

## **Market Simulation Plan & Scenarios**

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# **Congestion Revenue Rights (CRR) System Upgrade**

Document Version: 1.09

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## Revision History

| Date       | Version | Description   |
|------------|---------|---|
| 11/14/2024 | 1.0     | Created Market Simulation Plan & Scenario Document  |
| 11/21/2024 | 1.01    | Updated URL links for OASIS for MSS – 002.  |
| 12/02/2024 | 1.02    | <ul style="list-style-type: none"> <li>Updated UI's for MSS – 007, MSS – 008, and MSS – 011</li> <li>Updated Connectivity Testing dates in section 2.1.</li> </ul>  |
| 12/19/2024 | 1.03    | <ul style="list-style-type: none"> <li>Updated Section 2.1 dates for connectivity testing, market simulation, and expected production.</li> </ul>   |
| 01/13/2025 | 1.04    | <ul style="list-style-type: none"> <li>Updated Section 3 to reflect updated dates in Section 2.1.</li> </ul>  |
| 01/17/2025 | 1.05    | <ul style="list-style-type: none"> <li>Updated Appendix with API details to ensure participant visibility on proper API folders on developer website. Additional updates will be provided closer to Market Simulation.</li> </ul>                             |
| 1/30/2025  | 1.06    | <ul style="list-style-type: none"> <li>Updated Connectivity Testing start date.</li> </ul>  |
| 2/11/2025  | 1.07    | <ul style="list-style-type: none"> <li>Updated MSS – 002 OASIS related scenario to week 2 of market sim</li> <li>Updated MSS – 010 Secondary Market related scenario to week 2 of market sim</li> <li>Updated MSS – 014</li> <li>Updated MSS – 017</li> </ul> |
| 2/19/2025  | 1.07    | <ul style="list-style-type: none"> <li>Updated Unstructured Market Sim Week4 and 5 Dates</li> </ul>   |
| 2/24/2025  | 1.08    | <ul style="list-style-type: none"> <li>Updated MSS – 010 Secondary Market related scenario to week 3 of market sim</li> </ul>   |
| 03/04/2025 | 1.09    | <ul style="list-style-type: none"> <li>Updated MSS - 002</li> </ul>   |

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# 1. Introduction

The primary goal of market simulation testing is to ensure that CAISO and external participants are prepared for live market conditions and can operate effectively within the CAISO markets. These simulations are crucial when there are new market features, rule changes, system upgrades, and/or new participants joining the market.

- 1. Enhanced Efficiency and Stability:** Simulations contribute to efficient and stable market operations by allowing CAISO and entities' systems to work in unison.
- 2. New Rule and Feature validation:** CAISO may introduce new market rules, protocols, or features in order to adhere to architecture roadmaps, compliance standards, operational enhancements, and/or policy and stakeholder processes. Simulation testing allows for early detection and correction of issues, ensuring new rules and functionalities do not inadvertently impact market operations.
- 3. Increased Operational Readiness:** For market participants, simulations provide a hands-on environment to practice new functionality being implemented to ensure systems are compatible and ready for CAISO's operational protocols.
- 4. Effective Risk Mitigation:** By identifying and addressing issues in a controlled environment, both CAISO and market participants can reduce risks associated with software malfunctions, data errors, or misunderstanding of market rules and implementation impacts.

The objective of this document is to provide the information needed for market participants to successfully engage in the project market simulation, thereby enabling additional transparency and utilization of new features and functionality that will be available upon project go-live.

## 1.1 Scope of Initiative

The purpose of the CRR System Upgrade project is to replace the existing application with a new application that adopts the latest technology stack that is aligned with CAISO's technology standards, consolidate all CRR related functions, minimize human errors, reduce processing time, eliminate manual workarounds, and position the system to be able to accommodate policy changes down the road.

Note: Refer to the [External Business Requirements Specification](#) for more information on specific system and process impacts.

## 2. Market Simulation Information

### 2.1 High Level Overview

#### Connectivity Testing:

- CRR Market Interface UI (MUI): 02/03/24 – 02/14/25
- B2B API (First): 02/03/25 – 02/14/25
- B2B API (Second): 02/07/25 – 02/14/25

#### Structured Market Simulation:

- Week 1: 02/18/25 – 02/20/25
- Week 2: 02/25/25 – 02/27/25
- Week 3: 03/04/25 – 03/06/25

#### Unstructured Market Simulation:

- Week 4: 03/18/25 – 03/20/25
- Week 5: 03/25/25 – 03/27/25

#### Production New Application Cutover: 04/30/25

Note: Refer to calendar below for specific information.



## 2.2 Connectivity Testing & Pre-Simulation Activities

Note: Refer to Portal, Market Participant Portal, and CAISO developer websites for UI and API information. CRR MUI shall be made available at start of connectivity testing at <https://mapstage-crrmui.caiso.com/>.

## 2.3 Market Simulation Calendar

### 2.3.1 Week 1

| Week One: 02/18/25 - 02/20/25   |  |  |   |   |
|---|--|--|---|---|
| MONDAY  | TUESDAY  | WEDNESDAY  | THURSDAY  | FRIDAY  |
| <b>T-4w - Connectivity</b><br><b>Prior to Market Sim - Kickoff and Overview</b> <ul style="list-style-type: none"> <li>Market Sim Plan</li> <li>High level overview of new system</li> <li>Uploading and Downloading <ul style="list-style-type: none"> <li>Manual Entry,</li> <li>File Upload, API</li> </ul> </li> <li>Public/Private Downloads</li> <li>Messages</li> <li>Sorting and Filtering</li> <li>Documentation and Resources</li> <li>Contact Information</li> </ul> | <b>Miscellaneous process</b> <ol style="list-style-type: none"> <li>UDC Load Migration Submissions and post (N-hour)</li> <li>LT Re-nomination</li> <li><del>Secondary Market</del> (Moved to week 2)</li> <li>TOR conversion submission</li> </ol><br><b>Allocation Monthly Participants</b> <ol style="list-style-type: none"> <li>CEC Load Forecast Submissions</li> <li>Submit Historical Load</li> <li>Submit Forecast Load</li> </ol><br><b>Allocation Annual Participants</b><br><b>Submit AN Historical Load for 2024</b><br><b>Public/Private messages</b><br><b>Public/Private downloads (existing CRRs)</b> | <b>Miscellaneous process</b> <ol style="list-style-type: none"> <li>UDC Load Migration Submissions Open</li> <li><del>Secondary Market</del> (Moved to week 2)</li> <li>TOR conversion approval</li> </ol><br><b>Allocation Monthly Participants</b><br><b>Post Monthly nomination cap (MEQ T1)</b><br><b>Allocation Annual Participants</b><br><b>Post Annual nomination cap (SEQ T1, SEQ LT, UB, SS T1, SS LT)</b><br><b>Public/Private messages</b><br><b>MSIM Meeting 1:00 PM PT</b> | <b>Miscellaneous process</b> <ol style="list-style-type: none"> <li>UDC Load Migration Submissions close and post</li> <li><del>Secondary Market</del> (Moved to week 2)</li> </ol><br><b>MSIM Meeting 1:00 PM PT</b> | <b>Reserved for CRR team data processing and participant responses</b><br><br><b>Environment Patching</b> |

## 2.3.2 Week 2

| <b>Week Two: 02/25/25 - 02/27/25</b>  |  |   |  |   |
|---|--|---|--|---|
| <b>MONDAY</b>   | <b>TUESDAY</b>   | <b>WEDNESDAY</b>  | <b>THURSDAY</b>  | <b>FRIDAY</b>   |
| <b>Reserved for CRR team data processing and participant responses</b><br><br><b>CRR team setup for Monthly Markets</b> | <b>Allocation Monthly Participants</b><br>1. Submit Nominations for Tier 1 Monthly Market<br>2. Windows Close on Wednesday<br>3. Download Nomination Cap data<br>4. Download Allocation Market MN V0 ETC and T1 model results(NDA user)<br><b>5. Secondary Market</b><br><br><b>Auction Monthly Participants</b><br>1. Submit Auction Portfolios Monthly Auction Market Buy Bids, Sell Offers Credit - provide \$2mil to all MPs for testing<br>2. Windows Close on Thursday<br>3. Download Auction market model results(NDA user)<br><br><b>MSIM Meeting 1:00 PM PT</b> | <b>Allocation Monthly Participants</b><br>1. Download Allocation Market T1 Results<br><br>2. Submit Nominations for Tier 2 Monthly Market<br>3. Windows Close on Thursday<br>4. Download Nomination Cap T2 data<br>5. Download Allocation Market T2 model results(NDA user)<br><b>6. Secondary Market</b><br><br><b>MSIM Meeting 1:00 PM PT</b> | <b>Allocation Monthly Participants</b><br><br>Review results<br><br><b>Auction Monthly Participants</b><br><br>Review results<br><br><b>Secondary Market</b><br><br><b>MSIM Meeting 1:00 PM PT</b> | <b>Reserved for CRR team data processing and participant responses</b><br><br><b>Environment Patching</b> |



### 2.3.3 Week 3

| Week Three: 03/04/25 - 03/06/25   |   |  |   |  |
|---|---|--|---|--|
| MONDAY  | TUESDAY   | WEDNESDAY  | THURSDAY  | FRIDAY   |
| <p>Reserved for CRR team data processing and participant responses</p> <p>CRR team setup for Annual markets</p> | <p><u>Allocation Annual Participants</u></p> <ol style="list-style-type: none"> <li>1. Submit Nominations for Tier 1 Annual Market</li> <li>2. Windows Close on Wednesday</li> <li>3. Download Nomination Cap data</li> <li>4. Download Allocation Market AN V0 V1 and T1 model results(NDA user)</li> </ol> <p>1. Submit Nominations for LT Annual Market</p> <ol style="list-style-type: none"> <li>2. Windows Close on Wednesday</li> <li>3. Download Nomination Cap data</li> <li>4. Download Allocation Market ETC and LT model results(NDA user)</li> </ol> <p><u>Auction Annual Participants</u></p> <ol style="list-style-type: none"> <li>1. Submit Auction Portfolios Annual Auction Market Buy Bids, Sell Offers Credit - provide \$2mil to all MPs for testing</li> <li>2. Re-submit for any processes or scenarios which had issues previously</li> <li>3. Windows Close on Thursday</li> <li>4. Download Auction market model results(NDA user)</li> </ol> <p>MSIM Meeting 1:00 PM PT</p> | <p><u>Allocation Annual Participants</u></p> <ol style="list-style-type: none"> <li>1. Submit Nominations for Tier 2 Annual Market</li> <li>2. Windows Close on Thursday</li> <li>3. Download Nomination Cap T2 data</li> <li>4. Download Allocation Market T1 Results</li> </ol> <p>MSIM Meeting 1:00 PM PT</p> | <p><u>Allocation Annual Participants</u></p> <p>Review results</p> <p><u>Auction Annual Participants</u></p> <p>Review results</p> <p><u>Miscellaneous Annual process</u></p> <ol style="list-style-type: none"> <li>1. Submit Auction Portfolios for Participant requested scenarios</li> </ol> <p>MSIM Meeting 1:00 PM PT</p> | <p>Reserved for CRR team data processing and participant responses</p> <p>Environment Patching</p> |

### 2.3.4 Week 4

| Week Four: 03/18/25 - 03/20/25                                  |  |   |  |   |
|---|--|---|--|---|
| MONDAY  | TUESDAY  | WEDNESDAY   | THURSDAY   | FRIDAY  |
| Reserved for CRR team data processing and participant responses | Additional testing day for any of the market simulation scenarios<br><br>MSIM Meeting 1:00 PM PT | Additional testing day for any of the market simulation scenarios | Additional testing day for any of the market simulation scenarios<br><br>MSIM Meeting 1:00 PM PT | Reserved for CRR team data processing and participant responses<br><br>Environment Patching |

### 2.3.5 Week 5

| Week Five: 03/25/25 - 03/27/25                                    |  |   |  |   |
|---|--|---|--|---|
| MONDAY  | TUESDAY  | WEDNESDAY   | THURSDAY   | FRIDAY  |
| Additional testing day for any of the market simulation scenarios | Additional testing day for any of the market simulation scenarios<br><br>MSIM Meeting 1:00 PM PT | Additional testing day for any of the market simulation scenarios | Reserved for CRR team data processing and participant responses<br><br>Environment Patching<br><br>MSIM Meeting 1:00 PM PT | Additional testing day for any of the market simulation scenarios |

## 3. Market Simulation Scenarios

### 3.1.1 Week 1

*Note: Refer to schedule provided by Market Simulation Coordinator for date and time of open and close of submission windows as well as expected posting of results.*

| Market Simulation Scenarios |                |                          |  |  |
|-----------------------------|----------------|--------------------------|--|--|
| Scenario Title              |                |                          | CRR Participant Pre-Registration and Access Provisioning (BRS Traceability: MSIM – 001, MSIM - 002)  |  |
| Scenario ID                 | Scenario Steps | Action Owner             | Description  | MAP-Stage Date(s)                        |
| MSS - 001                   | 1.             | External CRR Participant | a) Assumption: CRR participant has a certificate<br><br>b) Pre-register new CRR market participant information in MasterFile per existing process <ol style="list-style-type: none"> <li>CRR Holder</li> <li>CRR Load Serving Entity</li> </ol>  | Prior to connectivity testing on 2/03/25 |
|                             | 2.             | External CRR Participant | a) Provision appropriate user access in the AIM system per existing process: <ol style="list-style-type: none"> <li>External CRR Holder (Read/Write)</li> <li>External CRR Holder (Read Only)</li> <li>External CRR NDA Reports (Read-Only)</li> <li>External Utility Distribution Company (UDC) (Read/Write)</li> <li>External Transmission Ownership Right (TOR) Owner (Read/Write)</li> </ol>                           | Prior to connectivity testing on 2/03/25 |
|                             | 3.             | CAISO System Automation  | a) CRR System to receive CRR participant information and update CRR System records<br><br>b) CRR System to support all of the following participants for accessing CRR System: <ol style="list-style-type: none"> <li>External CRR Holder (Read/Write)</li> <li>External CRR Holder (Read Only)</li> <li>External CRR NDA Reports (Read-Only)</li> <li>External Utility Distribution Company (UDC) (Read/Write)</li> </ol> | Prior to connectivity testing on 2/03/25 |

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|--|----|------------------------|---|----------------------|
|  |    |                        | 5. External Transmission Ownership Right (TOR) Owner (Read/Write)   |                      |
|  | 4. | Final Expected Outcome | a) External CRR participant able to access the CRR Market User-Interface (MUI) system via <a href="https://mapstage-crmmui.caiso.com">https://mapstage-crmmui.caiso.com</a> | 02/03/25 to 02/14/25 |

| Scenario Title |                |  | Miscellaneous Process – UDC Load Migration (MSIM – 004)  |   |
|----------------|----------------|--|--|---|
| Scenario ID    | Scenario Steps | Action Owner   | Description  | MAP-Stage Date(s)   |
| MSS - 003      | 1.             | CAISO User Preliminary Actions                           | a) ISO opens Load Migration market <u>three</u> business days ahead of open window<br>b) ISO opens MAP-Stage environment for Load Migration for the next <u>three</u> business days<br>c) ISO user to calculate N-Hour data for each UDC and post to <u>CRR MUI</u>  | a) 02/18/25 to 02/20/25<br>b) 02/18/25 to 02/20/25<br>c) 02/18/25       |
|                | 2.             | External Utility Distribution Company (UDC) (Read/Write) | a) UDC user shall see their N-Hour data on <u>CRR MUI</u> (API Details)<br>b) UDC user shall see notification of Load Migration window open on <u>CRR MUI</u><br>c) UDC user shall submit their load migration data on <u>CRR MUI</u><br>d) If Rejected, CRR System to notify UDC of submission issues on <u>CRR MUI</u> , UDC may be resubmit on <u>CRR MUI</u><br>e) If Approved, UDC to see their submission data on <u>CRR MUI</u> | a) 02/18/25<br>b) 02/18/25<br>c) 02/19/25<br>d) 02/19/25<br>e) 02/19/25 |
|                | 3.             | CAISO System Automation                                  | a) CRR system to send public notification to MUI notifying of Load Migration window open<br>b) CRR System to consume submitted load migration data and complete calculation<br>c) CRR System to display UDC-submitted and validation LM data on <u>CRR MUI</u>   | 02/19/25  |

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|  |    |                        | d) If Approved, privately notify impacted CLSE with their final LM results on <u>CRR MUI</u><br>e) CRR System to utilize results and automatically recalculate the MEQ per sink location per TOU for entities impacted by LP for each effective allocation market period<br>f) CRR system closes MAP-Stage environment for Load Migration<br>g) CRR system send public notification to MUI for closing Load Migration market window |          |
|  | 4. | Final Expected Outcome | a) UDC user to see private notification of Load Migration window close on <u>CRR MUI</u><br>b) CLSE users to see final Load Migration results on <u>CRR MUI</u><br>c) CRR System to update MEQ calculation  | 02/20/25 |

| Scenario Title |                |                                  | Miscellaneous Process – Long Term CRR Re-nomination (MSIM – 005)  |  |
|----------------|----------------|----------------------------------|---|--|
| Scenario ID    | Scenario Steps | Action Owner                     | Description   | MAP-Stage Date(s)                                  |
| MSS - 004      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens LT re-nomination market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for LT re-nomination for the next <u>three</u> business days                       | a) 02/18/25 to 02/20/25<br>b) 02/18/25 to 02/20/25 |
|                | 2.             | External CRR Holder (Read/Write) | a) CLSE user shall see notification of LT re-nomination window open on <u>CRR MUI</u><br>b) CLSE user to elect whether to re-nominate expiring LT CRRs in upcoming LT Market or subsequent annual PNP on <u>CRR MUI</u> | 02/18/25   |
|                | 3.             | CAISO System Automation          | a) CRR system to send private notification to each CLSE user notifying of LT re-nomination window open  | 02/18/25   |

|  |    |                        |   |          |
|--|----|------------------------|---|----------|
|  |    |                        | <ul style="list-style-type: none"> <li>b) CRR System to consume submitted LT re-nominations into expiring LT CRR Source/Sink Paths and MW quantities in LT signature data</li> <li>c) If no election made by CLSE user, then CRR System to default to not adding expiring LT CRRs to external participant LT signature data for that year</li> <li>d) If CLSE user elected to re-nominate in previous LT market then signature data is excluded from PNP for the annual allocation</li> <li>e) CRR System to update LT CRR information on <u>CRR MOI</u></li> <li>f) CRR system to send public notification to CLSE user for LT re-nomination window close</li> </ul> |          |
|  | 4. | Final Expected Outcome | <ul style="list-style-type: none"> <li>a) CLSE user to see their updated LT CRR information on <u>CRR MUI</u></li> <li>b) CLSE user to receive notification on <u>CRR MUI</u> of LT re-nomination market close</li> </ul>   | 02/20/25 |

| Scenario Title |                |                                | Miscellaneous Process – TOR Conversion (MSIM – 006)   |   |
|----------------|----------------|--------------------------------|---|---|
| Scenario ID    | Scenario Steps | Action Owner                   | Description   | MAP-Stage Date(s)   |
| MSS - 005      | 1.             | CAISO User Preliminary Actions | <ul style="list-style-type: none"> <li>a) ISO user to manually upload ETC/TOR nomination data for consumption</li> <li>b) ISO user opens TOR Conversion market <u>three</u> business days ahead of window open</li> <li>c) ISO user opens MAP-Stage environment for TOR Conversion for the next <u>three</u> business days</li> </ul> | <ul style="list-style-type: none"> <li>a) 02/18/25</li> <li>b) 02/18/25 to 02/20/25</li> <li>c) 02/18/25</li> </ul> |
|                | 2.             | CAISO System Automation        | <ul style="list-style-type: none"> <li>a) CRR System to validate and create ETC nominations in CRR MOI</li> <li>b) CRR system to send public notification to each CRR Holder notifying of TOR Conversion window open</li> <li>c) CRR System to display pending TOR conversion data on CRR MUI</li> </ul>                              | 02/18/25  |

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|--|----|---|--|----------|
|  | 3. | CAISO User Preliminary Actions  | a) ISO user to review/modify and submit ETC/TOR for each allocation market in MOI  | 02/18/25 |
|  | 4. | External Transmission Ownership Rights (TOR) Owner (Read/Write) <b>Transferor</b>       | a) TOR Owner shall see notification of TOR conversion window open on <u>CRR MUI</u><br>b) TOR Owner shall see pending TOR conversions on CRR MUI<br>c) TOR Owner to upload TOR conversion data on CRR MUI<br>d) TOR Owner is able to download TOR conversion data on CRR MUI                                 | 02/18/25 |
|  | 5. | CAISO System Automation   | a) CRR system to send public notification to each CRR Holder notifying of TOR Conversion window close<br>b) CRR System to consume TOR conversions and validate each Tor conversion transfer<br>c) CRR system to send public notification to each CRR Holder notifying of TOR Conversion Approval window open | 02/18/25 |
|  | 6. | External Transmission Ownership Rights (TOR) Owner (Read/Write) <b>Transferee(CRRH)</b> | a) <b>Transferee(CRRH)</b> shall see notification of TOR conversion approval window open on <u>CRR MUI</u><br>b) <b>Transferee(CRRH)</b> to view and elect to accept or reject their TOR conversion data on <u>CRR MUI</u>   | 02/18/25 |
|  | 7. | CAISO System Automation   | a) CRR system to send public notification to each CRR Holder notifying of TOR Conversion Approval window close<br>b) CRR system to send public notification to each CRR Holder notifying of TOR Conversion results posted  | 02/18/25 |

|  |    |   |  |          |
|--|----|---|--|----------|
|  | 8. | External Transmission Ownership Rights (TOR) Owner (Read/Write) <b>Transferor</b> | a) TOR Owner shall see notification of TOR conversion results is posted on <u>CRR MUI</u><br>b) TOR Transferor to see notification of conversion status on <u>CRR MUI</u>                              | 02/19/25 |
|  | 9. | Final Expected Outcome  | a) TOR Transferor and TOR Transferee to see final TOR conversion results on <u>CRR MUI</u><br>b) CRR System to automatically create new MT-TORs for accepted TOR conversions (Modeled TORs) in CRR MOI | 02/20/25 |

| Scenario Title |                |                                | Allocation Monthly Participants – CEC Load Forecast Submission (MSIM – 007)  |                            |
|----------------|----------------|--------------------------------|--|----------------------------|
| Scenario ID    | Scenario Steps | Action Owner                   | Description  | MAP-Stage Date(s)          |
| MSS - 006      | 1.             | CAISO User Preliminary Actions | a) ISO user opens CEC Load Forecast market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for CEC Load forecast submission for the next <u>three</u> business days | 02/18/25 to 02/20/25       |
|                | 2.             | CAISO System Automation        | a) CRR system to send public notification to notify of CEC Load Forecast window open   | 02/18/25                   |
|                | 3.             | External CEC user              | a) CEC user to submit load data from CRR MUI   | 02/18/25                   |
|                | 4.             | CAISO System Automation        | a) CRR System to consume CEC Load Forecast<br>b) CRR system to send public notification to notify of CEC Load Forecast window close  | a) 02/18/25<br>b) 02/20/25 |
|                | 5.             | Final Expected Outcome         | a) CRR System shall utilize final CEC Load Forecast submission as the baseline for validation in order for CRR Holders to not submit Load Forecast greater than 5% of CEC Load Forecast                        | 02/20/25                   |

| Scenario Title | Allocation Monthly Participants – Historical Load Submission (MSIM – 008) |
|----------------|---|
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| Scenario ID | Scenario Steps | Action Owner                     | Description  | MAP-Stage Date(s)    |
|-------------|----------------|----------------------------------|--|----------------------|
| MSS - 007   | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Monthly Historical Load market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Monthly Historical Load submission for the next <u>three</u> business days   | 02/18/25 to 02/20/25 |
|             | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CLSE user notifying of Monthly Historical Load window open   | 02/18/25             |
|             | 3.             | External CRR Holder (Read/Write) | a) CLSE user to view notification of Monthly Historical Load window open on <u>CRR MUI</u><br>b) CLSE user to submit Monthly Historical Load on <u>CRR MUI</u>   | 02/18/25             |
|             | 4.             | CAISO System Automation          | a) CRR System to automatically consume Monthly Historical Load submission<br>b) CRR System to validate Monthly Historical Load submission and automatically Accept or Reject   | 02/18/25             |
|             | 5.             | External CRR Holder (Read/Write) | a) CLSE user to view Monthly Historical Load Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CLSE user can resubmit Monthly Historical Load on <u>CRR MUI</u>  | 02/19/25             |
|             | 6.             | CAISO System Automation          | a) CRR system to send public notification to each CLSE user notifying of Monthly Historical Load window close  | 02/19/25             |
|             | 7.             | Final Expected Outcome           | a) CLSE user to view Monthly Historical Load Status and results on <u>CRR MUI</u><br>b) CRR System shall utilize final Monthly Historical Load submission for MEQ calculation and post to <u>CRR MUI</u><br>c) CLSE user to view MEQ Calculation on <u>CRR MUI</u> | 02/19/25             |

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| Scenario Title |                |                                  | Allocation Monthly Participants – Forecast Load Submission (MSIM – 009)   |   |
|----------------|----------------|----------------------------------|---|---|
| Scenario ID    | Scenario Steps | Action Owner                     | Description   | MAP-Stage Date(s)                         |
| MSS - 008      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Monthly Forecast Load market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Monthly Forecast Load submission for the next <u>three</u> business days  | 02/18/25 to 02/20/25                      |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CLSE user notifying of Monthly Forecast Load window open  | 02/18/25                                  |
|                | 3.             | External CRR Holder (Read/Write) | a) CLSE user to view notification of Monthly Forecast Load window open on <u>CRR MUI</u><br>b) CLSE user to submit Monthly Forecast Load on <u>CRR MUI</u>  | 02/18/25                                  |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Monthly Forecast Load submission<br>b) CRR System to validate Monthly Forecast Load Submission and automatically Accept or Reject<br>c) If no Monthly Forecast Load data submitted, and not on 5 year election sheet then CRR System to set to 0 | 02/18/25                                  |
|                | 5.             | External CRR Holder (Read/Write) | a) CLSE user to view Monthly Forecast Load Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CLSE user can resubmit Monthly Forecast Load on <u>CRR MUI</u>   | 02/19/25                                  |
|                | 6.             | CAISO System Automation          | a) CRR system to send public notification to each CLSE user notifying of Monthly Forecast Load window close   | 02/19/25                                  |
|                | 7.             | Final Expected Outcome           | a) CLSE user to view Monthly Forecast Load Status and results on CRR MUI  | a) 02/19/25<br>b) 02/20/25<br>c) 02/20/25 |

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|  |  |  | b) CRR System shall utilize final Monthly Forecast Load submission for MEQ calculation and post to <u>CRR MUI</u><br>c) CLSE user to view MEQ Calculation on <u>CRR MUI</u> |  |
|--|--|--|---|--|

| Scenario Title |                |                                  | Allocation Annual Participants – Historical Load Submission (MSIM – 010)   |                            |
|----------------|----------------|----------------------------------|--|----------------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description  | MAP-Stage Date(s)          |
| MSS - 011      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Annual Historical Load market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Annual Historical Load submission for the next <u>three</u> business days | 02/18/25 to 02/20/25<br>a) |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CLSE user notifying of Annual Historical Load window open  | 02/18/25                   |
|                | 3.             | External CRR Holder (Read/Write) | a) CLSE user to view notification of Annual Historical Load window open on <u>CRR MUI</u><br>b) CLSE user to submit Annual Historical Load on <u>CRR MUI</u>   | 02/18/25                   |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Annual Historical Load submission<br>b) CRR System to validate Annual Historical Load Submission and automatically Accept or Reject   | 02/18/25                   |
|                | 5.             | External CRR Holder (Read/Write) | a) CLSE user to view Annual Historical Load Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CLSE user can resubmit Annual Historical Load on <u>CRR MUI</u>                                | 02/19/25                   |
|                | 6.             | CAISO System Automation          | a) CRR system to send private notification to each CLSE user notifying of Annual Historical Load window close  | 02/19/25                   |

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|  | 7. | Final Expected Outcome | a) CLSE user to view Annual Historical Load Status and results on <u>CRR MUI</u><br>b) CRR System shall utilize final Annual Historical Load submission for SEQ calculation and post to <u>CRR MUI</u><br>c) CLSE user to view SEQ Calculation on <u>CRR MUI</u> | 02/19/25 |
|--|----|------------------------|--|----------|

| Scenario Title |   |                                | External CRR Participant Reports in CRR (MSIM – 018)  |                  |                      |                         |
|----------------|---|--------------------------------|---|------------------|----------------------|-------------------------|
| Scenario ID    | Scenario Steps  | Action Owner                   | Description   |                  | MAP-Stage Date(s)    |                         |
| MSS - 018      | 1.  | CAISO User Preliminary Actions | a) ISO user opens MAP-Stage environment for External Participant view of CRR Reports  |                  | 02/18/25 to 03/20/25 |                         |
|                | 2.  | Final Expected Outcome         | a) CRR Participant to view and download any and all of the following Reports within CRR, depending on approved provisioned access |                  | 02/18/25 to 03/20/25 |                         |
|                |   |                                | CRR Report Name/Type  | User Access Type |                      | CRR UI Name             |
|                |   |                                | Generic Reports   | CRRH/CLSE        |                      | MUI>Download>Public     |
|                |   |                                | Private Reports   | CRRH/CLSE        |                      | MUI>Download>Private    |
|                |   |                                | CRR FNM NDA Reports   | NDA              |                      | MUI>Download>Restricted |
|                | Active Existing CRRs for All CRR Holders from requested Report Date | CRRH/CLSE                      | MUI>Download>Public   |                  |                      |                         |



|  |  |  |   |           |                         |
|--|--|--|---|-----------|-------------------------|
|  |  |  | Awarded CRRs by Market  | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | Binding Constraints by Market   | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | Biddable Locations by Market  | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | Base Loading CRRs by Market   | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | Clearing Prices by Auction Market   | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | Active Existing CRRs for Only the logged in CRR holder from date report requested | CRRH/CLSE | MUI>Download>Private    |
|  |  |  | Awarded CRRs by Market for the logged in CRR Holder                               | CRRH/CLSE | MUI>Download>Private    |
|  |  |  | Constraint Definitions  | NDA       | MUI>Download>Restricted |
|  |  |  | Constraint Limits   | NDA       | MUI>Download>Restricted |
|  |  |  | Biddable Location Definitions   | CRRH/CLSE | MUI>Download>Public     |
|  |  |  | FNM Data Model  | NDA       | MUI>Download>Restricted |

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|--|--|--|---|-----|-----------|--|
|  |  |  | CRR Monthly and Annual Eligible CRR Auction and Allocation Market Source/Sink | All | Caiso.com |  |
|--|--|--|---|-----|-----------|--|

### 3.1.2 Week 2

*Note: Refer to schedule provided by Market Simulation Coordinator for date and time of open and close of submission windows as well as expected posting of results.*

| Scenario Title  |  |                                | Reports in Open Access Same-time Information System (MSIM – 003)  |                   |                 |   |  |                         |
|---|--|--------------------------------|---|-------------------|-----------------|---|--|-------------------------|
| Scenario ID   | Scenario Steps   | Action Owner                   | Description   | MAP-Stage Date(s) |                 |   |  |                         |
| MSS - 002   | 1.   | Public Access (external users) | <div>External Users to view and download any of the following OASIS reports, under the “Congestion Revenue Rights” tab:</div> <table><tr><th>Report Name/Type</th><th>Report Location</th></tr><tr><td><div>CRR Inventory Data<ul style="list-style-type: none"><li>CRRs Created from Auctions</li><li>CRRs Created from Allocations</li><li>CRRs Created from Load Migrations</li><li>CRRs Created from all Ad-hoc processes</li><li>CRRs Created from SRS</li><li>Awarded Sell Offers in Auction (Offer Type = "SELLER")</li></ul></div></td><td><div><a href="http://mapstage-oasis.caiso.com">http://mapstage-oasis.caiso.com</a> &gt;&gt; Congestion Revenue Rights &gt;&gt; CRR Inventory</div></td></tr></table> | Report Name/Type  | Report Location | <div>CRR Inventory Data<ul style="list-style-type: none"><li>CRRs Created from Auctions</li><li>CRRs Created from Allocations</li><li>CRRs Created from Load Migrations</li><li>CRRs Created from all Ad-hoc processes</li><li>CRRs Created from SRS</li><li>Awarded Sell Offers in Auction (Offer Type = "SELLER")</li></ul></div> | <div><a href="http://mapstage-oasis.caiso.com">http://mapstage-oasis.caiso.com</a> &gt;&gt; Congestion Revenue Rights &gt;&gt; CRR Inventory</div> | a) 02/25/25 to 02/27/25 |
| Report Name/Type  | Report Location  |                                |   |                   |                 |   |  |                         |
| <div>CRR Inventory Data<ul style="list-style-type: none"><li>CRRs Created from Auctions</li><li>CRRs Created from Allocations</li><li>CRRs Created from Load Migrations</li><li>CRRs Created from all Ad-hoc processes</li><li>CRRs Created from SRS</li><li>Awarded Sell Offers in Auction (Offer Type = "SELLER")</li></ul></div> | <div><a href="http://mapstage-oasis.caiso.com">http://mapstage-oasis.caiso.com</a> &gt;&gt; Congestion Revenue Rights &gt;&gt; CRR Inventory</div> |                                |   |                   |                 |   |  |                         |

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|----------------|----------------|--------------|--|--|-------------------|
|                |                |              | <ul style="list-style-type: none"> <li>TOR Conversions (dependent on TOR participation during market simulation)</li> </ul>  |  |                   |
|                |                |              | <p>CRR Public Bids</p> <p>Note: The monthly and annual markets coming from the new CRR system mapstage env will not be published on OASIS mapstage, since its publication schedule will not be reached accordingly during the market sim period:</p> <ul style="list-style-type: none"> <li>Monthly Auction – 90days after market close date</li> <li>Annual Auction – day after each season end date</li> </ul> | <p><a href="http://mapstage-oasis.caiso.com">http://mapstage-oasis.caiso.com</a> &gt;&gt; Public Bids &gt;&gt; CRR Public Bids</p>       |                   |
|                |                |              | All Available CRR Market Names   | <p><a href="http://oasismap.caiso.com">http://oasismap.caiso.com</a> &gt;&gt; Congestion Revenue Rights &gt;&gt; CRR Market Names</p>    |                   |
|                |                |              | CRR Clearing Prices  | <p><a href="http://oasismap.caiso.com">http://oasismap.caiso.com</a> &gt;&gt; Congestion Revenue Rights &gt;&gt; CRR Clearing Prices</p> |                   |
| Scenario Title |                |              | WAPAMEEA Nominations (MSIM – 017)  |  |                   |
| Scenario ID    | Scenario Steps | Action Owner | Description  |  | MAP-Stage Date(s) |

|           |    |                                   |   |                      |
|-----------|----|-----------------------------------|---|----------------------|
| MSS - 009 | 1. | CAISO User Preliminary Actions    | a) ISO opens MAP-Stage environment for WAPAMEEA Nominations market for next <u>three</u> business days only for the following LSEs (CDWR, WFLS, WDOE, WEPA, WNAS, WPUL) | 02/25/25 to 02/27/25 |
|           | 2. | External CRR Holder (Read/Write)* | a) Only the following LSEs (CDWR, WFLS, WDOE, WEPA, WNAS, WPUL) must have the ability to nominate WAPAMEEA APNodes for allocation market                                | 02/25/25             |
|           | 3. | CAISO System Automation           | a) CRR System to utilize WAPAMEEA submissions for APNodes for allocation market   | 02/26/25             |
|           | 4. | Final Expected Outcome            | a) WAPAMEEA related LSEs to see results of APNode nominations on <u>CRR MUI</u>   | 02/27/25             |

| Scenario ID    |                |  |  |   |
|----------------|----------------|--|--|---|
| MSS - 010      |                |  |  | a)  |
|                |                |  |  |   |
|                |                |  | a)   |   |
|                |                |  | a)   |   |
|                |                |  | a)   |   |
|                |                |  | a)   |   |
| Scenario Title |                | Allocation Monthly Participants – Tier 1 Submission (MSIM – 011) |  |   |
| Scenario ID    | Scenario Steps | Action Owner   | Description  | MAP-Stage Date(s)   |
| MSS - 012      | 1.             | CAISO User Preliminary Actions                                   | a) ISO user opens Monthly Tier 1 market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Monthly Tier 1 submission for the next <u>three</u> business days | a) 02/25/25 to 02/27/25<br>b) 02/25/25 to 02/27/25<br>c) 02/25/25 |

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|  |    |                                  | c) ISO user prepares MN V0 and ETC market with ETC nominations.  |          |
|  | 2. | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Monthly Tier 1 window open<br>b) CRR system to calculate MN ETC market.<br>c) CRR system to publish MN V0 and ETC market.<br>d) CRR system to publish Tier 1 model | 02/25/25 |
|  | 3. | External CRR Holder (Read/Write) | a) CRR Holder to access MN V0 and ETC market results.<br>b) CRR Holder to view public notification of Monthly Tier 1 window open on <u>CRR MUI</u><br>c) CRR Holder to submit Monthly Tier 1 data on <u>CRR MUI</u>                          | 02/25/25 |
|  | 4. | CAISO System Automation          | a) CRR System to automatically consume Monthly Tier 1 submission<br>b) CRR System to validate Monthly Tier 1 Submission and automatically Accept or Reject<br>c) CRR System to calculate Monthly Allocation Market Tier 1 Results            | 02/26/25 |
|  | 5. | External CRR Holder (Read/Write) | a) CRR Holder to view Monthly Tier 1 Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CRR Holder can resubmit Monthly Tier 1 data on <u>CRR MUI</u>   | 02/26/25 |
|  | 6. | External CRR NDA (Read Only)     | a) External CRR NDA User (Read only) to view Market MN V0 ETC and Tier 1 model results on <u>CRR MUI</u>   | 02/27/25 |
|  | 7. | CAISO System Automation          | a) CRR system to send public notification to CRR Holders notifying of Monthly Tier 1 submission window close   | 02/27/25 |
|  | 8. | Final Expected Outcome           | a) CRR Holder to view public notification of Monthly Tier 1 submission window close on <u>CRR MUI</u>  | 02/27/25 |

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|  |  |  | b) CRR Holder to view and download their Monthly Allocation Market Tier 1 Results on <u>CRR MUI</u> |  |
|--|--|--|---|--|

| Scenario Title |                |                                  | Allocation Monthly Participants – Tier 2 Submission (MSIM – 013)  |                      |
|----------------|----------------|----------------------------------|---|----------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description   | MAP-Stage Date(s)    |
| MSS - 013      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Monthly Tier 2 market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Monthly Tier 2 submission for the next <u>three</u> business days                          | 02/25/25 to 02/27/25 |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Monthly Tier 2 window open<br>b) CRR system to calculate set-aside value and publish Tier 2 model   | 02/25/25             |
|                | 3.             | External CRR Holder (Read/Write) | a) CRR Holder to view public notification of Monthly Tier 2 window open on <u>CRR MUI</u><br>b) CRR Holder to submit Monthly Tier 2 data on <u>CRR MUI</u>  | 02/25/25             |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Monthly Tier 2 submission<br>b) CRR System to validate Monthly Tier 2 Submission and automatically Accept or Reject<br>c) CRR System to calculate Monthly Allocation Market Tier 2 Results | 02/25/25             |
|                | 5.             | External CRR Holder (Read/Write) | a) CRR Holder to view Monthly Tier 2 Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CRR Holder can resubmit Monthly Tier 2 data on <u>CRR MUI</u>  | 02/25/25             |
|                | 6.             | External CRR NDA (Read Only)     | a) External CRR NDA User (Read only) to view Market MN Tier 2 model results on <u>CRR MUI</u>   | 02/26/25             |

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|  | 7. | CAISO System Automation | a) CRR system to send public notification to CRR Holders notifying of Monthly Tier 2 submission window close   | 02/26/25 |
|  | 8. | Final Expected Outcome  | a) CRR Holder to view public notification of Monthly Tier 2 submission window close on <u>CRR MUI</u><br>b) CRR Holder to view and download their Monthly Allocation Market Tier 2 Results on <u>CRR MUI</u> | 02/27/25 |

| Scenario Title |                |                                  | Auction Monthly Participants – Monthly Auction Submission (MSIM – 015)   |                      |
|----------------|----------------|----------------------------------|--|----------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description  | MAP-Stage Date(s)    |
| MSS - 014      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Monthly Auction market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Monthly Auction submission for the next <u>three</u> business days   | 02/25/25 to 02/27/25 |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Monthly Auction window open<br>b) CRR system to publish MN AUC MN market.  | 02/25/25             |
|                | 3.             | External CRR Holder (Read/Write) | a) CRR Holder to view public notification of Monthly Auction window open on <u>CRR MUI</u><br>b) CRR Holder to submit Monthly Auction bid portfolio data on <u>CRR MUI</u><br><br>1) Submit a bid that will pass<br>2) Submit a bid that will reject<br>3) Retract a submitted bid | 02/25/25             |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Monthly Auction submission<br>b) CRR System to calculate Monthly Auction Results  | 02/25/25             |

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**Template ISO External Market Simulation Plan**

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|----|----------------------------------|--|----------|
| 5. | External CRR Holder (Read/Write) | a) CRR Holder can update submitted Monthly Auction portfolio data on <u>CRR MUI</u> so long as market window remains open  | 02/26/25 |
| 6. | External CRR NDA (Read Only)     | a) External CRR NDA User (Read only) to view and download their Auction Market Model Results on <u>CRR MUI</u>   | 02/26/25 |
| 7. | CAISO System Automation          | a) CRR system to send public notification to CRR Holders notifying of Monthly Auction submission window close  | 02/26/25 |
| 8. | Final Expected Outcome           | a) CRR Holder to view public notification of Monthly Auction Submission window close on <u>CRR MUI</u><br>b) CRR Holder to view and download their Post CRR Monthly Auction Market Results on <u>CRR MUI</u> | 02/27/25 |

### 3.1.3 Week 3

*Note: Refer to schedule provided by Market Simulation Coordinator for date and time of open and close of submission windows as well as expected posting of results.*

| Scenario Title |                                  | Secondary Market – SRS Trade (MSIM – 019)  |                      |
|----------------|----------------------------------|--|----------------------|
| Scenario Steps | Action Owner                     | Description  | MAP-Stage Date(s)    |
| 1.             | CAISO User Preliminary Actions   | a) ISO will configure parameters on MOI to set minimum days allowed between the request creation date and start date to be <u>five calendar days</u> | 03/04/25 to 03/06/25 |
| 2.             | External CRR Holder (Read/Write) | a) CRR Holder must agree to a trade on <u>CRR MUI</u> prior to starting collateral evaluation  | 03/04/25             |

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**Template ISO External Market Simulation Plan**

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|----|----------------------------------|--|----------------------|
| 3. | CAISO System Automation          | <ul style="list-style-type: none"> <li>b) CRR System to send request to Market Clearing</li> <li>c) Market Clearing to determine available credit of the secondary market buyer and seller</li> <li>d) Market Clearing to send completed Secured Available Credit for Transferor and Transferee information to CRR System</li> <li>e) CRR System to calculate required credit for secondary trade and approve or reject the request</li> <li>f) In the event of credit rejection CRR system to display rejection message in <u>CRR MUI</u> to CRR transferor</li> <li>g) In the event of credit approval CRR system to display approval on <u>CRR MUI</u> to CRR transferor</li> </ul> | 03/04/25             |
| 4. | External CRR Holder (Read/Write) | <ul style="list-style-type: none"> <li>b) Rejected CRR Holder may resubmit request on <u>CRR MUI</u></li> <li>c) Approved CRR Transferor to transfer active CRRs (single or bulk) to approved CRR transferee on <u>CRR MUI</u></li> </ul>  | 03/04/25 to 03/06/25 |
| 5. | CAISO System Automation          | <ul style="list-style-type: none"> <li>b) CRR System to validate CRR sell offers submission and not allow Secondary trades for any CRR that has an active sell offer in an open auction market</li> <li>c) CRR System to identify secondary trades of allocated CRR entities that are subject to load migration and ensure has sufficient collateral to hold counter-flow position of traded CRR</li> <li>d) CRR system to display completed CRR transfer results and updated holdings to CRR Transferor and CRR Transferee on <u>CRR MUI</u></li> </ul>   | 03/04/25 to 03/06/25 |
| 6. | Final Expected Outcome           | <ul style="list-style-type: none"> <li>b) Completion of CRR transfer between approved CRR Transferor and approved CRR Transferee</li> <li>c) CRR Transferor and Transferee to see updated CRR holdings on <u>CRR MUI</u></li> </ul>  | 03/06/25             |

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**Template ISO External Market Simulation Plan**

| Scenario Title |                |                                  | Allocation Annual Participants – Tier 1 Submission (MSIM – 012)   |                      |
|----------------|----------------|----------------------------------|---|----------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description   | MAP-Stage Date(s)    |
| MSS - 015      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Annual Tier 1 market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Annual Tier 1 submission for the next <u>three</u> business days  | 03/04/25 to 03/06/25 |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Annual Tier 1 window open<br>b) CR system to publish AN V0 and T1 model   | 03/04/25             |
|                | 3.             | External CRR Holder (Read/Write) | a) CRR Holder to view public notification of Annual Tier 1 window open on <u>CRR MUI</u><br>b) CRR Holder to submit Annual Tier 1 data on <u>CRR MUI</u>  | 03/04/25             |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Annual Tier 1 submission<br>b) CRR System to validate Annual Tier 1 Submission and automatically Accept or Reject<br>c) CRR System to calculate Market MN V0 ETC and ETC model results<br>d) CRR System to calculate Annual Allocation Market Tier 1 Results | 03/04/25             |
|                | 5.             | External CRR Holder (Read/Write) | a) CRR Holder to view Annual Tier 1 Validation status (Accepted or Rejected) on <u>CRR MUI</u><br>b) If Rejected, CRR Holder can resubmit Annual Tier 1 data on <u>CRR MUI</u>  | 03/04/25             |
|                | 6.             | External CRR NDA (Read Only)     | a) External CRR NDA User (Read only) to view Market MN V0 ETC and Tier 1 model results on <u>CRR MUI</u>  | 03/05/25             |
|                | 7.             | CAISO System Automation          | a) CRR system to send public notification to CRR Holders notifying of Annual Tier 1 submission window close   | 03/06/25             |

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|--|----|------------------------|--|----------|
|  | 8. | Final Expected Outcome | a) CRR Holder to view public notification of Annual Tier 1 submission window close on <u>CRR MUI</u><br>b) CRR Holder to view and download their Annual Allocation Market Tier 1 Results on <u>CRR MUI</u> | 03/06/25 |
|--|----|------------------------|--|----------|

| Scenario Title |                |                                  | Allocation Annual Participants – Tier 2 Submission (MSIM – 014)   |                      |
|----------------|----------------|----------------------------------|---|----------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description   | MAP-Stage Date(s)    |
| MSS - 016      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Annual Tier 2 market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Annual Tier 2 submission for the next <u>three</u> business days  | 03/04/25 to 03/06/25 |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Annual Tier 2 window open<br>b) CRR system to calculate set-side and publish T2 model   | 03/04/25             |
|                | 3.             | External CRR Holder (Read/Write) | a) CRR Holder to view public notification of Annual Tier 2 window open on <u>CRR MUI</u><br>b) CRR Holder to submit Annual Tier 2 data on <u>CRR MUI</u>  | 03/04/25             |
|                | 4.             | CAISO System Automation          | a) CRR System to automatically consume Annual Tier 2 submission<br>b) CRR System to validate Annual Tier 2 Submission and automatically Accept or Reject<br>c) CRR System to calculate Market MN V0 ETC and ETC model results<br>d) CRR System to calculate Annual Allocation Market Tier 2 Results | 03/04/25             |
|                | 5.             | External CRR Holder (Read/Write) | a) CRR Holder to view Annual Tier 2 Validation status (Accepted or Rejected) on <u>CRR MUI</u>  | 03/04/25             |

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|  |    |                              | b) If Rejected, CRR Holder can resubmit Annual Tier 2 data on <u>CRR MUI</u>   |          |
|  | 6. | External CRR NDA (Read Only) | a) External CRR NDA User (Read only) to view Market MN V0 ETC and Tier 2 model results on <u>CRR MUI</u>   | 03/04/25 |
|  | 7. | CAISO System Automation      | a) CRR system to send public notification to CRR Holders notifying of Annual Tier 2 submission window close  | 03/05/25 |
|  | 8. | Final Expected Outcome       | a) CRR Holder to view public notification of Annual Tier 2 submission window close on <u>CRR MUI</u><br>b) CRR Holder to view and download their Annual Allocation Market Tier 2 Results on <u>CRR MUI</u> | 03/06/25 |

| Scenario Title |                |                                  | Auction Annual Participants – Annual Auction Submission (MSIM – 016)   |                      |
|----------------|----------------|----------------------------------|--|----------------------|
| Scenario ID    | Scenario Steps | Action Owner                     | Description  | MAP-Stage Date(s)    |
| MSS - 017      | 1.             | CAISO User Preliminary Actions   | a) ISO user opens Annual Auction market <u>three</u> business days ahead of window open<br>b) ISO user opens MAP-Stage environment for Annual Auction submission for the next <u>three</u> business days                                       | 03/04/25 to 03/06/25 |
|                | 2.             | CAISO System Automation          | a) CRR system to send public notification to each CRR Holder notifying of Annual Auction window open<br>b) CRR system to and publish AN AUC model  | 03/04/25             |
|                | 3.             | External CRR Holder (Read/Write) | a) CRR Holder to view public notification of Annual Auction window open on <u>CRR MUI</u><br>b) CRR Holder to submit Annual Auction portfolio data on <u>CRR MUI</u><br><br>1) Submit a bid that will pass<br>2) Submit a bid that will reject | 03/04/25             |

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|  |    |                                  |  |          |
|--|----|----------------------------------|--|----------|
|  |    |                                  | <b>3) Retract a submitted bid</b>  |          |
|  | 4. | CAISO System Automation          | a) CRR System to automatically consume Annual Auction submission<br>b) CRR System to calculate Annual Auction Results  | 03/04/25 |
|  | 5. | External CRR Holder (Read/Write) | a) CRR Holder can update submitted Annual Auction portfolio data on <u>CRR MUI</u> so long as market window remains open   | 03/04/25 |
|  | 6. | External CRR NDA (Read Only)     | a) External CRR NDA User (Read only) to view and download their Annual Auction Market Model Results on <u>CRR MUI</u>  | 03/05/25 |
|  | 7. | CAISO System Automation          | a) CRR system to send public notification to CRR Holders notifying of Annual Auction submission window close   | 03/05/25 |
|  | 8. | Final Expected Outcome           | a) CRR Holder to view public notification of Annual Auction Submission window close on <u>CRR MUI</u><br>b) CRR Holder to view and download their Post CRR Annual Auction Market Results on <u>CRR MUI</u> | 03/06/25 |

### 3.1.4 Week 4 & 5

Please note that Week 4 and 5 of Market Simulation is reserved for Unstructured Market Simulation where CRR Participants are able to coordinate with ISO team to test anything needed from Week 1, 2, and 3.

## 1. ISO Market Simulation Contact

Please contact [MarketSim@caiso.com](mailto:MarketSim@caiso.com) if you have any questions or concerns regarding the market simulation scenarios.

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## 2. Appendix A – User Interface Information

| Scenario ID | Scenario Title   | UI Details  |
|-------------|--|---|
| MSS - 001   | CRR Participant Pre-Registration and Access Provisioning       | AIM <a href="https://aim.caiso.com">https://aim.caiso.com</a>   |
| MSS - 002   | Reports in Open Access Same-time Information System            | <b>CRR Inventory Data:</b> <a href="http://mapstage-oasis.caiso.com">&gt;&gt; http://mapstage-oasis.caiso.com</a><br>Congestion Revenue Rights >> CRR Inventory<br><br><b>CRR Public Bids:</b> <a href="http://mapstage-oasis.caiso.com">&gt;&gt; http://mapstage-oasis.caiso.com</a> >> Public Bids >> CRR Public Bids<br><br><b>CRR Market Names &amp; Effective Periods:</b> <a href="http://mapstage-oasis.caiso.com">&gt;&gt; http://mapstage-oasis.caiso.com</a> >> Congestion Revenue Rights >> CRR Market Names<br><br><b>CRR Clearing Prices:</b> <a href="http://mapstage-oasis.caiso.com">&gt;&gt; http://mapstage-oasis.caiso.com</a> >> Congestion Revenue Rights >> CRR Auction Clearing Prices |
| MSS - 003   | Miscellaneous Process – UDC Load Migration                     | CRR MUI >> Load Migration   |
| MSS - 004   | Miscellaneous Process – Long Term CRR Re-nomination            | CRR MUI >> Editors >> LT Nomination Election  |
| MSS - 005   | Miscellaneous Process – TOR Conversion                         | Transferor: CRR MUI >> Editors >> TOR Conversion Requests<br>Transferee: CRR MUI >> Editors >> MT_TOR CRR Approvals   |
| MSS - 006   | Allocation Monthly Participants – CEC Load Forecast Submission | CRR MUI >> Load Data >> CEC Load  |
| MSS - 007   | Allocation Monthly Participants – Historical Load Submission   | CRR MUI >> Load Data >> Historical and Forecasted Load  |
| MSS - 008   | Allocation Monthly Participants – Forecast Load Submission     | CRR MUI >> Load Data >> Historical and Forecasted Load  |
| MSS - 009   | WAPAMEEA Nominations   | CRR MUI >> CRR Nominations  |
| MSS - 010   | Secondary Market – SRS Trade                                   | CRR MUI >> Secondary Market   |

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**Template ISO External Market Simulation Plan**

| Scenario ID      | Scenario Title  | UI Details   |
|------------------|---|--|
| <b>MSS - 011</b> | Allocation Annual Participants – Historical Load Submission | CRR MUI >> Load Data >> Historical and Forecasted Load |
| <b>MSS - 012</b> | Allocation Monthly Participants – Tier 1 Submission         | CRR MUI >> CRR Nominations                             |
| <b>MSS - 013</b> | Allocation Monthly Participants – Tier 2 Submission         | CRR MUI >> CRR Nominations                             |
| <b>MSS - 014</b> | Auction Monthly Participants – Monthly Auction Submission   | CRR MUI >> CRR Bids/Offers                             |
| <b>MSS - 015</b> | Allocation Annual Participants – Tier 1 Submission          | CRR MUI >> CRR Nominations                             |
| <b>MSS - 016</b> | Allocation Annual Participants – Tier 2 Submission          | CRR MUI >> CRR Nominations                             |
| <b>MSS - 017</b> | Auction Annual Participants – Annual Auction Submission     | CRR MUI >> CRR Bids/Offers                             |
| <b>MSS - 018</b> | External CRR Participant Reports in CRR                     | Refer to MSS - 018 for more information.               |

### 3. Appendix B – API Information

**Note:** Connectivity testing for API is being completed in two enablement timeframes. As the ISO team tests and makes ready each API the dates shall be moved up to reflect the two API enablement periods on 01/28/25 and 02/07/25. E.g., if the ISO prepares APIs related to # 10 sooner, the date shall be updated from 02/07/25 to 01/28/25. Participants interested in connectivity testing for specific APIs are expected to begin testing after each date provided below.

| #  | API   | MapStage date availability schedule |
|----|---|-------------------------------------|
| 1  | <a href="https://mapstage-api.caiso.com/crr/status">https://mapstage-api.caiso.com/crr/status</a>   | Available                           |
| 2  | <a href="https://mapstage-api.caiso.com/crr/auction/">https://mapstage-api.caiso.com/crr/auction/...</a><br><i>Examples:</i><br><a href="https://mapstage-api.caiso.com/crr/auction/v1.0/portfolioCreation">https://mapstage-api.caiso.com/crr/auction/v1.0/portfolioCreation</a><br><a href="https://mapstage-api.caiso.com/crr/auction/v1.0/portfolio">https://mapstage-api.caiso.com/crr/auction/v1.0/portfolio</a><br><i>etc...</i> | Available                           |
| 3  | <a href="https://mapstage-api.caiso.com/crr/historicalforecastedload/">https://mapstage-api.caiso.com/crr/historicalforecastedload/...</a>  | Available                           |
| 4  | <a href="https://mapstage-api.caiso.com/crr/loadmigration/">https://mapstage-api.caiso.com/crr/loadmigration/...</a>  | Available                           |
| 5  | <a href="https://mapstage-api.caiso.com/crr/marketstatus/">https://mapstage-api.caiso.com/crr/marketstatus/...</a>  | Available                           |
| 6  | <a href="https://mapstage-api.caiso.com/crr/messages/">https://mapstage-api.caiso.com/crr/messages/...</a>  | Available                           |
| 7  | <a href="https://mapstage-api.caiso.com/crr/nomination/">https://mapstage-api.caiso.com/crr/nomination/...</a>  | Available                           |
| 8  | <a href="https://mapstage-api.caiso.com/crr/secondarymarket/">https://mapstage-api.caiso.com/crr/secondarymarket/...</a>  | Available                           |
| 9  | <a href="https://mapstage-api.caiso.com/crr/marketdata/">https://mapstage-api.caiso.com/crr/marketdata/...</a>  | Available                           |
| 10 | <a href="https://mapstage-api.caiso.com/crr/torconversion/">https://mapstage-api.caiso.com/crr/torconversion/...</a>  | Available                           |