California ISO

Market Simulation

CIRA Technology Upgrade

Version 1.0

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Revision History

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1. Introduction

The California ISO Interface for Resource Adequacy Application (CIRA) is an application that allows Market Participants to enter and manage Resource Adequacy resource and unit information as well as support the submission, validation, and administration of Resource Adequacy information for CAISO market and reliability requirements. The CIRA Technology Upgrade shall improve the technology stack necessary for robust Resource Adequacy as well as replace and modernize the current application to better align with CAISO's standards, architecture, and RA redesign roadmap.

The objectives of this Market Simulation are to:

- Confirm successful connectivity and system interface functionality
- Validate CIRA UI and API functionality as applicable
- Execute defined scenarios to confirm expected system behavior
- Ensure that customer system changes interact correctly with ISO systems

2. Market Simulation Schedule

The Market Simulation timeline is 12/14/2026 through 01/29/2027, with expected Production Implementation of 02/04/2027.

3. Connectivity Testing

3.1 Connectivity Testing Overview

- Covers network testing and certificate provisioning
- Participants without certificates are expected to reach out to their User Access Administrator (UAA) for proper provisioning.
- Participants must attain MAPSTAGE provisioning the CIRA application
- Participants must update their firewall settings to ensure proper connections to applications ahead of Market Simulation.

3.2 Connectivity Testing Success Criteria

Certificate	Success Criteria
YES	• Successful upon completion of following criteria: ○ Access application via User Interface (UI) and login
NO	• Successful upon completion of following criteria: ○ Access network via UI and receive error message about incorrect provisioning
NO	• Not successful if: ○ Attempt to access network via UI and receive error message other than request for provisioning

4. Integration Testing

4.1 Integration Testing Overview

- Participants have successfully attained certificate provisioning and have successfully completed Connectivity Testing to proceed to Integration Testing
- Participants are to test retrieval of data
- For the purposes of Integration Testing ISO shall ensure the following:
  - MAPSTAGE code is completed
  - Availability of MAPSTAGE environment application externally

4.2 Integration Testing Success Criteria

Certificate	Success Criteria
YES	• Successful upon completion of connectivity testing • Successful retrieval via UI
YES	• Not successful if: • Receiving submission or retrieval error messages. Submit CIDI and email marketsim@caiso.com for support.
NO	• Not successful as participant cannot proceed to Integration Testing without first attaining proper provisioning

5. Access Provisioning

5.1 Getting Access to CAISO Applications

- Participants new to testing must complete network connectivity testing and certificate provisioning before proceeding (see steps above).
- Prior CIRA testers with established connectivity and active application provisioning generally do not need to repeat these steps, but should verify their access and certificates remain valid ahead of Market Simulation.
- If you're a user at an external market participant company and you need access to a CAISO application, your first step is to contact your company's User Access Administrator (UAA). Individual users do not request application access directly from the CAISO — all access requests, removals, and certificate actions must be submitted on your behalf by your company's authorized UAA. The one exception is OASIS, which is a public application and doesn't require UAA-managed access.
- Your UAA provisions access through the Access and Identity Management (AIM) application, selecting the specific applications, roles, and environments you need. Once submitted, provisioning typically takes about 1 to 1½ hours, though certain applications that require additional verification can take 24–48 hours to complete.
- If you don't know who your company's UAA is, email UAARequests@caiso.com. If your company doesn't yet have a UAA, one will need to be established before access can be granted.

5.2 Reference Links for UAAs

For the UAAs handling these requests, the following CAISO resources cover the provisioning process:

- User Access Administrator (UAA) main page — overview, forms, and guides: https://www.caiso.com/systems-applications/user-access-administrator-uaa
- Access and Identity Management (AIM) User Guide — step-by-step provisioning in AIM: https://www.caiso.com/documents/accessandidentitymanagement-aim-userguide.pdf
- AIM application page — overview and training resources: https://www.caiso.com/systems-applications/portals-applications/access-and-identity-management-aim
- UAA Establishment and Requirements — defines UAA responsibilities and identity-validation duties: https://www.caiso.com/documents/iso-user-access-administrator-uaa-establishment-and-requirements.pdf
- AARF & SFTP Form Reference Guide — completing the Application Access Request Form: https://www.caiso.com/documents/applicationaccessrequestformreferenceguide.pdf

- Requesting access and certificates — general user-facing guidance: https://www.caiso.com/systems-applications/requesting-access-certificates

6. Market Simulation

6.1 Market Simulation Overview

- Covers testing in the MAPSTAGE environment
- MAPSTAGE is an integrated Pre-production-like environment that is available to customers with provisioned access
- Allows customers to experience ISO release/project implementations prior to Production implementation
- Market Simulation will allow customers and the CAISO to conduct specific market scenarios in a test environment prior to the Production activation to ensure that all system interfaces are functioning as expected and to produce simulated market results
- Customers may use MAPSTAGE to validate the interaction of customer-driven changes with the ISO systems

6.2 Market Simulation Success Criteria

Criteria	Success Criteria

YES	• Successful upon execution of Market Simulation Scenarios
	  ○ End to end flow of data
	  ○ Systems are running as expected
	  ○ No major issues with system integrations
	  ○ No major showstoppers before activation

NO	• Not successful if major showstoppers present before entering activation which significantly impeded sufficient execution and completion of Scenarios. E.g., Key functionality not delivered as outlined in Business Requirements Specifications impacting submissions, market functions, and downstream data receives.

6.3 Market Simulation Scenarios

As the CIRA Technology Upgrade replaces the existing CIRA application, CAISO recommends that Market Participants focus their Market Simulation testing on the functionality and workflows most critical to their business operations.

For each applicable function and/or workflow, participants should then perform the same actions in the new CIRA applications in the MAPSTAGE environment to validate the functionality operates as expected.

This approach will allow participants to familiarize themselves with the upgraded application, verify critical business processes, and identify any potential issues or differences in functionality prior to Production deployment.

Should any issues or questions arise, Market Participants are encouraged to submit a CIDI through the existing process. Additionally, CAISO will host a dedicated weekly meeting to review testing progress, address questions, discuss reported issues, and provide support throughout the Market Simulation period.

7. Activation

- Complete successful Connectivity, Integration, Market Simulation, ahead of expected Activation
- Participants to confirm to Market Simulation team and Customer Readiness team their readiness for activation via submission of CIDI and emailing MarketSim@Caiso.com
- ISO to support participants throughout testing and thereafter for participant readiness

8. ISO Market Simulation Contact

Please contact MarketSim@caiso.com if you have any questions, feedback, and/or concerns about the testing and/or scenarios disclosed in this document. The ISO appreciates your partnership and participation in the Extended Day Ahead Market (EDAM).