Maximum Import Capability (MIC) Enhancements Pre-Market Sim Training

Monica Mouanetry, Sr. Customer Readiness Trainer – Presenter

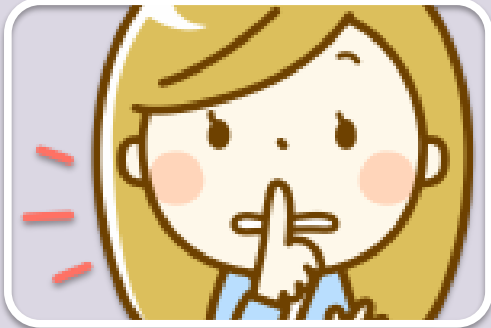Cynthia Hinman, Lead Customer Readiness Trainer - Producer

August 7, 2023

Updated: 08/07/23

Who does this impact?

Scheduling Coordinators that are participating in the Resource Adequacy program, more specifically California ISO Load Serving Entities (LSEs).

Housekeeping

Keep yourself muted to minimize background noise

Unmute to ask verbal questions or write questions in the chat pod

Raise your hand using WebEx interactivity tools

Agenda

This training will cover the following topics:

- High-level review of changes

- Application-specific details
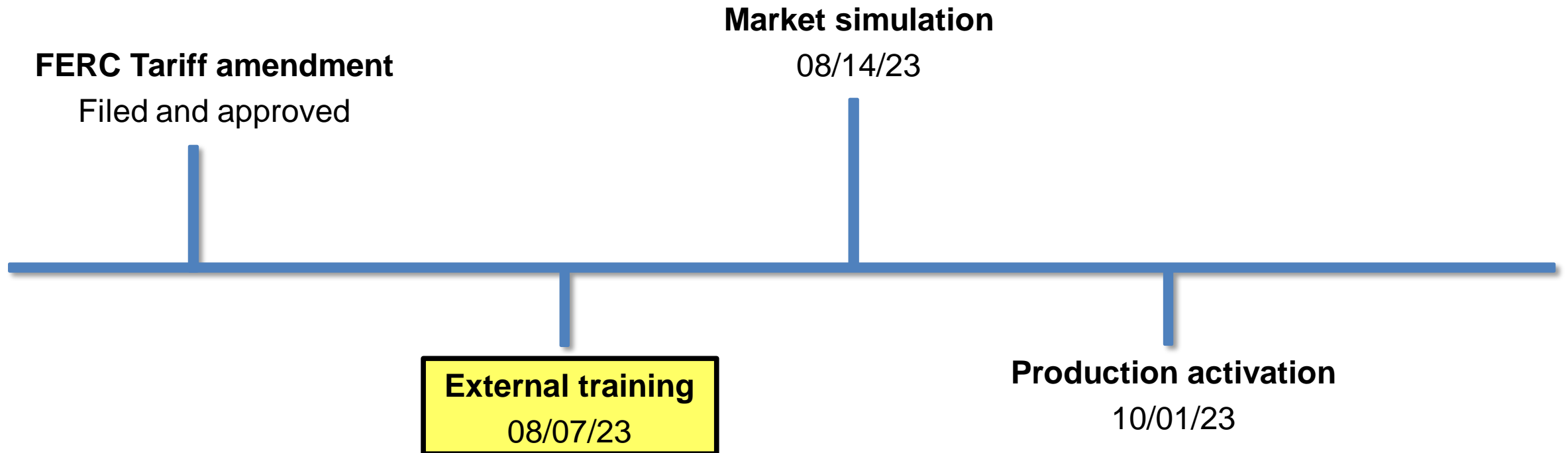
- Market simulation activities

Maximum Import Capability (MIC) Enhancements scope

1. Additional transparency with making data publicly available

2. Inclusion of contractual data from non-CPUC jurisdictional LSEs into the main portfolio

3. Request for MIC expansion

4. Give "same day priority" to the step 13 unallocated Remaining Import Capability for LSEs with existing RA Contracts

5. Update Tariff and Reliability Requirements BPM language to be consistent with current approved practice

MAXIMUM IMPORT CAPABILITY (MIC) ENHANCEMENTS TIMELINE

California ISO

Implementation timeline

FERC Tariff amendment

Filed and approved

Market simulation

08/14/23

External training

08/07/23

Production activation

10/01/23

California ISO

Maximum Import Capability (MIC) Enhancements
BACKGROUND: HIGH-LEVEL REVIEW OF CHANGES
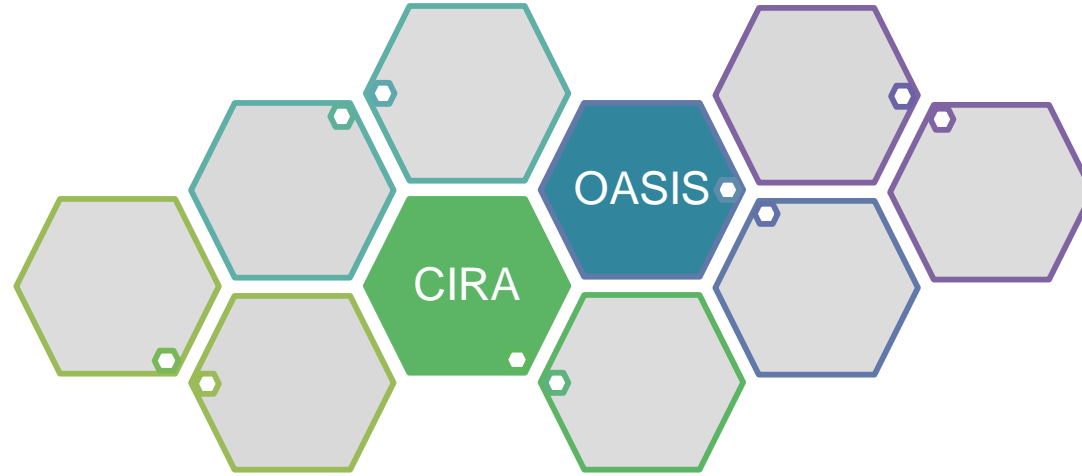
What is Maximum Import Capability?

Represents a quantity in MWs determined by the CAISO to be simultaneously deliverable to the aggregate of load in the CAISO Balancing Authority Area (BAA).

- ISO tests both the deliverability of internal resources and the deliverability of imports, to ensure all RA resources are simultaneously deliverable
- LSEs RA import showings are limited for each intertie to its share of MIC
- Calculated yearly by the CAISO
- Allocated yearly by the CAISO to LSEs

California ISO

Reason for this enhancement

1. Give "same day priority" to the step 13 unallocated Remaining Import Capability for LSEs with existing RA Contracts

2. Additional transparency with making data publicly available

Questions

REVIEW APPLICATION - SPECIFIC DETAILS

Customer Interface for Resource Adequacy (CIRA)

Step 13 Notification of Unassigned Import Capability

California ISO

Required CIRA application access role

Must be provisioned to CIRA for the **EXTERNAL RA READ-WRITE** role. Coordinate with your User Access Administrator (UAA) if you do not have access.

CIRA Access and Permissions	
CIRA Access Levels	**Access Level Description**
EXTERNAL RA READ-WRITE (app_cira_sc)	Permission to read, upload, and maintain data in the RA Plans, Supply Plans, NQC, Import Allocations, and Forced Substitution. Permission to read Validation Results, RA Reports, Obligation Reports, and historic Replacements

Links to CIRA Map Stage | CIRA Production

California ISO

Step: 13 2023 Notification of Unassigned Import Capability
Current process

LSEs/SCs review Unassigned Available Import Capability

Requests are sent to ReliabilityRequirements@caiso.com

Step 12

This posting contains information regarding unassigned available import capability pursuant to Tariff section 40.4.6.2.1 Step 12

Scheduling Point	Unassigned Available Import Capability
CASCADE_BG	60
CTW230_BG	74
NWEST_ITC	5
PARKER_BG	25
SYLMAR-AC_ITC	195.42
WSTWGMEAD_ITC	28.51

Note: Pursuant to Step 13 of the above referenced CAISO Tariff, Scheduling Coordinators for Load Serving Entities or Market Participants should notify the ISO of their request to assign any remaining Unassigned Import Capability as indicated in the table above, no later than **08/15/2022**.

Requests that are received prior to 9:00 a.m. PDT on 08/15/2022 will be denied. The CAISO will accept only two (2) requests per calendar week from any Scheduling Coordinator on behalf of a single Load Serving Entity, Participating Generator, or System Resource.
If a request includes more than two intertie allocation requests the ISO will only process the first two interties in the request; the remaining intertie requests will be denied.

Requests should be sent to:
ReliabilityRequirements@caiso.com

Reliability requirements

The reliability requirements and resource adequacy programs provide deliverability criteria that each load serving entity must meet, and provide rules for counting resources that must be made available to the ISO. The ISO reliability requirements program is intended to complement the state's efforts to implement resource adequacy programs.

Process and requirements
⊕ Templates

Import Allocations
⊕ 2024 Import allocations
⊖ 2023 Import allocations
  - 2023 Import Capability Used on Annual Resource Adequacy Plans   11/17/2022 15:10
  - 2023 Holders of Import Capability   9/22/2022 10:58
  - 2023 Additional Bi-Lateral Transfers of Import Capability   7/17/2023 08:26
  - **Step 13: 2023 Notification of Unassigned Import Capability   8/22/2022 17:00**
  - Step 12: 2023 Notification of Unassigned Import Capability   8/08/2022 13:09
  - 2023 Eligible Contacts for Bi-Lateral Transfers for Import Capability   11/08/2022 12:08
  - Step 10: 2023 Notification of Unassigned Import Capability   7/26/2022 11:13
  - Step 8: 2023 Bi-Lateral Transfers of Import Capability   7/19/2022 13:01
  - Step 6: 2023 Assigned and Unassigned RA Import Capability on Branch Groups   7/11/2022 11:26
  - Step 6: 2023 Contractual Data   7/13/2022 14:16
  - ISO Maximum Resource Adequacy Import Capability for Year 2023   7/01/2022 08:14

Step 13

This posting contains information regarding unassigned available import capability pursuant to Tariff section 40.4.6.2.1 Step 13

Scheduling Point	Unassigned Available Import Capability
All import capability assigned.	

Note: Scheduling coordinators can bi-laterally transact import capability with the contacts in 2023 Eligible Contacts for Bi-Lateral Transfers of Import Capability list:
http://www.caiso.com/Documents/2023-eligible-contacts-for-bi-lateral-transfers-for-import-capability.pdf

After transactions are complete, results must be communicated to the ISO through the following mailbox:
ReliabilityRequirements@caiso.com

[Reliability Requirements page on www.caiso.com](www.caiso.com)

California ISO

New screens and process

CIRA

3 New screens

1 New report screen

SC Request Unassigned Import Capability
New screen

CIRA > Plans > Manage Import Capability > SC Request Unassigned Import Capability

> LSEs and SCs can have the "same day priority" to the step 13 unallocated Remaining Import Capability for LSEs with existing RA Contracts directly in CIRA

[Tariff Section 40.4.6.2.1 Available Import Capability Assignment Process](#)

SC Request Unassigned Import Capability
New Screen > New Process

Select the **Year Ahead**, **SCID/LSE**, and **Import Group** to request for an Unassigned amount of Import Allocation Capability.

Reminder: ISO will only accept 2 requests per calendar week from any SC/LSE on behalf of a single LSE participating generator or system resource. If a request includes more than 2 intertie allocation requests, CIRA will only process the 1st two groups of interties in a single request. The remaining requests will be denied.

SC Request Unassigned Import Capability
Error message 1

CIRA

If a request includes more than two intertie allocation requests, the ISO will only process the first two interties in the request. The the remaining intertie requests will be denied.

Sample Error Message

"Request Submission Limit Exceeded for the SCID: XXXX. Only two requests submission is allowed per week."

SC Request Unassigned Import Capability
New Screen > New Process

Note: If you have an RA Contract, CAISO will give you preference on priority.
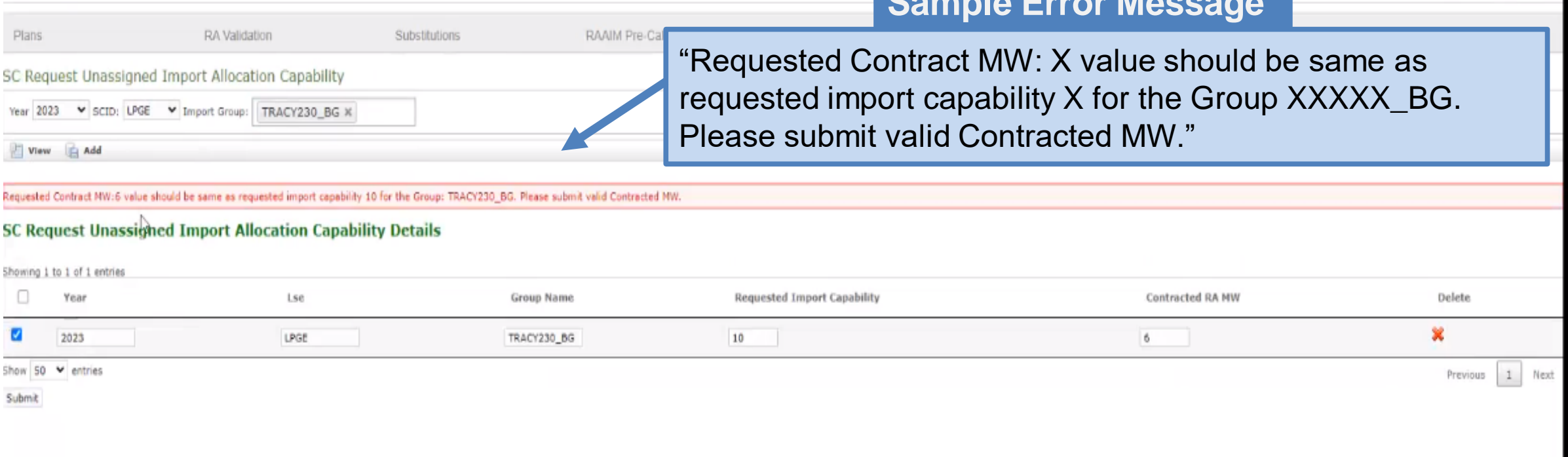
SC Request Unassigned Import Capability

Error message 2

Contracted RA MW amount must always equal the **Request Import Capability** MW amount. If the values do not match, you will receive an error message.

Sample Error Message

"Requested Contract MW: X value should be same as requested import capability X for the Group XXXXX_BG. Please submit valid Contracted MW."

Assigned MWs based on Proportion formula

Total Unassigned Available Import Capability at the Branch Group divided by the sum of from eligible portions of applicable Resource Adequacy contract with priority) multiplied by each LSE's eligible RA contract amount.

$$\frac{\text{Total Unassigned Available Import Capability at the Branch Group (BG)}}{\text{Sum value of eligible portions of the applicable RA contract}} \quad X \quad \text{LSE's eligible RA Contract amount} \quad = \quad \textbf{Assigned MW}$$

Link to Reliability Requirements BPM

California ISO

Scenario: Multiple LSEs/SCs request for an intertie branch group (BG)

CIRA

Sample Data

Intertie (BG) = PALOVRDE_ITC   **Unassigned Import Capability =** 2311.01

Requestor ID	Requestor Priority based on submission	Requested MW	RA Contract	RA Contracted MW
LSE 1	1	2300	No	
LSE 2	2	1700	Yes	1700
LSE 3	3	1500	Yes	1500

$$\frac{\text{Total Unassigned Available Import Capability at the Branch Group (BG)}}{\text{Sum of eligible portions of the applicable RA contract}} \times \text{LSE's eligible RA Contract amount} = \text{Assigned MW}$$

$$\frac{2311.01}{(1700 + 1500)} \times 1700 = 1227.72$$

$$\frac{2311.01}{(1500 + 1700)} \times 1500 = 1083.29$$

Remember: If you have an RA Contract, CAISO will give you preference on priority.

California ISO

Review Scenario: Multiple LSEs/SCs request for the same intertie branch group (BG).

CIRA

Intertie (BG) = PALOVRDE_ITC

Unassigned Import Capability = 2311.01

Requstor ID	Requestor Priority based on submission	Requested MW	RA Contract	RA Contracted MW	Requestor priority considering RA Contract	Assigned MW	Status	Results
LSE 1	1	2300	No		3	0	Rejected	Submission was rejected as no Unassigned Import Capability is left.
LSE 2	2	1700	Yes	1700	1	1227.72	Partially Assigned	Assigned MWs based on LSE proportion formula as the total requested contracted MW exceeds Unassigned Import Capability.
LSE 3	3	1500	Yes	1500	2	1083.29	Partially Assigned	Assigned MWs based on LSE proportion formula as the total requested contracted MW exceeds Unassigned Import Capability.

Reserved Import Capability
New screen

CIRA > **Plans** > **Manage Import Allocation** > **Reserved Import Capability**

Contact Information (for LSEs and SCID)
New screen

CIRA > **Plans** > **Manage Import Capability** > **Contact Information**

Be sure to update the existing LSE/SCID contact if the info has changed.

Add new LSE/SCID contact

Contact Information (for LSEs and SCID)
Error message

CIRA

California ISO | Customer Interface for Resource Adequacy

Sample Error Message

"There is already an existing LSE/SC with ID XXXX."

| Plans | RA Validation | | Legacy Replacements |

LSE/SCID Contact Information

There is already an existing LSE/SC with ID ABC1

LSE/SCID   -Select-

Name

View   Reset

LSE/SCID ▲	Name	SCID	Phone	Secondary Phone	Email	Secondary Email
ABC1	Test 123		123-456-7898	123-458-9778	ari@caiso.com	LNPtest@caiso.com

Add   Edit

☐ Download Screen Results

You can only have one LSE/SCID contact entered at a time

California ISO

Import Capability RA Plan Data
New Report

CIRA > **Reports** > **Import Capability RA Report**

Plans	RA Validation	Substitutions	RAAIM Pre-Calc	CSP Offers	Reports	Legacy Replacements

Import Capability RA Report

Submittal Type: Month Ahead ⌄ Month: August ⌄ Year: 2023 ⌄ Intertie: -Select- ⌄

View   Reset   Publish

Import Capability RA Report Details

Showing 1 to 415 of 415 entries

Submittal type	Month	Year	Intertie	Jurisdiction	Total Import Capability	RA Showing MW
M	August	2023	MEAD_ITC	NON_CPUC	1010.27	10
M	August	2023	PACI_MSL	CPUC	2426	390
M	August	2023	TRACY230_BG	NOT ASSOCIATED	575	0
M	August	2023	TRACY500_BG	NON_CPUC	803.13	0
M	August	2023	STANDIFORD_BG	CPUC	196	0

This report allows LSEs/SCs to view the total annual and monthly RA capacity shown on each intertie aggregated by LRA jurisdiction (e.g., CPUC, non-CPUC, Other)

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Questions

California ISO

Open Access Same-Time Information System (OASIS)

Updates to UI and API

California ISO

Two New Reports

Welcome to the California ISO Open Access Same-time Information System (OASIS) site. On OASIS you will find real-time data related to the ISO transmission system and its Market, such as system demand forecasts, transmission outage and capacity status, market prices and market result data.

Standards Information
North American Energy Standards Board (NAESB)
ISO Business Practice Manuals
Available Transfer Capability Information

Transmission Information
Base Case Data
Interconnection Study Statistics

System Help
• All technical specifications and artifacts for OASIS are available on the ISO Developer site. **Self-registration is required to access the site.**
• To download data without using the OASIS interface, see How to use report URLs to download OASIS data on the **ISO Developer site.**
• Access non-technical OASIS reference documents on www.caiso.com

[Open Access Same-Time System (OASIS) link](#)

Available Import Capability

New report

| ATLAS REFERENCE | REPORT DEFINITION | PRICES | TRANSMISSION | SYSTEM DEMAND | ENERGY | ANCILLARY SERVICES | CONGESTION REVENUE RIGHTS | PUBLIC BIDS | RESOURCE ADEQUACY |

Year: 2023 ⌄ Month: November ⌄ SCID: [ALL] ⌄ Intertie: BLYTHE_BG ⌄ **Apply** **Reset**

Download XML   **Download CSV**

Available Import Capability

1 - 3 of ???

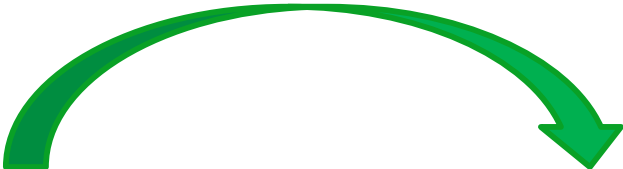| RA Period Start Date	Month	Year	SCID	Intertie	LSE ID	LSE Name	Total Import Allocation	Reserved Capability	Tradable Capability	Contact Information
11/01/2023	11	2023	ABC1	BLYTHE_BG	LABC	ABC Company LABC	2.00000	0.00000	2.00000	TEST_CIRA, 123-456-7890, test@caiso.com
11/01/2023	11	2023	EFG1	BLYTHE_BG	LEFG	EFG Company LSE	2.00000	0.00000	2.00000	
11/01/2023	11	2023		BLYTHE_BG		Synergy Marketing and Trade, LLC	2.00000	0.00000	2.00000	

Displays the total import allocation, per intertie for LSEs, per month, and how much of that allocation they are willing to trade

PRR 1524 for Market Instrument BPM

California ISO

Import Capability Used in RA Plan Data report
Data from CIRA to OASIS

Available Import Capability (in CIRA)

PRR 1524 for Market Instrument BPM

Import Capability Used in RA Plan Data
New report

ATLAS REFERENCE   REPORT DEFINITION   PRICES   TRANSMISSION   SYSTEM DEMAND   ENERGY   ANCILLARY SERVICES   CONGESTION REVENUE RIGHTS   PUBLIC BIDS   **RESOURCE ADEQUACY**
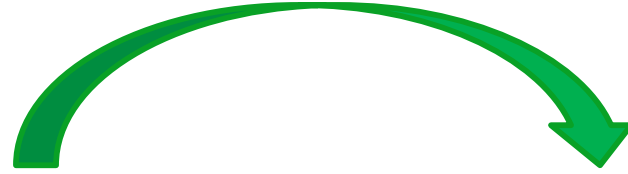
Submittal Type: ANNUAL ▾ **Year:** 2023 ▾ **Month:** ALL ▾ **Intertie:** BLYTHE_BG ▾   Apply   Reset

Download XML   Download CSV

Import Capability Used in RA Plan Data

1 - 20 of 24

Submittal Type	RA Period Start Date	Month	Year	Intertie	Jurisdiction	Total Import Allocation	RA Showing MW
ANNUAL	05/01/2023	5	2023	BLYTHE_BG	CPUC	12.00000	2.00000
ANNUAL	05/01/2023	5	2023	BLYTHE_BG	NON_CPUC	10.00000	3.00000
ANNUAL	05/01/2023	5	2023	BLYTHE_BG	NOT_ASSOCIATED	11.00000	4.00000
ANNUAL	06/01/2023	6	2023	BLYTHE_BG	CPUC	4.00000	0.00000
ANNUAL	06/01/2023	6	2023	BLYTHE_BG	NON_CPUC	0.00000	0.00000
ANNUAL	06/01/2023	6	2023	BLYTHE_BG	NOT_ASSOCIATED	0.00000	0.00000
ANNUAL	07/01/2023	7	2023	BLYTHE_BG	CPUC	4.00000	0.00000
ANNUAL	07/01/2023	7	2023	BLYTHE_BG	NON_CPUC	0.00000	0.00000
ANNUAL	07/01/2023	7	2023	BLYTHE_BG	NOT_ASSOCIATED	2.00000	0.00000
ANNUAL	08/01/2023	8	2023	BLYTHE_BG	CPUC	4.00000	0.00000
ANNUAL	08/01/2023	8	2023	BLYTHE_BG	NON_CPUC	0.00000	0.00000
ANNUAL	08/01/2023	8	2023	BLYTHE_BG	NOT_ASSOCIATED	2.00000	0.00000
ANNUAL	09/01/2023	9	2023	BLYTHE_BG	CPUC	4.00000	0.00000
ANNUAL	09/01/2023	9	2023	BLYTHE_BG	NON_CPUC	0.00000	0.00000
ANNUAL	09/01/2023	9	2023	BLYTHE_BG	NOT_ASSOCIATED	2.00000	0.00000

Posts the total annual and monthly RA capacity shown on each intertie aggregated by jurisdiction

PRR 1524 for Market Instrument BPM

California ISO

Import Capability Used in RA Plan Data report
Data from CIRA to OASIS

Import Capability RA Report Details (in CIRA)

[PRR 1524 for Market Instrument BPM](#)

New OASIS APIs

Date	Tech Spec Version	Description

6/21/2023	7.4.0	Maximum Import Capability (MIC) Enhancements
		
		 • New Report "Available Import Capability Data"
		  ○ AVAIL_IMP_CAP_GRP
		 • New Report "Import Capability used in RA Plan Data"
		  ○ ANNUAL_IMP_CAP_USED_RA_PLAN_GRP
		  ○ MONTHLY_IMP_CAP_USED_RA_PLAN_GRP

OASIS Technical Specification document version 7.4.0 is available on the ISO Developer site

Questions

California ISO

Market Simulation
READINESS ACTIVITIES

Market Simulation Timeline

- Register for Market Sim by email MarketSim@caiso.com.
  - Registration started **July 31, 2023** (You can still register)
  - Run the scenarios
  - Validate expected market sim scenario outcomes

- Market Simulation Forums start on **August 10, 2023**
  - View the [CAISO public calendar](#) for full schedule

- MIC Market Sim starts on **August 14, 2023**

Market Sim Scenarios - Facilitate submission and retrieval of Import Capability reports

1. Submit request for unassigned import capability as part of step 13 of the import allocation process for 2023 & 2024 RA years

2. Upload trades and RA showing for 2023

3. Update contact information for 2023

4. Update the reserve versus tradeable capability for 2023

5. Validate two new OASIS reports for 2023
   - OASIS > Resource Adequacy > Available Import Capability
   - OASIS > Resource Adequacy > Import Capability used in RA Plan Data

MIC Enhancement Fall 2023 Release Plans and Market Sim Scenarios

California ISO

Market Sim Scenario – Expected Outcome

Participants to verify:

1. Submitting Step 13 request for Unassigned import capability

2. Monthly available import capability

3. Monthly/Annual import capability in RA plan

4. OASIS reports:
   - OASIS > Resource Adequacy > Available Import Capability
   - OASIS > Resource Adequacy > Import Capability Used in RA Plan Data (Monthly & Annually)

Market Simulation Questions?

Submit questions and/or concerns through the CIDI application or email **MarketSim@caiso.com**.

Functional Environment, select: '**Market Simulation Fall 2023**'

CONTACT CUSTOMER SUPPORT
TELL US HOW WE CAN HELP

*SCID

*Functional Environment

--None--

--None--
Production
Market Simulation
Parallel Operations
RC Integration
RC Shadow Operations
Market Simulation Spring 2023
Market Simulation Summer 2023
Market Simulation Fall 2023
Market Simulation Independent 20
Market Simulation Summer 2024
Market Simulation Fall 2024
Market Simulation Independent 20

Review for Price Correction

Manual Reference Level Change Request

*Subject

Market Participant Setup for Market Simulation Activities

Register for Market Simulation participation via the MarketSim@caiso.com mailbox starting today, 08/07/23

Confirm users are provisioned for access to participate
- Coordinate with your UAAs

Attend Market Simulation Forum to stay informed on timing of activities for this and other **Fall 2023** release initiatives
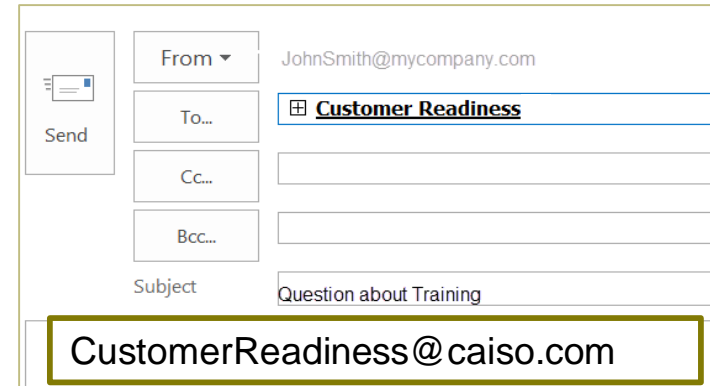- Monday/Thursday 2pm PPT

Final Questions

Thank you for your participation!

For clarification on anything presented in this training, send an email to: CustomerReadiness@caiso.com

For any other questions or stakeholder specific questions or concerns, please submit a ticket.

REFERENCE MATERIALS

California ISO

Acronyms

Abbreviation	Terms
BAA	Balancing Authority Area
BG	Branch Group
CIRA	Customer Interface for Resource Adequacy
CV	Cross Validation
LRA	Local Regulatory Area
LSE	Load Serving Entity
MW	Megawatt
OASIS	Open Access Same-Time System
RA	Resource Adequacy
RIC	Remaining Import Capability
SC	Scheduling Coordinator
SCID	Scheduling Coordinator ID

California ISO

Impacted Systems

Impacted Systems	Details
Open Access Same-Time Interface System **OASIS**	**Two new reports to the UI:** - Available Import Capability - Import Capability Used in RA Plan **New API reports:** - Available Import Capability Data (AVAIL_IMP_CAP_GRP) - Import Capability used in RA Plan Data (ANNUAL_IMP_CAP_USED_RA_PLAN_GRP and MONTHLY_IMP_CAP_USED_RA_PLAN_GRP
Customer Interface for Resource Adequacy **CIRA**	• Automatically calculates MIC allocations each day and publishes the allocation data each day on CIRA and OASIS. • Creation of two new fields in relation to "Available MIC for trading" which are "Locked" (new field) or "Unlocked". • SCs can input the LSE contact info and availability for the trade. • Provides aggregate usage by branch group level after validation of each month ahead and year ahead RA showing. • Provides capability to grant "same day priority" to the step 13 unallocated Remaining Import Capability (RIC) for LSEs with existing RA Contracts.

California ISO

Reference Materials

Business Practice Manual changes:

Reliability Requirements - https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability%20Requirements

PRR 1523 (Reliability Requirements Section 6.1.3.5)

Market Instruments - https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Market%20Instruments

PRR 1524 (Market Instrument Section 12.8)

Tariff changes:

Section 40.4.6.2 Resource Adequacy Demonstration for all SCs in the CAISO BAA - http://www.caiso.com/Documents/Section40-RADemonstration-for-SchedulingCoordinatorsintheCAISOBalancingAuthorityArea-asof-May28-2023.pdf

Business Requirements Specification: http://www.caiso.com/Documents/BusinessRequirementsSpecifications-MaximumImportCapabilityEnhancements.pdf

Initiative webpage:

https://stakeholdercenter.caiso.com/StakeholderInitiatives/Maximum-import-capability-enhancements

Market Simulation Structured Scenarios:

http://www.caiso.com/Documents/Market-Simulation-Structured-Scenarios-Maximum-import-capability-enhancements.pdf

Reference Material

Technical Specification – Located on the [ISO's Developer Site](#), which provides detailed descriptions of the API changes for:

– Open Access Same-Time Information System (OASIS)