



California ISO

Market Simulation Forum

May 15, 2025

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ISO PUBLIC

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Overview

- Presentation Summary of Changes
- Market Simulation Overview
- Market Simulation MAP Stage Availability
- Market Simulation MAP Stage Code
- Market Simulation Activities
- Market Simulation Settlements (if needed)
- Market Simulation Initiatives - Current
 - FERC881 Track 2
 - Transmission Exchange Agreement (TEA)
- Market Simulation Initiatives - Upcoming
 - Subscriber Participation Transmission Ownership Model (Subscriber PTO)
 - EDAM/DAME/Western EIM/BAA/ISO

Summary Of Changes

- Slide 8: Updated MAPSTAGE availability
- Slide 10: Updated project dates
- Slide 18: Updated Hybrid Resource 2C Activation date
- Slide 21: Updated Subscriber PTO dates
- Slide 23: Updated next meeting dates

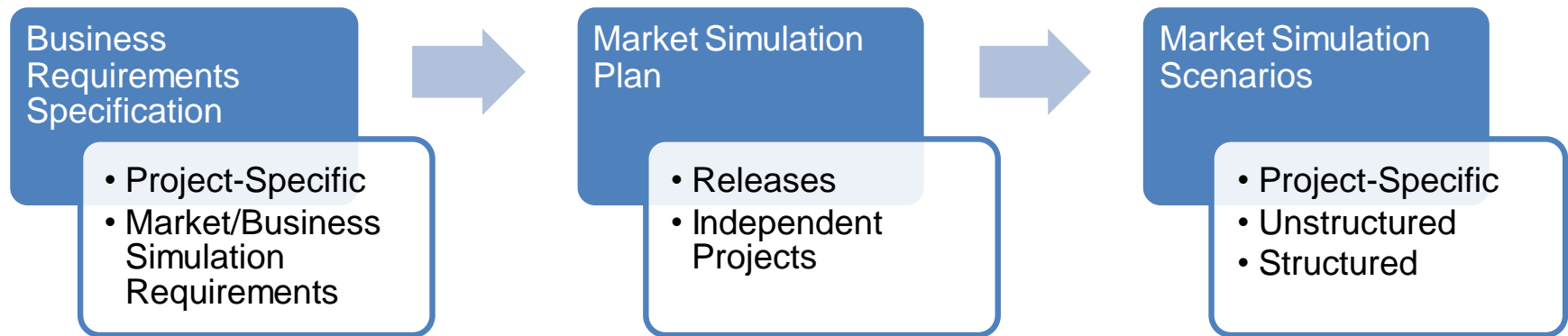
Market Simulation Overview

- Covers activities in the MAP Stage environment
- MAP Stage is an integrated 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 also use MAP Stage to validate the interaction of customer-driven changes with the ISO systems

Reasons for Market Simulation

- **Rule impacts:** Generalized changes in market rules, bidding rules, settlements rules, market design changes, or other business rules.
- **Interface changes:** Changes that impact templates (RA Supply Plan, Master File RDT, etc.), User Interfaces (UI), Application Programming Interface (API) / Web Service.
- **New/modified application/report:** Changes that cause addition/modification of ISO systems or reports, especially when data input is required by the customer
- **New/modified system process:** Modification of data flow in systems, especially if the new/modified process requires the customer to demonstrate proficiency prior to Production
- **New/modified model data:** Addition or substantial modification of model data as a market solution or export provided by the ISO
- **New/modified user role:** The addition or modification of access permissions for a user role

Market Simulation for ISO Implementation of Releases & Projects - Deliverables



Market Simulation Forums

Scheduled for 2-3PM PT

	Monday	Tuesday	Wednesday	Thursday	Friday
April		1	2	3	4
	7	8	9	10	11
	14	15	16	17	18
	21	22	23	24	25
	28	29	30		
May				1	2
	5	6	7	8	9
	12	13	14	15	16
	19	20	21	22	23
	26	27	28	29	30

**Market
Simulation
Forum**

ISO Closure

Cancelled

Market Simulation MAP Stage Availability

- *MAP Stage weekly maintenance window is Friday**

System	UI	API	Comments
ADS			
ALFS	Not Available		
BAAOP			
BSAP			
CIRA			
CMRI			
CRR (old)		Not Available	
CRR (new)			
DRRS			
ECIC	Not Available		
FDR	Not Available		
MF			
OASIS			
OMS			
PLC		Not Available	
RCBSAP			
RIMS		Not Available	
SIBR			MAPSTAGE patch to API from 5/5 to 5/17
MRIS			
TR		Not Available	
webWheel		Not Available	
webLineR	12/31/24	From 4/14	
AVAILABLE			
MAINTENANCE			

*Maintenance may also occur after 1600 PT on other days and may deviate from the weekly maintenance window as necessary

Market Simulation MAP Stage Code

System	MAP-STAGE	PRODUCTION	Comments
Market	Release 23	Release 23	
FNM	DB134	DB134 from 4/14	
ADS			
ALFS			
BAAOP			
BSAP			
CIRA			
CMRI		From 4/9	
DRRS			
ECIC			
FDR			
MF			
OASIS		From 4/1	
RCBSAP			
SIBR			
TR			

AHEAD OF PRODUCTION
SYNCED WITH PRODUCTION
BEHIND PRODUCTION

Market Simulation Activities

Initiative	Market Simulation	Comments	Activation
Congestion Revenue Rights (CRR) System Upgrade	Connectivity Testing: <ul style="list-style-type: none"> MUI: 02/03/25 – 02/14/25 B2B API (First): 02/03/25 – 02/14/25 B2B API (Second): 02/07/25 – 02/14/25 Market Simulation: <ul style="list-style-type: none"> Structured: 02/18/25 – 03/05/25 Unstructured: 03/18/25 – 03/27/25 	N/A	05/22/25
FERC881 Track 2	Connectivity Testing: <ul style="list-style-type: none"> UI: 12/31/24 – 04/14/25 API: 04/14/25 – 06/30/25 Market Simulation: <ul style="list-style-type: none"> Unstructured: 04/14/25 – 06/30/25 	N/A	Track 2: 07/12/25
Hybrid Resources Phase 2C (HR2C) - RIMS	No Market Simulation. ISO to provide live walk-through of functionality on meeting.	No settlements impacts	05/15/25
Transmission Exchange Agreement (TEA)	Unstructured MSIM (WAPA): 3/17/25 – 4/4/25 (new Aggregate Tie) Unstructured MSIM (WAPA, TEA BRS): Jan. 2026	N/A	Aggregate Tie: 05/01/25 Full Activation: March 2026
DAME / EDAM / Western EIM	See project slide 19.	BPM posting 7/1/25	See project slide 19.
Subscriber PTO	See project slide 21.	Training: Jun - Sept	10/01/25

Map-Stage Environment Issues

Initiative	Defects
Congestion Revenue Rights (CRR) System Upgrade	N/A
FERC881 Track 2	N/A
Hybrid Resources Phase 2C (HR2C) - RIMS	N/A
Transmission Exchange Agreement (TEA)	N/A
DAME / EDAM / WEIM	N/A
Other projects and issues	MAPSTAGE SIBR undergoing patch to API from 5/5 to 5/17

CRR System Upgrade

- ✓ **Registration:** by 9/30/24
- **Multiple Training Sessions:** From 10/28
- **Access Provisioning:** Ready for **MAPSTAGE** provisioning
 - CRR: EXTERNAL CRR HOLDER READ-ONLY ACCESS
 - CRR: EXTERNAL CRR HOLDER READ/WRITE ACCESS
 - CRR: EXTERNAL CRR NDA REPORTS READ-ACCESS
 - CRR: EXTERNAL UTILITY DISTRIBUTION COMPANY (UDC) READ/WRITE ACCESS
 - CRR: EXTERNAL TRANSMISSION OWNERSHIP RIGHT (TOR) OWNER READ/WRITE ACCESS
 - CRR: EXTERNAL CALIFORNIA ENERGY COMMISSION (CEC) READ/WRITE ACCESS
- **Reminder:** OASIS Tech Specs include the new & modified reports (<https://developer.aiso.com>)

CRR System Upgrade – Market Simulation Timeline

Connectivity Testing: (completed)

- 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: (completed)

- 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: (completed)

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

Activation & New Application Cutover: 05/22/2025

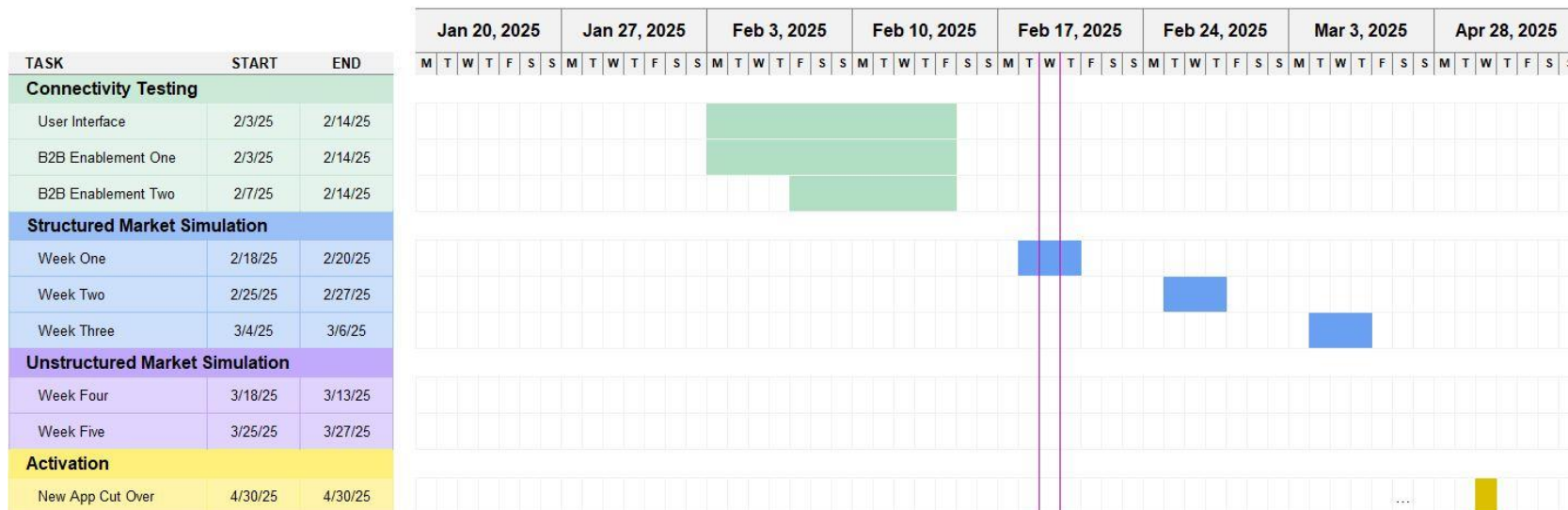
UI reporting issues:

1. Cert Name
2. Time period
3. Screenshots

B2B reporting issues:

1. Cert Name
2. Time period
3. Request Header UUID (for restAPIs only)
4. Endpoint used
5. Request submitted to CRR app (SCID/entityID used)
6. Response from CRR app
7. Screenshots

Note: Refer to CRR [Market Simulation Plan](#) for Market Simulation Scenarios and detailed Market Simulation Calendar.
Market Participant Portal URL for [CRR UI](#) updated for Connectivity Testing. See [Mock APIs](#) and request Parameters and responses.



CRR System Upgrade – Market Simulation Timeline

Training:

- **4/23/25 at 9am:** Refresher Training for Congestion Revenue Rights (CRR) System Upgrade Project for CRR Holders
- **4/23/25 at 1pm:** Refresher Training for Congestion Revenue Rights (CRR) System Upgrade Project for Allocations and Load Migration for LSEs
- **4/24/25 at 9am:** Refresher Training for Congestion Revenue Rights (CRR) System Upgrade Project for Utility Distribution Company (UDC)

Note: please email CustomerTraining@caiso.com for training material.

Postings:

- **05/23/25** – July Post CRR FNM by SP
- **06/10/25** – July Post MEQ
- **06/03/25** – July List of Outages Post by SP
- **06/10/25** – July Tier 1 (T1) opens 1A (tentative)

Note: Updates to [Web Posting](#) posted. This document is being provided for visibility only, no action required from participants.

FERC Order 881 Track 2 – Market Simulation Timeline

Connectivity Testing (webLineR Only):

- Provisioning & UI: 12/31/24 – 04/14/25
- API: 04/14/25 – 06/30/25

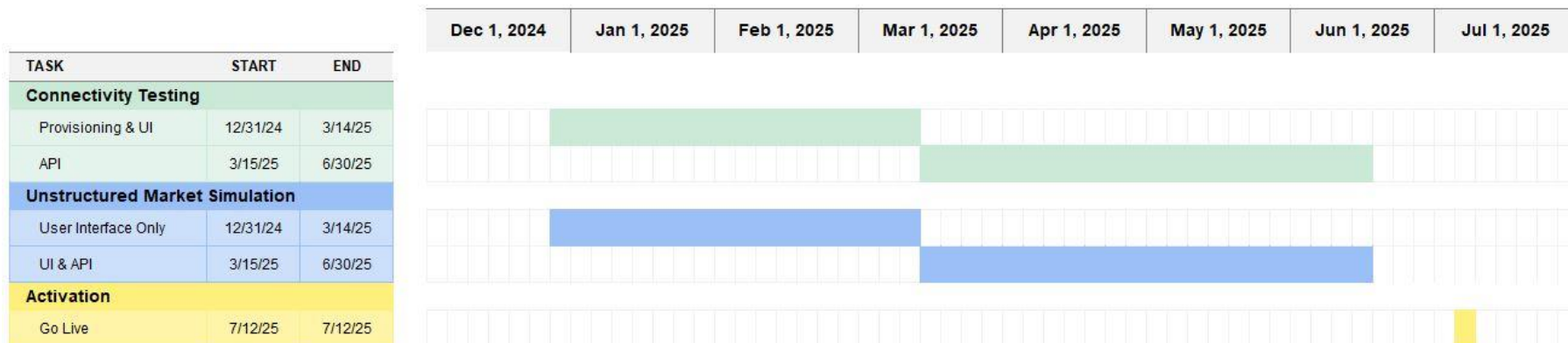
Market Simulation (webLineR Only):

- Unstructured (UI Only): 12/31/24 - 04/14/25
- Unstructured (UI & API): 04/14/25 – 06/30/25

Activation (webLineR Only):

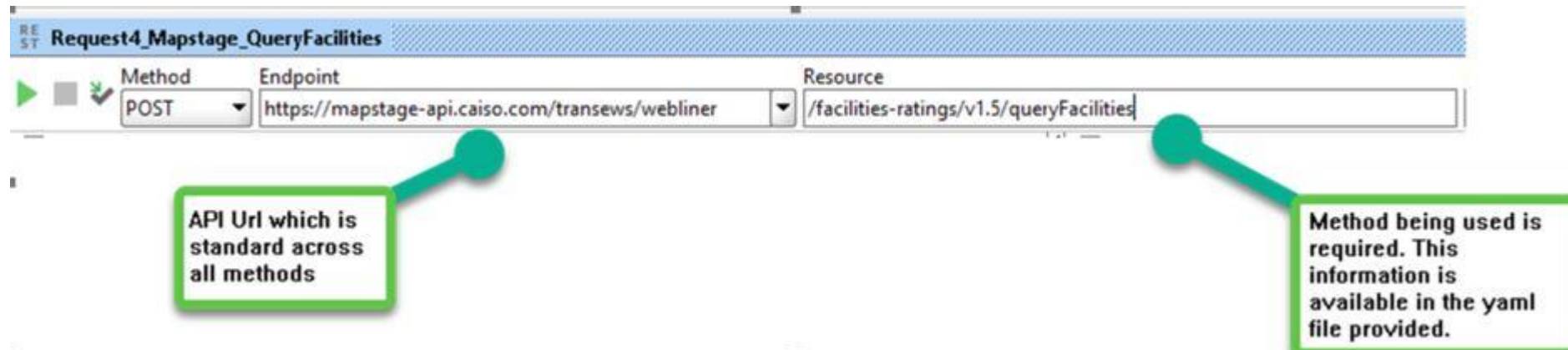
- Go-live: 07/12/25

Note: refer to [webLineR MAPSTAGE](#) to test connectivity. If did not attend the training and would like a copy, please email CustomerTraining@caiso.com for training material. Note: Extension being provided for Track 3 does not impact Track 1 and Track 2 FNM and/or ICCP functionality.



FERC881 Track 2 – webLineR Question

The API URL is <https://mapstage-api.caiso.com/transews/webliner/> and is reflected on the ISO Developer site. As this is not a webpage participants will need to use a tool like SOAPUI or Postman to submit API requests and provide the method utilized. For example:



Note: webLineR UI, <https://mapstage-webliner.caiso.com> is a webpage and can be accessed via a valid certificate.

HR2C RIMS

- **Register by December 31, 2024**
- No Market Simulation. ISO walkthrough provided on Tuesday, May 6th.
- **Activation: 5/15/2025**

ID#	Guidance on Market Participant Impacts	Source System	Sink System	Reason for Potential Scenario
MKT-004	Unstructured Market Simulation Market Participants must have the capability to input Site information data into web form submission. Note: BU requested that Market Participants have the opportunity to practice filling out and submitting the form prior to production.	N/A	RIMS	<i>Unstructured Market Sim, New Data type</i>
MKT – 005	Unstructured Market Simulation <i>Market Participant must have the capability to upload Topo Map, Sharing Agreement, Shapefile, and provide Site Info via web form.</i>	N/A	RIMS	<i>Unstructured Market Sim, New Data type</i>
MKT – 006	Unstructured Market Simulation <i>Market Participant must have the capability to see on UI uploaded Topo Map, Sharing Agreement, Shapefile, and provide Site Info via web form.</i>	N/A	RIMS	<i>Unstructured Market Sim, New Data type</i>
MKT – 007	Unstructured Market Simulation <i>Market Participants must have the capability to add Topo Map, Site Info, Shapefile, and Sharing Agreement (applicable only to Fuel Type of Solar) to Bucket 1 for any hybrid resource project created with a fuel type of Solar or Wind.</i>	N/A	RIMS	<i>Unstructured Market Sim, New Data type</i>
MKT – 008	Unstructured Market Simulation <i>In the event Market Participant's upload fails validation, Market Participant must receive notification of the error.</i>	N/A	RIMS	<i>Unstructured Market Sim, New Data type</i>

Transmission Exchange Agreement (TEA)

- **Register by December 31, 2024**
- MF, SIBR, ETCC, ITS, Settlements, CMRI, OASIS
- Unstructured MSIM (WAPA Only): 03/17/25 - 04/4/25 (completed)
- Full Scope Unstructured MSIM (WAPA Only, TEA BRS): Jan. 2026
- First Activation: Week of 05/1/25 (new Aggregate Tie)
- Full Activation: March 2026

Note: Refer to [TEA External BRS](#) for overview of functionality for October Activation.

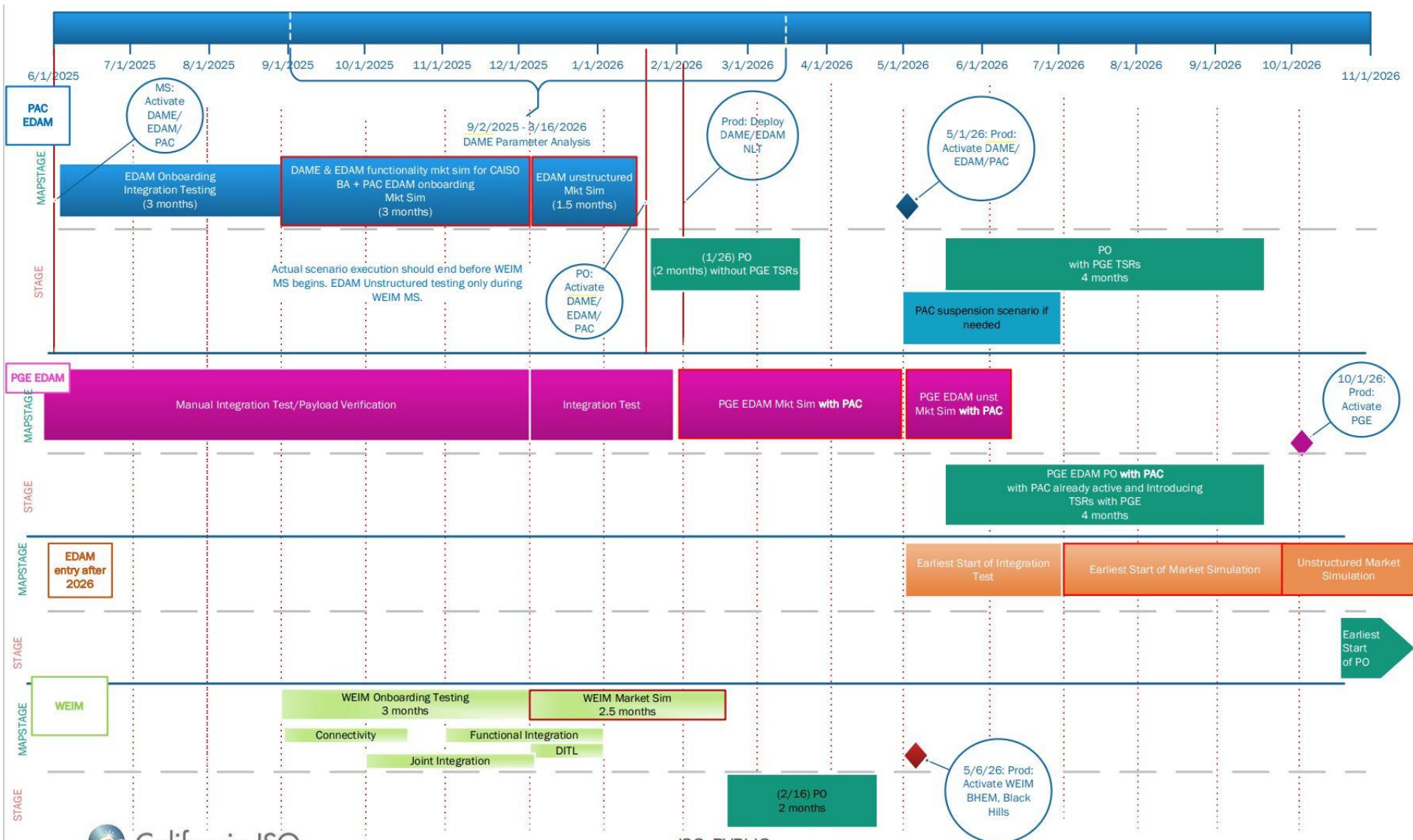
			Feb 17, 2025							Feb 24, 2025							Mar 3, 2025							Mar 10, 2025							Mar 17, 2025							Mar 24, 2025						
TASK			M							M							M							M							M							M						
START																																												
END																																												
Unstructured Market Simulation																																												
WAPA Only	2/24/25	3/14/25																																										
Activation																																												
Go-Live	3/24/25	3/24/25																																										

DAME / EDAM / WEIM – Market Simulation Timeline

Initiative	Connectivity Testing	Integration Testing	Structured Market Sim	Unstructured Market Sim	Parallel Operations	Activation
<u>Day-Ahead Market Enhancements</u>	06/01/25 – 09/01/25	06/01/25 – 09/01/25	09/01/25 – 12/01/25	12/01/25 – 01/15/26	01/26/26 – 03/26/26 (EDAM OB)	05/01/26
<u>Extended Day-Ahead Market</u>	06/01/25 – 09/01/25	06/01/25 – 09/01/25	09/01/25 – 12/01/25	12/01/25 – 01/15/26	01/26/26 – 03/26/26 (EDAM OB)	05/01/26
<u>EDAM ISO BAA Participation Rules Track A</u>	06/01/25 – 09/01/25	06/01/25 – 09/01/25	09/01/25 – 12/01/25	12/01/25 – 01/15/26	01/26/26 – 03/26/26 (EDAM OB)	05/01/26
<u>Extended Day-Ahead Market On-Boarding - Pacificorp</u>	05/01/25 – 05/31/25	06/01/25 – 09/01/25	09/01/25 – 12/01/25	12/01/25 – 01/15/26	01/26/26 – 03/26/26	05/01/26
<u>Extended Day-Ahead Market - PGE</u>	11/01/25 – 11/30/25	12/01/25 – 01/31/26	02/01/26 – 04/30/26	05/01/26 – 06/12/26	05/18/26 – 09/04/26	10/01/26
<u>WEIM - Berkshire Hathaway Energy Montana</u>	09/01/25 – 10/17/25	10/01/26 – 11/30/26	12/01/25 – 02/13/26	NA	02/16/26 – 04/17/26	05/06/26
<u>WEIM – Black Hills</u>	09/01/25 – 10/17/25	10/01/26 – 11/30/26	12/01/25 – 02/13/26	NA	02/16/26 – 04/17/26	05/06/26

Note: [Spring 2026 Release Market Sim Plan](#) posted on Release Planning page. Developer related documentation available for [CMRI](#) and [OASIS](#) for DAME and EDAM. [EDAM Market Simulation Scenarios v1.1](#) and [From/To](#) document.

DAME / EDAM / WEIM – Market Simulation Timeline



Subscriber Participating Transmission Ownership Model (Subscriber PTO)

Connectivity/Integration Testing:

- 08/11/25 – 08/15/25

Unstructured Market Simulation:

- 08/18/25 - 08/29/25

Activation:

- 10/01/25

Note: Refer to Subscriber PTO BRS for overview of functionality. Phase 1 to include all functionality except for Settlements and CMRI, Phase 2 includes Settlements and CMRI only.

Next Steps

- Work with your UAA to provision your organization's access to MAP Stage for access to the systems to execute Market Simulation
- Review BRS Market Simulation requirements, Market Simulation Plans, Market Simulation Scenarios and provide any feedback
- Register for participation in Market Simulation
- Attend the Release User Group Forums, every other week, for implementation updates, including active and upcoming Market Simulation activities
- During active Market Simulations, attend the weekly Market Simulation Forums

Market Simulation Registration

- **Please register for your participation in Market Simulation activities for each Market Simulation initiative as appropriate**
 - If you have intent to actively engage in MAP Stage testing of access, systems, functionality, processes, and/or review of results/data
- **This informs CAISO Market Simulation to provide more specific support for your efforts, including**
 - Data setup for your testing
 - More immediate communication and coordination impacting your testing/review
 - More detailed information for the applicable initiatives
- **How to register**
 - Submit CIDI with ‘Functional Environment’ = “Market Simulation”
 - Identify the Market Simulation initiative(s) you will participate in
 - Identify any specific resources as applicable
 - List the contacts and e-mail addresses that you would like to include
 - CIDI is preferred and if you don’t have CIDI, you can e-mail marketsim@caiso.com with the same information

Upcoming Meetings

- Market Simulation Forum:
 - Tuesday, June 19, 2025 @ 2:00 PM PT
- Release User Group (RUG):
 - Tuesday, May 27, 2025 @ 10:00 AM PT
- CRR Customer Partnership Group (CPG):
 - Thursday, May 15, 2025 @ 10:00 AM PT
- Technical User Group (TUG):
 - Tuesday, May 20, 2025 @ 10:00AM PT
- DAME, EDAM, EDAM CAISO BAA PR:
 - Thursdays 1PM PT (registered participants only)

Market Simulation Support

- Email general questions to marketsim@caiso.com
- Submit market simulation specific issues and questions in CIDI with subject: **“Project Name: System Name – Issue Title” with Functional Environment set to Market Simulation.**
 - If not related to a Project submit subject as “NA: System Name – Issue Title”
- Service Desk: (916) 351-2309