**REVISION HISTORY**

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<td>02/16/2022</td>
<td>Populated draft with Independent (pre-summer) 2022 Release initiatives with impacts</td>
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<td>0.3</td>
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<td>Finalized document for posting</td>
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<td>1.1</td>
<td>04/18/2022</td>
<td>Updated document to reflect scope changes to Short-Long Start Definitions. Added links to market simulation documentation.</td>
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<td>1.2</td>
<td>04/27/2022</td>
<td>Added link to market simulation documentation for WEIM RSEE initiative</td>
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</table>
TABLE OF CONTENTS

Introduction ........................................................................................................................................... 5
List of Acronyms .................................................................................................................................... 6
1 Short-Long Start Definitions .............................................................................................................. 8
   1.1 Functional Overview ................................................................................................................. 8
   1.2 Business Requirements Specification (BRS) Document ............................................................ 8
   1.3 Impacted Systems ...................................................................................................................... 8
   1.4 Market Simulation Impact ......................................................................................................... 8
   1.5 Business Practice Manuals ....................................................................................................... 8
   1.6 Summary of Charge Code Impacts ........................................................................................ 9
   1.7 Drafts Settlements Technical Documentation Link(s) ............................................................. 9
2 Transmission Service and Market Scheduling Priorities Phase 1 .................................................. 10
   2.1 Functional Overview ................................................................................................................. 10
   2.2 Business Requirements Specification (BRS) Document ............................................................ 11
   2.3 Impacted Systems ...................................................................................................................... 11
   2.4 Market Simulation Impact ......................................................................................................... 11
   2.5 Business Practice Manuals ....................................................................................................... 11
   2.6 Summary of Charge Code Impacts ........................................................................................ 11
   2.7 Drafts Settlements Technical Documentation Link(s) ............................................................. 11
3 WEIM Resource Sufficiency Evaluation Enhancements (RSEE) Phase 1 ................................. 12
   3.1 Functional Overview ................................................................................................................. 12
   3.2 Business Requirements Specification (BRS) Document ............................................................ 12
   3.3 Impacted Systems ...................................................................................................................... 12
   3.4 Market Simulation Impact ......................................................................................................... 13
   3.5 Business Practice Manuals ....................................................................................................... 13
   3.6 Summary of Charge Code Impacts ........................................................................................ 13
   3.7 Drafts Settlements Technical Documentation Link(s) ............................................................. 13
4 Reliability Demand Response Resource (RDRR) Bidding Enhancements Track 1 .................... 14
   4.1 Functional Overview ................................................................................................................. 14
   4.2 Business Requirements Specification (BRS) Document ............................................................ 14
   4.3 Impacted Systems ...................................................................................................................... 14
4.4 Market Simulation Impact

4.5 Business Practice Manuals

4.6 Summary of Charge Code Impacts

4.7 Drafts Settlements Technical Documentation Link(s)

5 Updates to Alert Warning Emergency (AWE) Tool

5.1 Functional Overview

5.2 Business Requirements Specification (BRS) Document

5.3 Impacted Systems

5.4 Market Simulation Impact

5.5 Business Practice Manuals

5.6 Summary of Charge Code Impacts

5.7 Drafts Settlements Technical Documentation Link(s)
**Introduction**

This document provides a functional overview of the Independent 2022 (pre-summer) release on a project-by-project basis. It should be used to provide a quick view into relevant high-level documentation and new functionalities that are required to be implemented for summer 2022. Links to each project’s External Business Requirements Specification (BRS) documentation are provided, if applicable.
### List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ALFS</td>
<td>Automated Load Forecast System</td>
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<tr>
<td>AS</td>
<td>Ancillary Services</td>
</tr>
<tr>
<td>AWE</td>
<td>Alert, Warning or Emergency Notice</td>
</tr>
<tr>
<td>BAOOP</td>
<td>Balancing Authority Area Operations Portal</td>
</tr>
<tr>
<td>BRS</td>
<td>Business Requirements Specification</td>
</tr>
<tr>
<td>CAISO</td>
<td>California Independent Systems Operator</td>
</tr>
<tr>
<td>CMRI</td>
<td>CAISO Market Results Interface</td>
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<tr>
<td>CPUC</td>
<td>California Public Utilities Commission</td>
</tr>
<tr>
<td>DA</td>
<td>Day-Ahead</td>
</tr>
<tr>
<td>DAM</td>
<td>Day-Ahead Market</td>
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<td>DR</td>
<td>Demand Response</td>
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<tr>
<td>EEA</td>
<td>Energy Emergency Alert</td>
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<tr>
<td>FERC</td>
<td>Federal Energy Regulatory Commission</td>
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<td>FIT</td>
<td>Fully Integrated Tracking</td>
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<td>FODD</td>
<td>FERC Ongoing Data Delivery</td>
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<td>HASP</td>
<td>Hour-Ahead Scheduling Process</td>
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<td>IFM</td>
<td>Integrated Forward Market</td>
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<td>MF</td>
<td>Master File</td>
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<tr>
<td>MW</td>
<td>Mega Watt</td>
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<tr>
<td>MWh</td>
<td>Mega Watt hour</td>
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<td>OASIS</td>
<td>Open Access Same Time Information System</td>
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<td>PT</td>
<td>Price Taker</td>
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<td>RAAIM</td>
<td>Resource Adequacy Availability Incentive Mechanism</td>
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<td>Reliability Demand Response Resource</td>
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<td>RDS</td>
<td>Report Data Services</td>
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<td>Resource Sufficiency Evaluation</td>
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<tr>
<td>RT</td>
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<td>RTPD</td>
<td>Real-Time Pre-Dispatch</td>
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<td>Residual Unit Commitment</td>
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<tr>
<td>SC</td>
<td>Scheduling Coordinator</td>
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<td>SIBR</td>
<td>Scheduling Infrastructure and Business Rules</td>
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Independent 2022 (Pre-Summer) Release Functional Overview

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<tr>
<th>Technology</th>
<th>Template Version:</th>
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<tr>
<th>Technology</th>
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<tr>
<td>SOA</td>
<td>Service Oriented Architecture</td>
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<td>STUC</td>
<td>Short-Term Unit Commitment</td>
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<td>TBD</td>
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<tr>
<td>VER</td>
<td>Variable Energy Resource</td>
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<td>WEIM</td>
<td>Western Energy Imbalance Market</td>
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1 Short-Long Start Definitions

1.1 Functional Overview

- Update current CAISO tariff definitions and business practice manuals.
- The Medium Start definition will be removed and rolled into the Short Start definition.
- Clarify operational and settlement communication and outcomes for WEIM and CAISO participants.

Implementation Efforts Include:

- Update bid insertion rules to account for changes to Short Start and Long Start definitions under tariff revisions; account for the DA/RT unit commitment 255 minute cycle time for Short Start units (was previously 270 minutes). As previously implemented, Long Start units will not have bid-insertion performed in real-time markets if not committed in the Day-Ahead Market.
- Update IFM, RTM market systems to have the DA binding commitment cycle time (startup time + minimum up time) changed from 270 to 255 minutes.
- Settlement systems shall account for new tariff start definitions when applying DA/RT Bid Cost Recovery, AS Non-Spin/Spin No Pay, RAAIM Pre-Calc calculations.
- Auxiliary Processes shall consider a resource to be eligible for real-time commitment if the sum of startup time and minimum up time is 255 minutes or less.

1.2 Business Requirements Specification (BRS) Document

The BRS can be found [HERE](#).

1.3 Impacted Systems

- IFM
- RTM
- Settlements
- SIBR

1.4 Market Simulation Impact

N/A

1.5 Business Practice Manuals

- Definitions and Acronyms
- Market Instruments
- Market Operations
- Reliability Requirements
- Settlements and Billing
1.6 Summary of Charge Code Impacts
N/A

1.7 Drafts Settlements Technical Documentation Link(s)
N/A
2 Transmission Service and Market Scheduling Priorities
   Phase 1

2.1 Functional Overview

The purpose of this initiative is to explore development of a long-term, holistic, and durable, framework for establishing scheduling priorities in the CAISO market. The scope of this initiative includes:

1. Extension of the current, interim, wheeling through scheduling priorities framework for summer 2022 and summer 2023, until May 1, 2024
2. Enhancements to provide additional visibility of the non-RA capacity for a supporting resource as well as notifications when a high priority export (PT export) schedule exceeds the non-RA capacity of the supporting resource
3. Clarification to tariff language regarding PT exports from Variable Energy Resources (VER)
4. Publication of additional requested data and information:
   a. Aggregate high priority wheel (Priority Wheeling Through) registration data
   b. Aggregate Resource Adequacy (RA) import data
   c. Residual Unit Commitment (RUC), HASP, RTPD. RTD load forecast adjustments
   d. Curtailment data for RUC and HASP

Implementation Efforts Include:

Transparency enhancements:

- Publish Aggregate PT Wheel Registration Data
  - Publish at CAISO website the Master File registered PT (high priority) wheeling aggregated schedule at different import/export points by month

- Publish of Aggregate RA Import Data showing
  - Publish CAISO website for the aggregate MW of RA imports shown at each tie point based on monthly RA plans for the last eighteen (18) months showing

- Publish load forecast adjustments utilized in RUC
  - Publish RUC hourly load forecast adjustments on OASIS

- Publish schedule reduction data on wheeling though transactions, exports and load on OASIS, promptly after those instructions have been issued

Market scheduling priorities processes Clarification:

- Extension of wheeling through scheduling priorities for May 1, 2024
  - Provides certainty for external parties wheeling across the CAISO as to the rules for summer 2022 and summer 2023
• VERs attest to support PT export schedules based on the most recent forecast for each of the applicable four (4) fifteen (15) minute intervals for which a bid has been submitted for Generation that is equal to or greater than the Self-Schedule PT export quantity.

• High Priority Export Enhancements—Provide awareness for SC regarding the instantaneous non-RA capacity for supporting resource, and notification if sum of PT export schedules exceeds non-RA capacity.
  ➢ SC for supporting resource will be able to view instantaneous non-RA capacity of resource
  ➢ SC(s) submitting PT export schedules and supporting resource will receive a notification warning in SIBR when the sum of PT schedules exceeds non-RA capacity of supporting resource prior to the market close.

2.2 Business Requirements Specification (BRS) Document
The BRS can be found HERE.

2.3 Impacted Systems
HASP
OASIS
RTD
RTPD
RUC
SIBR

2.4 Market Simulation Impact
Yes, see Market Simulation Structured Scenarios—Transmission Service and Market Scheduling Priorities-Phase 1 for more details.

2.5 Business Practice Manuals
Market Instruments
Market Operations

2.6 Summary of Charge Code Impacts
N/A

2.7 Drafts Settlements Technical Documentation Link(s)
N/A
3 WEIM Resource Sufficiency Evaluation Enhancements (RSEE) Phase 1

3.1 Functional Overview

The purpose of this initiative is to implement enhancements to the EIM Resource Sufficiency Evaluation (RSE). The CAISO and stakeholders reviewed several potential changes in the recent Market Enhancements for summer 2021 Readiness initiative, where net-load uncertainty to the RSE’s capacity test was implemented. This initiative’s goal is to implement potential enhancements to ensure the RSE is administered accurately and applied equitably.

Implementation Efforts Include:
- RSEE-1010: Consideration of Intertemporal Constraints in the Capacity Test
- RSEE-1020: Flexible Ramping Test Modifications – PBC
- RSEE-1030: Consider a Resource’s Transition through FOR in the Flexible Ramping Sufficiency Test.
- RSEE-1040: RSE Modifications – Storage Resources Treatment
- RSEE-1050: Balancing Test Modifications
- RSEE-1060: DR Inclusion with RSE
- RSEE-1070: Reliability of CAISO Interchange Schedules
- RSEE-1090: Increased RSE Data on RSE Results and Additional Data Transparency and Reporting
- RSEE-1100: Increased EIM Entities Situational Awareness Regarding Test Performance
- RSEE-1110: Net-Load Uncertainty Calculation Removal from Capacity Test
- RSEE-1120: Intertie Uncertainty Calculation Removal from Capacity Test

3.2 Business Requirements Specification (BRS) Document

The BRS can be found HERE.

3.3 Impacted Systems

<table>
<thead>
<tr>
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3.4 Market Simulation Impact
Yes, see Market Simulation Structured Scenarios—WEIM Resource Sufficiency Evaluation Enhancements Phase 1A for more details

3.5 Business Practice Manuals
Energy Imbalance Market (EIM)
Market Instruments
Market Operations
Settlements and Billing

3.6 Summary of Charge Code Impacts
Charge Code – 6046: Over and Under Scheduling EIM Allocation 5.4

3.7 Drafts Settlements Technical Documentation Link(s)
CG CC 6046 – Over and Under Scheduling EIM Allocation v5.4
4 Reliability Demand Response Resource (RDRR) Bidding Enhancements Track 1

4.1 Functional Overview
This project enhances real-time bidding for the Reliability Demand Response Resource (RDRR) model by aligning RDRR bidding rules with real-time price conditions consistent with FERC Order No. 831 by requiring that RDRRs must bid at least 95% of the hard energy bid cap ($1,900/MWh) when the conditions are satisfied to raise the soft energy bid cap to $2,000/MWh without requiring additional cost-justification support to substantiate their bids.

Additionally, this project maintains the positioning of RDRRs in the market consistent with the terms of the CPUC settlement. Further, the CAISO will preserve the existing bidding structure for RDRRs when the $1,000/MWh soft energy bid cap is in place.

It maintains that in the real-time market, RDRRs are treated as emergency response resources with limited availability and are only released for dispatch when an EEA 2 notice is issued.

Implementation Efforts Include:
The CAISO will automatically adjust the submitted RDRR bids based on the change in energy bid cap by maintaining the percentage of the bid cap originally submitted by the Scheduling Coordinator. This automatic adjustment will occur after the market close and will only apply if no action is taken by the close of each hour’s real-time market by the Scheduling Coordinator.

4.2 Business Requirements Specification (BRS) Document
The BRS can be found HERE.

4.3 Impacted Systems
SIBR

4.4 Market Simulation Impact
Yes, see Market Simulation Structure Scenarios—Reliability Demand Response Resource Bidding Enhancements – Track-1 for more details

4.5 Business Practice Manuals
Market Instruments
Market Operations

4.6 Summary of Charge Code Impacts
N/A
### 4.7 Drafts Settlements Technical Documentation Link(s)

N/A
5 Updates to Alert Warning Emergency (AWE) Tool

5.1 Functional Overview
To ensure operators have the proper message types for summer 2022, this initiative focuses on Updates to the AWE Tool by transitioning from specific AWE declarations (Alert, Warning, Stage 1, 2, 3) to EEA declarations (EEA Watch, EEA 1, EEA 2, EEA 3).

Implementation Efforts Include:
- Addition of four new AWE templates and removal of six AWE templates
  - Addition/Updates to EEA Watch, EEA1, EEA2, EEA3 AWE templates
- Updating names of messages
- Replacement tool
- Specific training environment for this tool (ability to practice sending this message out)
- Process Map Update

5.2 Business Requirements Specification (BRS) Document
The BRS can be found HERE.

5.3 Impacted Systems
AWE

5.4 Market Simulation Impact
N/A

5.5 Business Practice Manuals
Market Operations

5.6 Summary of Charge Code Impacts
N/A

5.7 Drafts Settlements Technical Documentation Link(s)
N/A