
- Validate that outage topology is correctly depicted in the respective day's market model.
- Identify and validate Extra Long Start Unit Commitments.
- Identify and validate potential Non-RA Unit Commitments.
- Identify and validate expected Real-Time mitigation potential (including potential Exceptional Dispatches).

A.2.2. Scope/ Applicability

This procedure is applicable to

- The Day-Ahead Market activities,
- The commitment and Dispatch of RMR units in both the Day-Ahead and Real-Time,
- Cases where an Exceptional Dispatch is necessary prior to running the Day-Ahead Market,

- Procurement and availability of Ancillary Services,
- Day-Ahead Market suspension and intervention, and
- Validation of the quality of market solutions for each day.

A.3. Day-Ahead Market Procedure Detail

A.3.1. Prior to DAM Close

A.3.1.1. Three (3) Days Out Results Review

Take the following actions to review the results of the three (3) days out power flow that was run the night before:

CAISO Generation Dispatcher / CAISO Market Operator / CAISO Day-Ahead Operations Engineer
Between 0600 & 0900 PPT Three (3) Days Prior to the Operating Day 1. **Review** the results of yesterday's D+3, D+2, and Day-Ahead (DA) for binding constraints that require resolution. 2. If any extremely Long-Start Commitment (ELC) is required, **confirm** that Bids are available: • If Bids are necessary, **notify** the SC to submit appropriate Bids. 3. **Review** grid events that have taken place overnight that may require re-runs of power flows.

A.3.1.2. MOC Constraint

The following describes the Minimum On-line Commitment (MOC) constraint set-up process:

CAISO Generation Dispatcher / CAISO Market Operator / CAISO Manager of Real-Time Operations
1. **Determine** if any MOC constraints need to be enforced for the current DAM (D+1), Prior to 10:00 PPT: • If there are at least two (2) market resources defined in the MOC constraint, and there is enough RA, SR, RMR or previous CPM capacity to meet the MOC requirement, the MOC constraint may be **created** and **utilized**. • If there are less than two (2) market resources defined in the MOC constraint, the MOC constraint may **not** be **created** and **utilized**.

CAISO Generation Dispatcher / CAISO Market Operator / CAISO Manager of Real-Time Operations

- If there is not enough RA, SR, RMR, or previous CPM capacity to meet the MOC requirement, the MOC constraint may **not** be **created** and **utilized** unless additional capacity is made available through a change in unit status or an Exceptional Dispatch CPM is made for adequate capacity.

Note: *RA substitutions must meet 06:00 DAM substitution requirements to count towards MOC capacity requirements.*

2. If there are MOC requirements that need to be enforced,
   - **Use** the applicable procedure or outage card to determine the requirement(s).
   - **Enter** requirements into MOC display.

A.3.1.3. Manual ELC Process

The following describes the Extremely Long Start Commitment (ELC) determination process. This is a backstop manual process to the automated D+2 RUC commitment process:

CAISO Generation Dispatcher / CAISO Market Operator

Two (2) days prior to the Operating Day

1. **After** the power flow study run:
   - If an ELC unit is needed and the identified unit was offline:
     - **Place** a phone call to the SC and
     - **Inform** the SC that the unit needs to be started and available at its minimum Load for the indicated period of time.
   - If an ELC unit is needed and the identified unit was online or offline:
     - **Inform** the SC to place a Bid in SIBR for the indicated amount to at least cover the minimum up time.

Prior to 0900 PPT One (1) day prior to the Operating Day

1. **Verify** the following for the ELC units that were required to Start-Up yesterday for tomorrow:
   - They have Bids submitted in the DAM for the next day.
   - The unit has been manually placed in the ELC determination section of IFM for the indicated date/time and minimum Load MW.

See *Section C.3 Day-Ahead Exceptional Dispatch for detail.*

A.3.1.4. RUC Bid Determination

The following describes the process of determining historical bid use for D+2 RUC:

CAISO Market Operator
1. **Consider** using historical energy bids to commit resources in D+2, **taking** the following into consideration: • Large differences in load forecast (i.e., holidays) • Significant Outages in previous 7-days • Network Model or RA updates • Other reliability concerns 2. If historical bids are determined necessary: • **Evaluate** the historical bids in the previous 7-days. • **Select** the applicable and reflective bid set to address the consideration. • **Make** the adjustment.

A.3.1.5. Ancillary Services Determination

Take the following actions to determine the DAM Ancillary Services (AS) requirements after CFCD is published:

CAISO Market Operator
1. **Confirm** all input parameters for the AS Requirements display. 2. **Retrieve** the Load Forecast and **populate**. 3. **Check** with the CAISO Manager of Real-Time Operations (or OE) for forecasted internal path transmission constraints, transmission Outages, or Generation limitations that render the AS undeliverable. 4. **Determine** if transmission constraints or Generation limitations exist: • If there is a transmission constraint, **prepare** the AS Block Tool: ○ **Identify** the applicable Unit(s) associated with the constraint. ○ **Limit** each applicable Unit(s) AS product availability in the AS Block display. ○ **Log** the event in SLIC. ○ **Post** a System Operating Message on OASIS: ▪ *AS Blocking: "Based on historic patterns of power flows and Transmission and Generation availability, the CAISO is forecasting congestion in the _____ area. As a result, the CAISO* may be limiting or not awarding Ancillary Services to resources in that area. *This restriction will be in effect for Operating date _____ from HE___ through HE___ for the DA/RT markets."*

CAISO Market Operator

- If there is a Generation limitation (that is not due to congestion), including air emissions, or Start-Up limitations:
  - If the limitation is provided by the Scheduling Coordinator, **verify** if an approved outage card is on file:
    - If not, **refer** the SC to create an Outage for proper recordation of the limitation.
  - If the limitation is brought by CAISO Operations Engineering Services, **verify** if an approved outage card is on file:
    - If not, **refer** to CAISO Operations Engineering Services to create an Outage for proper recordation of the limitation.
  - If the limitation is brought by the CAISO Manager of Real-Time Operations, from the CAISO Generation Dispatcher, **verify** if the approved outage card was provided by the CAISO Generation Dispatcher:
    - If not, **ensure** the CAISO System Operator/CAISO Manager of Real-Time Operations **obtains**, and **approves**, a valid outage card.
  - The CAISO Market Operator will not **incorporate** a generation limitation into a Day-Ahead run unless the limitation has been properly reflected in an approved outage card.
    - Outage card approval serves as notification to the Scheduling Coordinator of their unit's limitation.

See *Section D.3 Ancillary Service Procurement and Availability Validation for details.*

A.3.1.6. Constraint Enforcement

The following describes the steps to determine if constraint enforcement is necessary:

CAISO Market Operator

1. **Determine** if any constraint enforcement is necessary, based on D+2 or D+3 studies.
2. **Verify** enforced contingency, flowgate and nomogram constraints in the market software.

See *Section E.3 Pre-Market Validation for details.*

A.3.1.6.1. Return of Transmission prior to DAM Run

The following process describes the event where a transmission outage returns early to service prior to the DAM Run and after the D+2 power flow study:

CAISO Market Operator / CAISO Transmission Dispatcher

1. If a transmission outage returns to service earlier than the scheduled outage end date, **and** there is sufficient time to make any necessary ETC updates and notifications per CAISO Operating Procedure 3640 Existing Transmission Contract Calculator Update, Section 2.2 Scope/Applicability:
   - **Update** the activation status of any associated Market elements (i.e., Nomogram, MOC, Contingency, Flowgate, Conformances) **via** OMS.
   - **Update** the ETC limits.

     Note: *This is performed automatically via the ETC Calculator.*
   - **Send** out an MNS message (CAISO Transmission Dispatcher).
   - **Execute** the D1 run as normal.
2. If a transmission outage returns to service earlier than the scheduled outage end date, **and** there is insufficient time to make any necessary ETC updates and notifications, per CAISO Operating Procedure 3640 Existing Transmission Contract Calculator Update, Section 2.2 Scope/Applicability:
   - **Update** the activation status of any associated Market elements (i.e., Nomogram, MOC, Contingency, Flowgate, Conformances) via OMS.

     Note: *The ETC Limits that will be utilized for the next Day-Ahead trade date are available in the OASIS Current Transmission Usage Report at 09:00. Note that any Real-Time changes to ETC limits to this report between the timeframe of 09:00 and Day-Ahead Market close (10:00) will not be utilized in Day-Ahead, per Operating Procedure 3640 Existing Transmission Contract Calculator Update. After the Day-Ahead publishes, the ETC limits used in Day-Ahead will be available in the OASIS Transmission Usage Interface report.*
   - **Send out** an MNS message (CAISO Transmission Dispatcher).

     Note: *While an ETC Limit may be changed between 09:00 and 10:00, it will not be included in the Day-Ahead market.*
   - **Execute** the D1 run as normal.

A.3.1.7. Closing the DAM

The following describes the actions necessary to close the DAM:

CAISO Market Operator
1. **Verify** that the DAM closed automatically at 10:00 PPT (or as soon thereafter as possible). 2. If there is a disruption that prevents the DAM from closing on time: • **Send out** a market message to inform market participants that the DAM will close late. • **Consider closing** the DAM as soon as possible, by **working** with the Technical Team to resolve any issues. ***Note**: The Market Operations BPM allows postponing the closing of the DAM for a maximum of two (2) hours in extreme cases.* 3. **Transfer** the DAM input data **via** the UI transfer input process.

A.3.1.8. Suspending Convergence Bidding prior to closing the DAM

The CAISO has the authority to suspend Convergence Bidding when necessary, per Tariff Section 7.9.3. This can be performed to bids already submitted or to bids that will be submitted in the future either at the PNode, Aggregated PNode, or all PNodes level(s).

Suspending Convergence Bidding is considered a rare, last-resort action, only performed where the inclusion of such Convergence Bidding risks:

- Sufficient Energy or Ancillary Service bids
- Process failure of bids
- Achieving alternating current (AC) solutions over an extended period of time
- Enforcement of natural gas constraint(s)
- Where not taking such action may affect System Reliability or grid operations

CAISO Director of Real-Time Operations, CAISO Manager of Real-Time Operations and CAISO Market Operator
1. **Confirm** decision to limit or suspend Convergence Bidding by PNode, Aggregate PNode, or all PNode levels. 2. **Update** the status of the desired PNodes in the market as unable to accept Convergence Bids. 3. **Send out** a market message to inform market participants that the DAM will not process Convergence Bids on desired PNode list. • **Provide** such notification in advance, whenever practicable.

CAISO Director of Real-Time Operations, CAISO Manager of Real-Time Operations and CAISO Market Operator
***Note**: Per Tariff requirements, within two (2) business days, the CAISO will provide information justifying the decision to suspend or limit Convergence Bidding.* 4. **Execute** the D1 run as normal.

A.3.2. After the DAM Close

A.3.2.1. Run MPM

The DAM has been closed (see previous section). The following describes the steps to run the MPM process:

CAISO Market Operator
1. After Clean Bids have been transferred: • **Review** Unit Commitment Request and Validation document. • **Adjust** initial conditions to reflect Exceptional Dispatch commitments issued, after previous day results have been published. 2. **Input** MOC constraints and requirements into the market software. 3. After **adjusting** initial conditions, **Execute** MPM. 4. **Review** the output results. 5. **Contact** CAISO Operations Engineering Services for a Congestion verification, after a review is complete. • If output of the MPM is satisfactory (i.e., anticipated local reliability needs will be met), ○ **Go** to Section A.3.2.2 Run IFM, otherwise, **notify** the CAISO Manager of Real-Time Operations.

CAISO Generation Dispatcher / CAISO Market Operator
1. If additional RMR commitments are necessary: • **Request** approval from the CAISO Manager of Real-Time Operations to commit the RMR units. • **Create** manual RMR commitments of the specified unit(s). • **Log** this activity in SLIC. • **Re-run** the MPM. • **Go back** to Section A.3.2.1 Run MPM.

A.3.2.2. Run IFM

The following describes the IFM process:

CAISO Market Operator
1. **Execute** the IFM. 2. **Determine** if the IFM has run properly (i.e., look at the execution messages for errors and warnings): • **Review** results, ○ If adjustments are necessary and the adjustments won't delay the IFM by more than approximately one hour: ▪ **Make** the adjustment. ▪ **Re-run** MPM, then IFM. ▪ **Re-evaluate** the results after finishing the MPM & IFM runs.

A.3.2.3. Run RUC

Take the following actions to make the necessary adjustments in the RUC process:

CAISO Market Operator
1. As described in Tariff Section 31.5.3.1.1, **consider adjusting** the RUC target adjustment as necessary, taking the following into consideration: • Demand Response • Load Forecast errors – Risk Predictor • Fire dangers – Cal Fire and PTO updates • Weather changes – updated weather forecasts and PTO updates • Reliability Coordinator next-day analysis – from the RC • Potential loss of resources – test energy, update from PTOs, subsequent Outages • Stranded Capacity – potential for transmission Outages or overloads • **Address** reliability concerns or need for additional capacity "insurance" to cover the following operational risks: ○ Tighter Resource Adequacy (RA) supply margins, as identified by the Assistance Energy Transfer (AET) Yellow System Conditions Alert email,[1] including days where the CAISO opts-in to AET. ○ Weather forecasts where additional Regulation is procured to cover cloudy and other weather-related volatility.

[1] See Energy Imbalance Market BPM, under Section 11.3.2 Resource Sufficiency Evaluation for details on the AET opt-in / opt-out criteria for the CAISO BAA.

CAISO Market Operator

- West-wide grid impacts where the WEIM footprint is experiencing weather, as designated by a Peak Outlook alert as extreme conditions within the 95-98th percentile of normal ranges.
- Adjustments for reducing uncertainty during times of less operational uncertainty, and increasing during times of more operational uncertainty. The following conditions-based values allow for generally lower percentile adjustments, based upon net load uncertainty and the described conditions above:

VER and Load Uncertainty Level	Percentage Coverage
Very Low	No RUC Adjustment
Low	25% of Max Uncertainty
Moderate	50% of Max Uncertainty
High	75% of Max Uncertainty

Note: *During lower uncertainty and forecast deviations time periods (such as peak solar hours), dispatchable resources in the market (including WEIM transfer) and regulating resources can effectively manage the determined uncertainty.*

- **Consider** RUC adjustments to only morning and evening peak hours (e.g., Morning HE07-HE09 and Evening HE19-HE21) where the exact hours may be adjusted due to seasonal shifts.

2. If a RUC modification is required for any reason (*Example: The net short to reflect Demand Curtailment available pursuant to a Demand Response Program):*
   - **Insert** the appropriate values in the Manual Adjustment columns (MW or %) and the Reason from the list above into the RUC Net Short screen.
   - Upon confirmation with the Manager of Real-Time Operations,
     - **Apply** the RUC Net Short and **execute** RUC.

   Note: *The RUC Adjustment values and reason are automatically published to OASIS.*

CAISO Market Operator / CAISO Day-Ahead Operations Engineer / CAISO Manager of Real-Time Operations

1. **Evaluate** the RUC output.
2. If additional adjustments are necessary and the adjustments won't delay the IFM by more than one hour:
   - **Make** the adjustment.
   - **Re-run** MPM and IFM (if necessary).
   - **Re-evaluate** the results after finishing the MPM/IFM run/RUC runs.

CAISO Market Operator

1. **Evaluate** the DAM results for Overgeneration conditions:
   - If the possibility for Overgeneration exists, at the 1530 meeting,
     - **Discuss** the potential for, and the estimated magnitude of, the Overgeneration in the CAISO Balancing Authority relevant to particular hour(s) of the Trading Day.
2. **Evaluate** the D+2 RUC commitments:
   - If the possibility for erroneous data inputs, changing system conditions, or reliability concerns exists:
     - **Discuss** adjusting D+2 RUC startup commitment(s).
     - **Obtain** an approval from the CAISO Manager of Real-Time Operations.
     - **Make** the adjustment.
     - **Log** the event in SLIC.
3. **Verify** that DAM results are successfully published.

CAISO Generation Dispatcher / CAISO Transmission Dispatcher / CAISO Market Operator / CAISO Day-Ahead Operations Engineer / CAISO Manager of Real-Time Operations

1. **Evaluate** DAM results and **plan** and **set-up** future market runs.
2. ***Run*** *D+2 & D+3 Markets.*

   Note: *The D+1 processes are complete at this point.*
3. **Attend** the 1530 Grid Ops meeting to **discuss** the results of the DAM and potential Exceptional Dispatches for RTM.
4. **Consider** the need to **issue** Exceptional Dispatches.

   Note: *This may be due to system, zonal, or local reasons including, but not limited to, any of the following:*
   - *Load Forecast errors – Risk Predictor*

CAISO Generation Dispatcher / CAISO Transmission Dispatcher / CAISO Market Operator / CAISO Day-Ahead Operations Engineer / CAISO Manager of Real-Time Operations
• *Fire dangers – Cal Fire and PTO updates* • *Weather changes – updated weather forecasts and PTO updates* • *Reliability Coordinator next-day analysis – from the RC* • *Potential loss of resources – test energy, update from PTOs, subsequent Generation Outages* • *Actual or potential forced transmission Outages after the DAM closed* • *Stranded Capacity – potential for transmission Outages or overloads* • ***Address** reliability concerns*

A.3.2.4. Market Disruption Process

The following describes the process for the CAISO Market Operator, if during the execution of any market module (i.e., MPM, IFM, and RUC) a failure occurs requiring manual intervention.

CAISO Market Operator
1. If a DAM module fails and is not able to complete, • **Inform** the IT support groups of the Market Disruption and **jointly investigate** the cause of the failure. 2. **Resolve** the issue according to the cause of failure. ***Note:** Market Operator actions may include, but are not limited to, removal of invalid Bids (effectively making the resource non-participating in CAISO market), remodeling of incorrectly modeled outages, and coordinated fallback to backup servers.* 3. **Re-run** DAM module and **continue** with the normal DAM process. 4. **Create** SLIC log for a Market Disruption that **includes** the cause of the failure, actions taken to resolve the issue, affected participants (if any), and communications made. 5. If a market participant(s) is directly affected by the Market Disruption, • **Notify** market participant(s) through proper communication channels (Market Notification System (MNS) phone). 6. In the event that a Bid is removed from a market run to mitigate Market Disruption, the CAISO Market Operator will: • **Notify** the Scheduling Coordinator **via** phone call immediately, or as soon as practicable, but no later than three (3) business days after the applicable Bid was removed and • **Will provide** information specifying when its Bid was removed and the nature of the disruption.

CAISO Market Operator
See *Section F.3 Day-Ahead Market Suspension and Intervention for details.*

A.3.2.5. D+2 & D+3 Determination

The following describes the process of running and reviewing the results of the two (2) day out power flow, and running the three (3) day out power flow:

Note: *The DAM processes should be complete at this point.*

CAISO Market Operator
1. **Run** a D+2 power flow with Scheduled Outages included, as needed. 2. **Review** MPM results for the following: • Nomogram Constraints Static Data effect • Interconnection Constraints (ITCs) • Contingency Constraints • Flowgate violations • Commitment of any ELC units

CAISO Generation Dispatcher / CAISO Market Operator / CAISO Operations Engineering Services / CAISO Manager of Real-Time Operations
1. If ELC units are selected by MPM, • **Determine** the Long-Start requirement commitment of necessary unit(s), depending on anticipated system conditions. ***Note:*** *DAM Bids from ELC resources are deemed as Bids for the day after the DAM.* ***Refer*** *to CAISO Operating Procedure 2330 Real-Time Exceptional Dispatch for a description of ELC units that require Start-Up steam from another unit and the combined estimated Start-Up time.* 2. If an ELC unit is needed, but the identified unit was not selected, • **Determine** the Long-Start requirement commitment of necessary unit(s), depending on anticipated system conditions and • **Create** an Exceptional Dispatch, if necessary.

CAISO Generation Dispatcher
1. If Operator identifies the ELC unit as necessary, the CAISO Manager of Real-Time Operations will have the Generation Dispatcher **notify** the SC, within the Start-Up time period for the ELC resource, that the resource is committed for Operating Day two (2) days out. 2. If Operator does not commit the ELC unit, • **Take** no action. ***Note**: If an ELC unit is committed, the CAISO Tariff requires the ELC resource to submit the same Bid in the DAM for the next day.* 3. **Enter** the required manual commitment in the DAM. 4. **Log** this activity in SLIC.

Scheduling Coordinator (SC)
1. If the CAISO dispatched your ELC unit, • **Submit** the same Bid in the DAM for the target day. ***Note**: If a subsequent Bid for the ELC unit is not submitted in the DAM then the unit will not be paid. If the unit is not started then it must have an Outage card submitted.*

CAISO Market Operator
1. **Run** a three (3) day out power flow with scheduled Outages included, as needed.

A.3.2.6. Generator Decommitment

The following describes the actions for post IFM shutdown issues:

Scheduling Coordinator (SC)
After Reviewing the post IFM/RUC Advisory Schedules, if there is a concern that a resource will not be able to meet its DA Schedule: • **Contact** the CAISO Generation Dispatcher. • **Request** if the resource is required for system stability or reliability. • **Advise** the CAISO of the SC's intent to continue to Bid the resource in RT or not submit Bids.

CAISO Generation Dispatcher

1. If an SC has requested to shut down or reduce a resource due to a concern that the resource will not be able to meet its DA Schedule:
   - **Inform** the SC if the resource is needed for system stability and/or reliability:
     - If the resource is required for reliability,
       - **Refer** to CAISO Operating Procedure 2330 Real-Time Exceptional Dispatch to **determine** if the units should be **Dispatched** under that method.
     - If the resource is required for stability, as long as Bids will be provided,
       - No operator action is required.
2. If IFM/RUC has issued an advisory Schedule that will shut down or limit the resource from meeting its minimum Start-Up/shut-down requirements:
   - **Consider issuing** an Exceptional Dispatch.
   - **Refer** to CAISO Operating Procedure 2330 Real-Time Exceptional Dispatch.

B.3 Day-Ahead Reliability Must Run Unit Commitment and Dispatch Procedure Detail

B.3.1. Energy Dispatching

B.3.1.1. Dispatch Philosophy

Manual RMR dispatch in the Day-Ahead is determined based upon next day power flow studies and two-day forward (D2) market results. RMR dispatch may be determined where:

1. Minimum Online Capacity (MOC) results in D2 indicate a local shortage of MWs required for voltage/thermal support,
2. D2 Power Flow results indicate an infeasibility based upon a shortage of available local market resources, or
3. Non-competitive congestion is determined locally, where the given Legacy RMR location based upon its shift factors, the RMR resource can provide congestion relief.

CAISO Manager of Real-Time Operations / CAISO Market Operator
In **coordination** with the CAISO Market Operator, 1. **Review** the power-flow results, **including** dispatch of RMR. ***Note:*** *Per the CAISO Tariff, an RMR resource can receive a manual RMR Dispatch in Day-Ahead.* • If a manual RMR is required in Day-Ahead, ○ **Create** a Day-Ahead manual RMR dispatch. **Refer** to CAISO Desktop Procedure RTM-004 Day-Ahead ED Guide and Logging Instructions.

C.3 Day-Ahead Exceptional Dispatch Procedure Detail

C.3.1. Day-Ahead Exceptional Dispatch (ED)

The following provides guidance for issuing a Day-Ahead ED:

C.3.1.1. Description of an Exceptional Dispatch

An ED is a commitment or Dispatch Instruction by CAISO Operators, that is not a result of the market optimization in the IFM, RUC or RTM. To the extent possible, the CAISO utilizes market solutions before issuing an ED.

C.3.1.2. Day-Ahead Exceptional Dispatch

Take the following actions to issue an Exceptional Dispatch prior to running the Day-Ahead Market:

CAISO Generation Dispatcher

1. Prior to running the DAM, **determine** the need to Day-Ahead ED a resource for a reliability purpose.
    - Valid reasons for **creating** a Day-Ahead ED may include:
        - Where a Day-Ahead ED provides a more accurate Gas-Burn report, especially during gas limitations;
        - In support of a multi-day transmission outage, requiring a single-resource online for congestion and reliability purposes;
        - A large resource may be given a Day-Ahead ED for capacity purposes, to ensure the resource is online and stable before a series of high-load summer days.
    - After the above considerations, if it is still determined that a resource should be required in the Day-Ahead solution, a Day-Ahead ED may be **created**.

    Note: *Any unit that was exceptionally dispatched in the Day-Ahead Market must be added to the RT ED Tool for the duration of the Exceptional Dispatch period (in some cases it may require adding it daily).*
2. **Confirm** with the Manager of Real-Time Operations and the Market Operator, any Day-Ahead ED required for reliability.
3. **Confirm** RA status and available RA MWs.

    Note: *If the exceptionally dispatched resource is a non-RA resource, an ED may trigger a CPM offer at PMin. If the CPM is accepted, then there will be a must offer obligation for the CPM amount.*
4. **Inform** the SC about the Exceptional Dispatch commitment and duration for CAISO Market Operator.
5. **Utilizing** the ED Tool,
    - **Confirm** RA status and available RA MWs.

CAISO Generation Dispatcher

- **Create** an Exceptional Dispatch and
- **Commit** those resources that are required to meet the reliability requirements of the Balancing Authority Area.

6. **Determine** the code in CAISO Operating procedure 2330C Exceptional Dispatch Instruction Type Codes.
7. To **ensure** proper settlement Start-up cost and Bid Cost Recovery (BCR), for all Exceptional Dispatches in either the Day-Ahead or Real-Time timeframe, the ED timeframe shall be **entered** as the maximum of either:
   - ED timeframe length required for Operations and reliability needs;
   - The length of Minimum On line registered in the MasterFile.

CAISO Market Operator

1. Prior to running the DAM, if a resource is needed for reliability and is not an ELC resource awarded during the D+2 market run (or during the 48-hour or 72-hour RUC run), then;
   - **Confirm** with the Generation Dispatcher, the resource and timing requirements.
   - **Match** RT Exceptional Dispatch created in the RT ED Tool.
   - For ELC in Day-Ahead,
     - **Refer** to CAISO Desktop Procedure RTM-004 Day-Ahead ED Guide and Logging Instructions.
2. If after the DAM published, additional capacity is required to meet reliability is needed,
   - **Refer** to CAISO Operating Procedure 2330 Real-Time Exceptional Dispatch.
3. For any resources that were issued ED commitments after the DAM published,
   - **Set** initial conditions for the next trade day for the applicable instruction time periods of the ED commitments.
     - For any Test Energy ED's where the Constraint Type = "Test," the initial conditions are NOT **set** for the next trade date.
     - After the completion of RUC, **review** the results.
4. **Log** the event and **indicate** this was a Day-Ahead ED.

C.3.1.3. ED using SLIC Logging

The following describes SLIC logging for ED:

CAISO Market Operator
SLIC Log Entry 1. Log Type - Day-Ahead Desk 2. Title - Extra Long Start Commitments (ELC) ***Note:*** *Do not utilize the "EDE Instructions for Generators/Corrections-96 hour" log type for Settlement purposes.* 3. Res Type - Generator 4. BA - **Select** BA Name from drop-down list 5. Resource - **Select** Resource from drop-down list 6. Event DTS - Date and Time to reflect the effective start date and time of the Exceptional Dispatch 7. Contact DTS - Date and Time to reflect the effective start date and time of the Exceptional Dispatch 8. Contact Name - Manager of Real-Time Operations or Generation Dispatcher Contact name 9. Short Description - **Enter** "DA ED for "*resource name*" 10. Operating Date - Exceptional Dispatch Energy operational date 11. Instruction Type - **Select** the EDE instruction type from operating procedure 2330C Exceptional Dispatch Instruction Type Codes. 12. Reason - **Select** drop-down reason such as "Unit Commitment – Transmission Outage." 13. Other Reason - **Type** "DA ED" 14. GOTO MW - **Type** GOTO MWS (absolute value) 15. Start Verbal Dispatch - **Type** EDE timing (Hour) 16. End Verbal Dispatch - **Type** EDE end of Dispatch (Hour) 17. Constraint Type - **Select** "Minimum" for PMin, or Fixed or Maximum. 18. Text - **Type** "DA ED for *resource name*" and any other pertinent details.

C.3.1.4. Energy, Reserves and Congestion Mitigation

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

Reason	Dispatch Description
Energy	• RA, partial RA, non-RA, or CPM unit Capacity dispatched as Energy in RT is done through the market application RTM. Other dispatches should be done with the Exceptional Dispatch Tool, and when possible, dispatched economically.
Congestion Mitigation	• All resources can be dispatched through the market application, as required for Congestion Mitigation. • Capacity with an effectiveness factor or determined effective by Operating Engineer (OE) study can be dispatched, as needed, through Exceptional Dispatch for Congestion Mitigation outside of the market applications, economically utilizing the Exceptional Dispatch tool.

C.3.1.5. Economic Considerations

The following describes the economic considerations that should be considered before issuing an ED:

- Units that have been awarded a Day-Ahead RUC or a Spin/Non Spin Schedule.
- For a unit getting the standard CPM rate of $55,000/MW-year, each MW of CPM designation will cost $4,583 per month.
- A unit electing Supplemental Revenues (SR) and bidding $1,000/MWh can earn its revenue cap in approximately 7-10 hours, depending on its Default Energy Bid (DEB). However, the revenue cap is set by the CPM rate and the available MWs of the unit. Hence, an SR unit can, in principle, earn no more than an equally sized CPM resource.
- A unit's SR cap is set by its PMax. So, an SR unit that is twice the size of a unit electing the CPM compensation can earn approximately double in Supplemental Revenues (SR), that the CPM unit can earn in CPM payments. This requires the SR unit to be Exceptionally Dispatched above PMin for sufficient hours, in order to earn that additional revenue (7-10hrs).
- An SR unit's Bids can be updated hourly. Therefore, the Bid for one hour may not be an indication of what the cost of the SR unit will be in the next hour. Assume that any SR unit that is subject to ED will increase its Bid in the subsequent hour, where possible.
- All ED to non-RA units with CPM election should be reviewed for upcoming Scheduled Outages during the 30-day period.
- Units with RA<PMin are treated as RA=PMin.

- Units electing SR and Committed at PMin receive no Supplemental Revenues until dispatched above PMin. Units electing CPM get paid a Capacity payment.
- Generally, commitment of SR resources is cost effective for smaller units and resources required near their PMin for most hours during the 30-day period.

D.3 Ancillary Service Procurement and Availability Validation Procedure Detail

D.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:

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:

- 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.
- 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.
- 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.

Day-Ahead and D+2 AS requirements are posted on OASIS, under Ancillary Services.

Note: *Dynamic imports and pseudo tie imports are included with hourly integrated generation.*

Minimum and/or maximum AS limits may also be determined for each/any AS Region.

Consider one or more of the following factors:

- Path Contingency de-ratings (example: loss of Path 26),
- Path OTCs,
- Largest single Contingency (on-line Generating Unit or in-service transmission),
- Forecasted path flows, and
- Other anticipated local operating conditions for Load and/or Generation.

CAISO Generation Dispatcher / CAISO Market Operator / CAISO Manager of Real-Time Operations
1. If it is necessary for the CAISO to establish a procurement limit or change a procurement limit for an AS Region: • **Provide** a Market Notice by 6:00 PM two days ahead of the operating day, whenever practicable. ***Note**: Change will only be posted on OASIS and no market notice will be sent if it is less than two days prior to Real-Time.*

D.3.2. Regulating Reserves

Sufficient Generating Units are required to immediately respond to Automatic Generation Control (AGC) in the CAISO Balancing Area for a continuous balance between resources and Demand. The following provides information for meeting the requirements for NERC Control Performance Standards:

Regulation procurement is Dynamic and may be adjusted daily or hourly, by the CAISO Manager of Real-Time Operations or the CAISO Generation Dispatcher. Due to operating variances or system conditions, it may be necessary to adjust the procurement amount higher or lower.

Min/Max: A target between 300 - 400 MW each for regulation procurement, for reg up and reg down, ensures adequate response to ACE deviations; however, this target can be lowered or raised if it is determined that system conditions require it. The purpose of this limit is to help accommodate additional regulation procured through the co-optimization of AS. The regulation limit would hold our upward regulation procured as "Contingency reserve" in reserve to be released by the Generation Dispatcher during a Contingency or other operating event that would require the Dispatch of Contingency reserves.

Adjust regulation requirements during the Operating Day to support any modifications to:

- The CAISO Load Forecast and Forecast deviations,
- Prior day's system Loads,
- RMR Dispatch Instructions, or

- Previous day, week, or month performance, or Real-Time System Conditions, Interchange, and Generation Schedule change magnitude.

D.3.3. Ancillary Service Regions

AS may be procured regionally in the following regions:

AS regions are posted on OASIS. If the AS region is changed more than two days prior to Real-Time, then the CAISO will post a Market Notice clarifying the changes. If the change is made less than two days prior to Real-Time, then the change will only be posted on OASIS and no Market Notice will be sent.

	AS Region Name	Description of AS Region (set of resources included in AS Region)		AS Region Status
		Internal CAISO Control Area	Intertie Resources (Current Scheduling Points)	
1	*Expanded System*	All internal Generators	All	Active
2	*System*	All internal Generators	None	Active
3	*South of Path 15*	All Generation residing South of Path 15	None	Active
4	*Expanded South of Path 15*	All Generators residing South of Path 15	NW3, SR3, NV3, NV4, AZ2, AZ3, AZ5, LC1, LC2, LC3, MX, LA1, LA2, LA3, LA4, LA7	Active
5	*South of Path 26*	All Generators residing South of Path 26	None	Active
6	*Expanded South of Path 26*	All Generators residing South of Path 26	NW3, SR3, NV3, NV4, AZ2, AZ3, AZ5, LC1, LC2, LC3, MX, LA1, LA2, LA3, LA4, LA7	Active
7	*North of Path 15*	All Generators residing North of Path 15	None	Active
8	*Expanded North of Path 15*	All Generators residing North of Path 15	NW1, NW2, SR5, SR2, SMUD, TID	Active
9	*North of Path 26*	All Generators residing North of Path 26	None	Active
10	*Expanded North of Path 26*	All Generators residing North of Path 26	NW1, NW2, SR5, SR2, SMUD, TID	Active

D.3.4. Planned Outages

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

Scheduling Coordinator (SC) / Participating Generator (PG)
1. **Submit** to the CAISO Operations Planning Department, each quarter, Schedules of planned Outages for each resource, for the next 12-month period. 2. **Contact** the CAISO Operations Planning Department with any changes to the quarterly Schedule, to ensure correct timelines.

CAISO Operations Planning
***Note**: Planned Outages are automatically updated in the Outage Scheduler, based on the quarterly Outage information, or recent updates to the annual planned Outage Schedule as recorded in the outage management system.* 1. **Conduct** periodic verification of the submitted planned Outage timelines, with the SCs/Participating Generators.

D.3.5. Forced Outages

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

Scheduling Coordinator (SC) / Participating Generator (PG)
1. If a resource is forced out-of-service, • **Inform** the CAISO Generation Dispatcher by submitting an Outage Request, **via** the outage management system interface.

CAISO Generation Dispatcher
1. If monitoring indicates that a resource has separated from the system and an Outage Request or a phone call is not received from the SC or Participating Generator, • **Contact** the responsible party to **determine** if the separation is due to a Forced Outage.

CAISO Generation Dispatcher / Scheduling Coordinator (SC) / Participating Generator (PG)
1. **Create** a record in the outage management system for resources that are forced out-of-service. The record includes the following information: • Resource, • SC/Participating Generator, • Amount of resource unavailable, • Time the resource is unavailable, • Estimated time of return, • Time the resource was available, and • Reported cause. ***Note**: The Outage Scheduler is automatically updated to reflect the time duration of the Forced Outage whenever an outage management record is initiated. The Outage Scheduler is updated to reflect the return of the resource at such time when the SC declares the resource available when the outage management record is updated. Out-of-service Resources are blocked from Day-Ahead AS procurement. Outages submitted after the Day-Ahead Market Close will not be reflected in the next trade date.*

E.3 Pre-Market Validation Procedure Detail

E.3.1. 08:00 Daily Meeting

The 08:00 Meeting includes the following:

CAISO Manager of Real-Time Operations
1. **Capture** issues and constraints not previously identified from the previous Operating Day's actual results, including mitigation actions required, Exceptional Dispatches and Unit Commitments.

CAISO Day-Ahead Operations Engineer
1. **Review** Outages added or removed since the previous day's reports and 2. **Provide** reports of Outages, including updates to the outage management system, generation requirements, active Nomograms, contingencies, and transmission corridor or path de-rates for the next day.

CAISO Validation and Review Team

1. **Review** unexplained binding constraints for today's Day-Ahead Market (DAM).
2. **Consider** yesterday's D+2 and RUC Binding Commitments.
3. **Review** historical and current unexplained binding constraints, including the following:

Concern	Possible Actions
Market Activity	**Verify** if constraints are consistent with expectations.
Flowgates, Contingencies, Nomograms	**Get** the list from CAISO Operations Planning Engineer for all Flowgates, Contingencies, and Nomograms to be un-enforced in the DAM run.
Infeasible solutions	**Report** any infeasible solution to the Validation and Review Lead for possible resolution before proceeding with the market run.

4. **Flag out** all listed items to be un-enforced, before running the DAM and after transferring the input.
5. **Take** appropriate action, based on stated objectives in Section A.2.1 Background.
6. **Record** all issues and actions in the SLIC Log.

   ***Note**: Enforced Contingency restraints and binding restraints are posted on the CAISO website*.

E.3.2. Day-Ahead Market

Take the following actions during the Day-Ahead Market (DAM) run:

CAISO Validation and Review Team

1. **Remain** available to address issues or concerns that arise during the DAM runs.
2. **Review** the DAM results (**considering** inputs from previous reviews of D2 and D3 runs, etc.).
   - **After** reviewing the DAM results,
     - If the Validation and Review Team determines the constraint is correct,
       - **Obtain** the Validation and Review Lead's approval.
       - **Publish** DAM Results.
     - If the Validation and Review Team determines the constraint is unexplained and should be un-enforced for the market run and time allows for the DAM to be re-run,
       - **Un-enforce** the element that is causing the constraint, and
       - **Re-run** the applicable portion of the market.

CAISO Validation and Review Team
▪ **Log** the following in SLIC: – Duration, if any, – Element that was un-enforced, – Reason, and – Any available additional information (i.e., ticket information). ○ If the CAISO Market Quality and Validation Team determines the constraint is unexplained, but will be unable to determine cause in a timeframe that will allow the DAM to be re-run, ▪ **Publish** DAM, **noting** the unexplained prices that may be subject to change after the fact. 3. **Address** urgent issues relative to the Real-Time Market, as required by the Validation and Review Lead or System Operations Management.

E.3.3. 15:30 Daily Meeting

The 15:30 meeting includes the following:

CAISO Manager of Real-Time Operations
1. **Identify** ongoing mitigation issues, Unit Commitments, and Exceptional Dispatches.

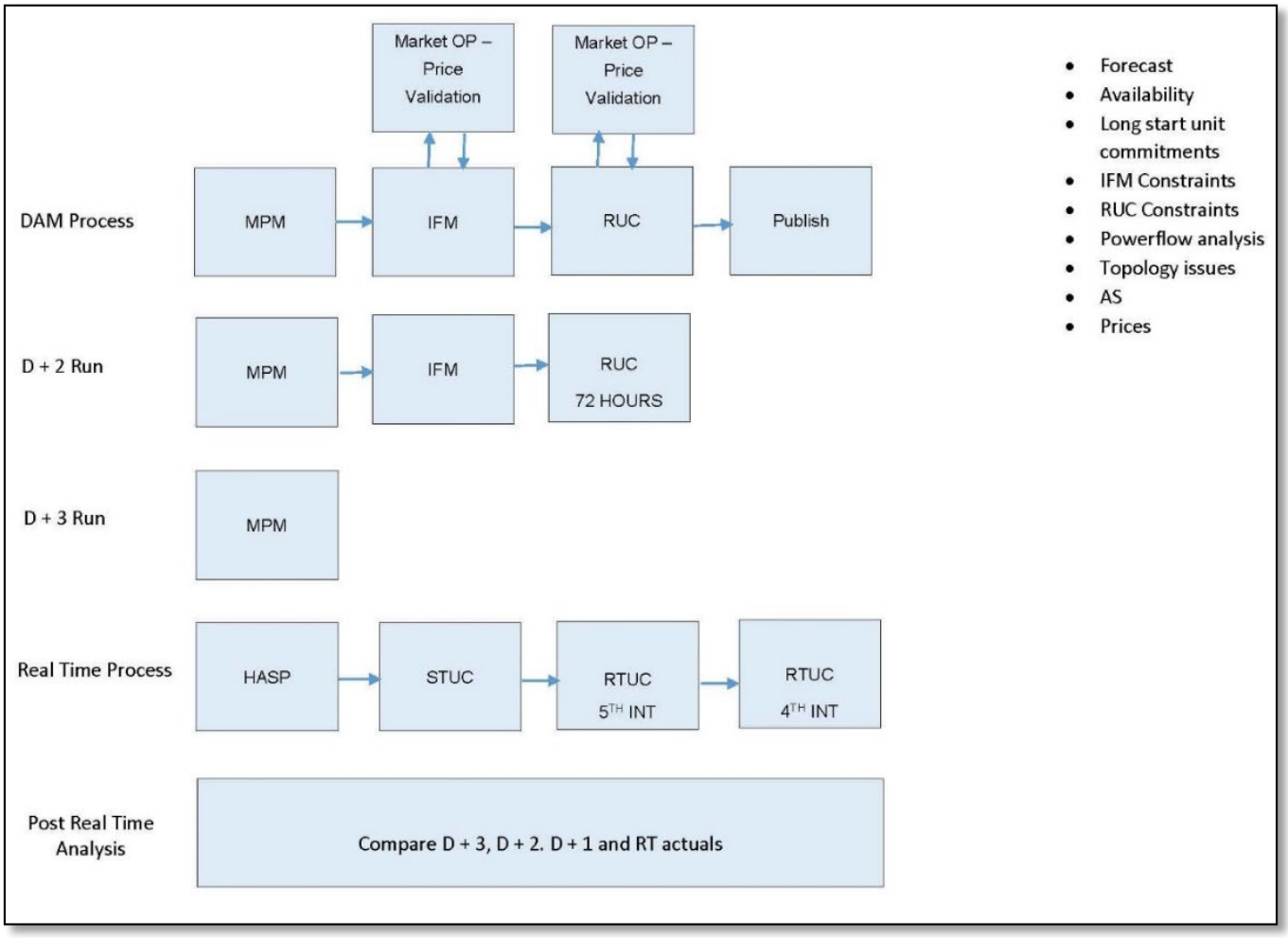
CAISO Day-Ahead Operations Engineer
1. **Review** the following and **provide** reports of Outages for the next 1-4 days (providing day-of-the-week information is available): • No Call Outages approved for the period under review, • Outages that have impact on market and State Estimator models, • Outages added or removed since previous days reports, • Updates to: ○ Outage management system, ○ Generation requirements, ○ Nomograms and contingencies required, and ○ Transmission Corridor or Path derates.

CAISO Market Operator
1. Discuss the following: • Binding constraints from of Day-Ahead (DA) results. • Any immediate issues from DA results just published. • Units committed in D+1 through the Market, based on different procedures (i.e., CAISO Operating Procedures 7820 San Diego Area, 7630 Orange County Area Requirements, 6510 SCIT, etc.). • Any possible additional Unit Commitments or Exceptional Dispatches due to reliability requirements. • Any possible ELC unit(s) needed.

E.3.4. Flowchart

The following flowchart describes the validation process with respect to the DAM and RTM:

Validation Process - DAM & RTM Flowchart



F.3 Day-Ahead Market Suspension and Intervention Procedure Detail

F.3.1. Day-Ahead Market Suspension or Intervention

By 1800, take the following actions to notify Market Participants of the state of the Day-Ahead Market.

CAISO Director of Real-Time Operations, CAISO Manager of Real-Time Operations

1. In the event the CAISO has not published the Day-Ahead Market results by 1800:
   - **Determine** if the CAISO will be able to **publish** the Day-Ahead Market, or if it is feasible to **publish** the previous day's Day-Ahead Market results, or if it is necessary to **suspend** the publication of any Day-Ahead Market results.
     - If it is determined that the CAISO will be able to **publish** the Day-Ahead Market results:
       - **Instruct** the Market Operator to notify Market Participants, via MNS, that the CAISO intends to publish the Day-Ahead Market results, and the time the publication is expected to occur.
     - If it is determined that the CAISO will **publish** the previous day's Day-Ahead Market results:
       - **Instruct** the Market Operator to notify Market Participants, via MNS, that the CAISO has suspended the Day-Ahead Market and will publish the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A).
       - **Contact** MES and **instruct** them to publish the previous day's Day-Ahead Market results.
     - If it is determined that the CAISO is unable to **publish** any Day-Ahead Market results, but will instead request Market Participants to follow the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A):
       - **Instruct** the Market Operator to notify Market Participants, via MNS, that the CAISO is unable to publish any Day-Ahead Market results, and request all Market Participants to follow the previous day's Day-Ahead Market results.
     - If it is determined the CAISO will **suspend** the publication of any Day-Ahead Market results:
       - **Instruct** the Market Operator to notify Market Participants, via MNS, that the CAISO has suspended the Day-Ahead Market, will not publish any Day-Ahead Market results, and will rely on the use of Exceptional Dispatch and other manual instructions and on the Real-Time Market results, pursuant to Tariff Section 7.7.9(b)(1)(B).
       - **Contact** MES and **notify** them that no Day-Ahead Market results will be published.

CAISO Market Operator

1. If the CAISO Manager of Real-Time Operations or the CAISO Director of Real-Time Operations has determined the CAISO will **publish** the Day-Ahead Market results:
   - **Notify** Market Participants, **via** MNS, and
   - **Indicate** the CAISO intends to publish the Day-Ahead Market results and the time the publication is expected to occur.
     - **Use** the notice template in Section F.3.2 MNS Notice Templates.
2. If the CAISO Manager of Real-Time Operations or the CAISO Director of Real-Time Operations has determined the CAISO is unable to **publish** any Day-Ahead Market results, but will instead request Market Participants to follow the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A):
   - **Notify** Market Participants, **via** MNS, **indicating** the CAISO is unable to publish any Day-Ahead Market results and requests all Market Participants to follow the previous day's Day-Ahead Market results.
     - **Use** the notice template in Section F.3.2 MNS Notice Templates.
3. If the CAISO Manager of Real-Time Operations or the CAISO Director of Real-Time Operations has determined the CAISO will **suspend** the Day-Ahead Market and publish the previous day's Day-Ahead Market results instead:
   - **Notify** Market Participants, **via** MNS, and **indicate** that the CAISO has suspended the Day-Ahead Market and will publish the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A).
     - **Use** the notice template in Section F.3.2 MNS Notice Templates.
4. If the CAISO Manager of Real-Time Operations or the CAISO Director of Real-Time Operations has determined the CAISO will **suspend** the publication of any Day-Ahead Market results:
   - **Notify** Market Participants, **via** MNS, and **indicate** that the CAISO has suspended the Day-Ahead Market, will not publish any Day-Ahead Market results, will rely on the use of Exceptional Dispatch and other manual instructions, and on the Real-Time Market results, pursuant to Tariff Section 7.7.9(b)(1)(B).
     - **Use** the notice template in Section F.3.2 MNS Notice Templates.

F.3.2. MNS Notice Templates

Use and adapt as appropriate, the following text:

Day-Ahead

1. The CAISO intends to publish the Day-Ahead Market results and the publication is expected to occur by HH:MM.
2. The CAISO has suspended the Day-Ahead Market and will publish the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A). The publication is expected to occur by HH:MM.
3. The CAISO is unable to publish Day-Ahead Market results. Please follow the previous day's Day-Ahead Market results, pursuant to Tariff Section 7.7.9(b)(1)(A).
4. The CAISO has suspended the Day-Ahead Market and will not publish any Day-Ahead Market results. The CAISO will rely on the use of Exceptional Dispatch, other manual instructions, and on the Real-Time Market results, pursuant to Tariff Section 7.7.9(b)(1)(B).

2. 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	Sections 7.7.1, 7.7.3 and 7.7.9
CAISO Operating Procedure(s)	2330 Real-Time Exceptional Dispatch 6510 SCIT 7630 Orange County Area Requirements 7820 San Diego Area
NERC Requirements	BAL-005-1 R6
WECC Criterion	
Other References	Business Practice Manual: Market Operations

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:

AS	Ancillary Services
Availability	Measured in MW, it is the maximum quantity of Energy or AS (measured at the point of delivery) the unit is capable of producing at any given time (assuming adequate time to ramp to that maximum quantity). Sufficient availability of usable water is assumed when determining the availability of hydroelectric facilities.
CFCD	Cal ISO Forecast Cal ISO Demand
CMRI	Customer Market Results Interface
CPM	Capacity Procurement Mechanism. The CPM enables the CAISO to acquire Generation capacity through Exceptional Dispatches to: (1) Maintain grid reliability if Load Serving Entities fail to meet Resource Adequacy requirements; (2) Procured Resource Adequacy Resources are insufficient; (3) Unexpected conditions, i.e., significant events, create the need for additional capacity. The CPM replaces the Interim Capacity Procurement Mechanism
DA	Day-Ahead
DAM	Day-Ahead Market
Dynamic System Resource	A System Resource that has satisfied the CAISO's contractual and operational requirements for submitting a Dynamic Schedule, and for which a Dynamic Schedule has been submitted, including a Dynamic Resource-Specific System Resource.
ED	Exceptional Dispatch
EDE	Exceptional Dispatch Energy
ELC	Extremely Long-Start Commitment
Exceptional Dispatch	A Dispatch Instruction issued outside of the market applications for reliability purposes, specified in Section 34.9 of the CAISO Tariff. Energy from Exceptional Dispatches does not set the LMP at the applicable PNode.
HASP	Hour-Ahead Scheduling Process
IFM	Integrated Forward Market

MED	Manual Economic Dispatch
NQC	Net Qualified Capacity
OE	Operations Engineer
PPT	Pacific Prevailing Time (PST or PDT as applicable)
RA	Resource Adequacy – a resource that is designated in a Supply Plan to provide RA Capacity. The criteria for determining the types of resources that are eligible to provide Qualifying Capacity may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.
Real-Time Operations Management Team	Grid Operations Manager; Manager, Market Operations Coordination; Director, Real-Time Operations; and VP, System Operations (or their designated representative).
RR	Reliability Requirement (RR) capacity is the sum of RA and ICPM capacity and is required to be offered to the CAISO.
RT	Real-Time
RTM	Real-Time Market
RUC	Residual Unit Commitment
SIBR	Scheduling Infrastructure Business Rules
Spinning Reserves	The portion of unloaded synchronized Generating Capacity, controlled by the CAISO, which is capable of being loaded in ten (10) minutes, and which is capable of running for at least two hours.
SR	Supplemental Revenue – Bid-based Energy payments that are not subject to the same Bid mitigation rules as other units dispatched under Exceptional Dispatch (or those dispatched through the CAISO markets), but subject to a cap on the supplemental revenues that can be earned by a resource. It equals the higher of: (1) the Energy Bid price minus the Default Energy Bid or (2) Resource Specific Settlement Interval Locational Marginal Price minus the Default Energy Bid for Exceptional Dispatches subject to bid mitigation, pursuant to CAISO Tariff Section 39.10.
Synchronous Condenser	A Unit that is electrically connected to the CAISO Controlled Grid or Distribution Grid to provide AS in circumstances where the generator is not producing Energy.
System Unit	One or more individual Generating Units and/or Loads within a Metered Subsystem, controlled so as to simulate a single resource with specified performance characteristics, as mutually determined and agreed to by the MSS Operator and the CAISO. The Generating Units and/or Loads making up a System Unit must be in close physical proximity to each other, such that the operation of the resources comprising the System Unit

	does not result in significant difference in flows on the CAISO Controlled Grid.
Voltage Support	An Ancillary Service required for maintaining normal operating conditions to prevent transmission lines and transformers from overloading. Units not under contract as Synchronous Condensers may also be called to raise or lower their Energy output to fulfill Voltage Support needs.

Version History

Version	Change	Date
18.3	Added distinction between RMR and Legacy RMR. Minor format and grammar updates. Removed version history prior to 5 years.	1/01/20
18.4	Updated message in Section A.3.1.6 Ancillary Services Determination as a result of market participants' enquiries. Replaced ISO Director, System Operations with ISO Director, Real-Time Operations. Updated Real-Time Operations Management Team roles in Definitions Section. Updated various section references throughout. Removed "and the RC" from Operationally Affected Parties. Removed version history prior to 5-years. Minor format and grammar updates.	10/08/20
18.5	Updated references of ISO to CAISO. Section B.3.1.1: Clarified between Legacy and Non-Legacy RMR Manual Dispatch. Section B.3.1.2: Removed most content (Retired Day-Ahead EverBridge dispatch process for Condition 1 RMR with MOO, as it is no longer in use) and included with Section B.3.1.1. Section B.3.1.3: Removed this section of Real-Time activities from this Day-Ahead procedure (See 2310 for Real-Time activities). Minor format and grammar updates.	2/12/21
18.6	Added Section A.3.1.9 on suspending Convergence Bidding. References: Updated NERC Standard BAL-005 reference. Removed history prior to five years.	12/10/21
18.7	Periodic Review: No changes.	2/10/22
18.8	Added details to the RUC Net Short process.	6/01/22
18.9	Removed 50% spin procurement requirement in Section E.3.1. Under the prior standards, at least 50% of contingency reserves had to be Spinning Reserves. WECC has eliminated the requirement that a Balancing Authority maintain at least 50% of its contingency reserves as Spinning Reserve. Minor edit to procedure reference in Section B.3.1.1.	4/01/23
19.0	Section G.3.1: Removed Step 1 for Emergency Response Coordinator notification.	6/09/23

Version	Change	Date
19.1	Renamed RTMO and Day-Ahead Market Operator to Market Operator, Generation Desk to Generation Dispatcher, Transmission Desk to Transmission Dispatcher, and Shift Manger Desk to Shift Manager. Updated reference link for desktop procedure RTM-004 (Internal only).	9/05/23
19.2	Replaced Shift Manager with Manager, Real-Time Operations and Manager of Real-Time Operations.	9/14/23
19.3	Updates for RUC net short criterion, which includes Operation RA, uncertain weather and west-wide grid impacts.	12/21/23
19.4	Removed Legacy RMR concepts and steps throughout and renumbered accordingly. Removed history prior to five years.	1/01/24
19.5	Section D.3.1: Changed Solar contribution to contingency reserves to 10% or greater. Minor edit in References section and removed history prior to five years.	4/23/24
19.6	Section A.3.2.3: Added philosophy and implementation considerations for RUC Adjustments.	5/07/24
19.7	Periodic Review: Updated language in Section C.3.1.4, replacing MED tool with Exceptional Dispatch tool under Dispatch Description for both Energy and Congestion Mitigation. Updated definition for Real-Time Operations Management Team due to role and title changes. Minor formatting and grammar edits throughout. Removed history prior to five years.	1/23/25

3. 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 1: Day-Ahead Market Flowchart

(See following page)

Appendix 1: Day-Ahead Market Flowchart

The following flowchart describes the Day-Ahead Market activities: