

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

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Revised: 08/16/23

- Slide 7 (Updated date)
- Slide 22 (Provided clarification)
- Slide 39 (Provided clarification)
- Slide 41 (Corrected info)
- Slide 49 (New slide)
- Slide 50 (New slide)

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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

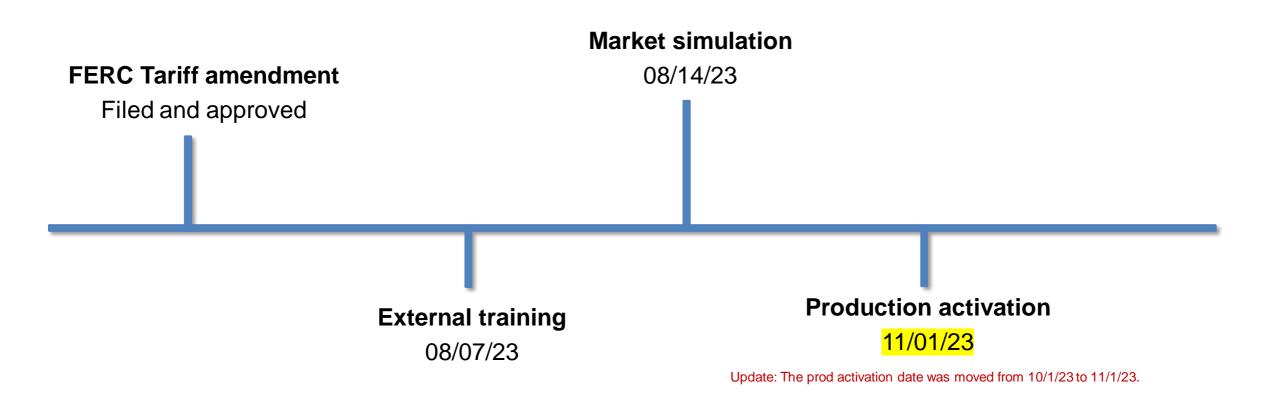
- 1. Additional transparency with making data publicly available
- 2. Inclusion of contractual data from non-CPUC jurisdictional LSEs into the main portfolio
- 3. Request for MIC expansion
- 4. Give "same day priority" to the step 13 unallocated Remaining Import Capability for LSEs with existing RA Contracts
- 5. Update Tariff and Reliability Requirements BPM language to be consistent with current approved practice



MAXIMUM IMPORT CAPABILITY (MIC) ENHANCEMENTS TIMELINE



Implementation timeline





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



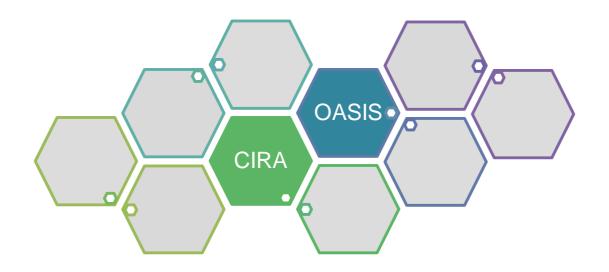
Reason for this enhancement

- 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



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-	Permission to read, upload, and maintain data in the RA				
WRITE	Plans, Supply Plans, NQC, Import Allocations, and				
(app_cira_sc)	Forced Substitution. Permission to read Validation				
	Results, RA Reports, Obligation Reports, and historic				
	Replacements				

Links to CIRA Map Stage | CIRA Production



Step: 13 2023 Notification of Unassigned Import Capability

Current process

LSEs/SCs review Unassigned Available Import Capability





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

① Templates 🗗

Import Allocations

- 2024 Import allocations
- 2023 Import allocations
 - 2023 Import Capability Used on Annual Resource Adequacy Plans 11/17/2022 15:
 - 2023 Holders of Import Capability 9/22/2022 10:58
 - 2023 Additional Bi-Lateral Transfers of Import Capability
 - Step 13: 2023 Notification of Unassigned Import Capability 8/22/2022 17:00
 - _____
 - 2023 Eligible Contacts for Bi-Lateral Transfers for Import Capability 11/08/2022 12
 - Step 10: 2023 Notification of Unassigned Import Capability 7/26/2022 11
 - Step 8: 2023 Bi-Lateral Transfers of Import Capability 7/19/2022 13
 - 🔁 Step 6: 2023 Assigned and Unassigned RA Import Capability on Branch Groups
 - 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 Unassaigned 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

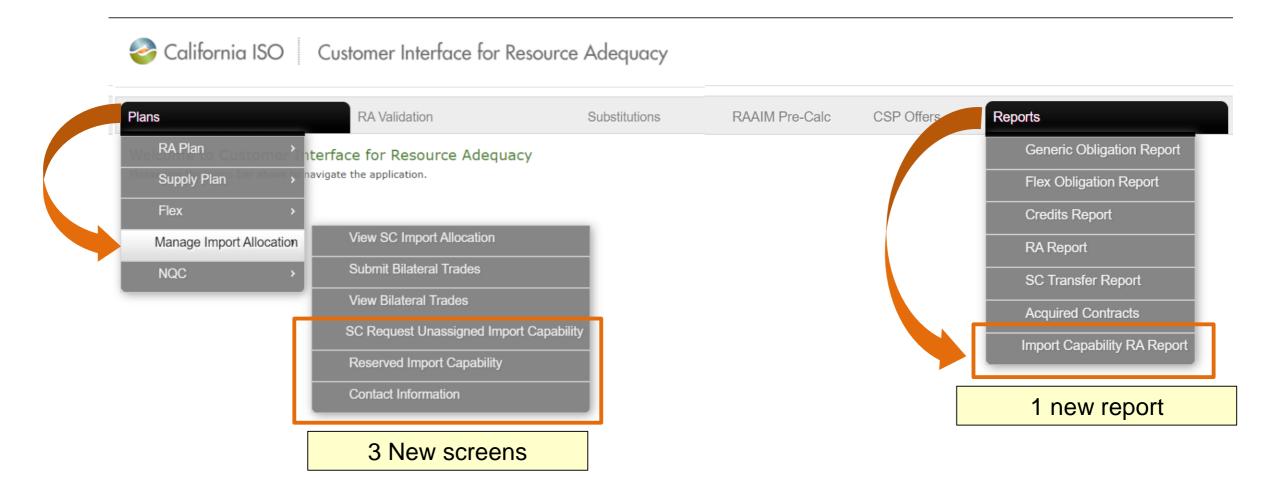
Reliability Requirements page on www.caiso.com



Step: 13 - 2023 Notification of Unassigned Import Capability

CIRA

New screens and process





New screen



Map-Stage [v. 6.5.0-61]

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

Customer Interface for Resource Adequacy

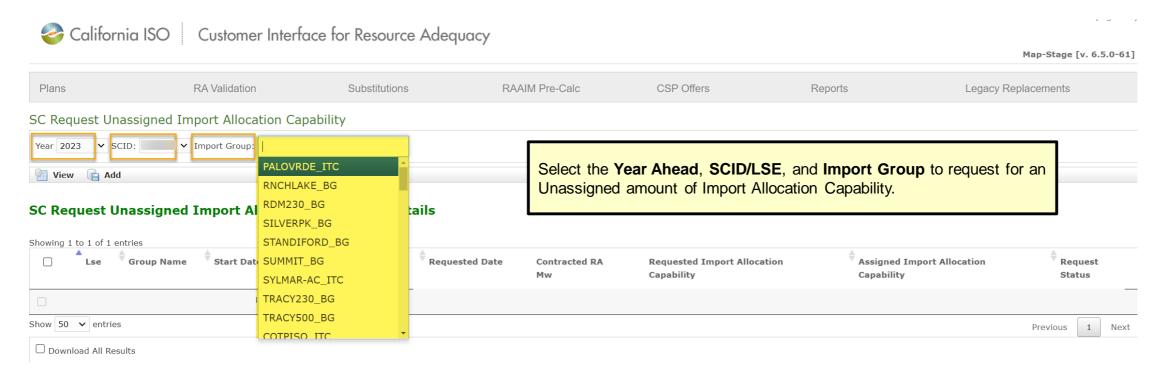
Plans RA Validation RAAIM Pre-Calc CSP Offers Substitutions Reports Legacy Replacements SC Request Unassigned Import Allocation Capability LSEs and SCs can have the "same day priority" Year 2023 SCID: -Select- Import Group: Choose ImportGroup to the step 13 unallocated Remaining Import Add Wiew View Capability for LSEs with existing RA Contracts directly in CIRA. SC Request Unassigned Import Allocation Capability Details Showing 1 to 1 of 1 entries Start Date **Group Name End Date Requested Date Requested Import Allocation Assigned Import Allocation** Request Contracted RA Mw Capability Capability Status Show 50 ∨ entries Previous Next ☐ Download All Results

Tariff Section 40.4.6.2.1 Available Import Capability Assignment Process



New Screen > New Process





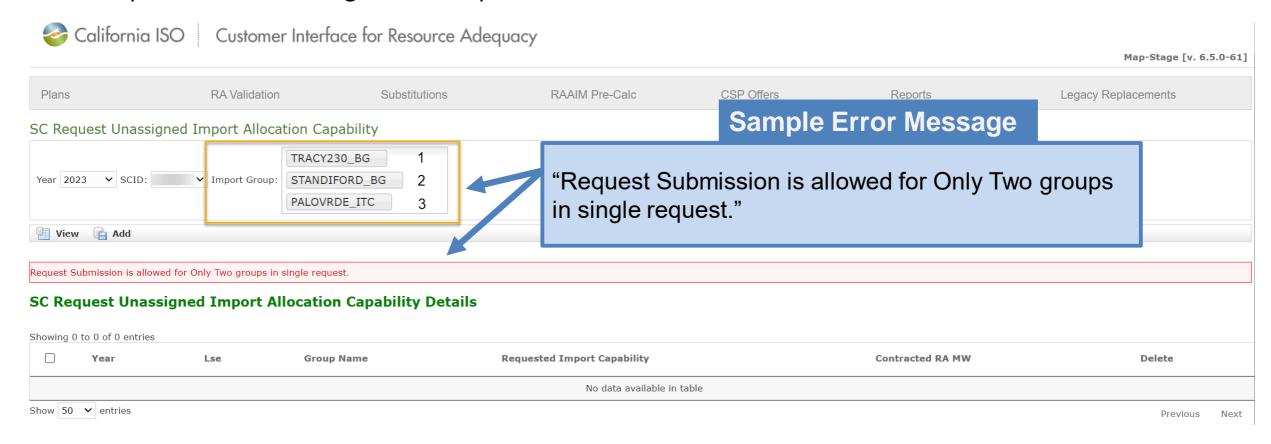
Reminder: ISO will only accept 2 requests per calendar week from any SC/LSE on behalf of a single LSE participating generator or system resource. If a request includes more than 2 intertie allocation requests, CIRA will only process the 1st two groups of interties in a single request. The remaining requests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



Error message 1



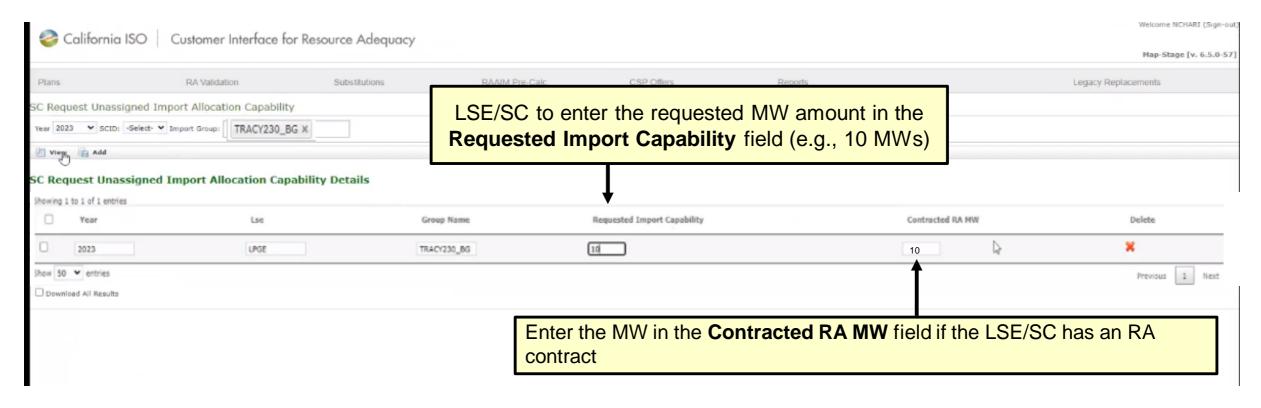
If a request includes more than two intertie allocation requests, the ISO will only process the first two interties in the request. The remaining intertie requests will be denied.





New Screen > New Process





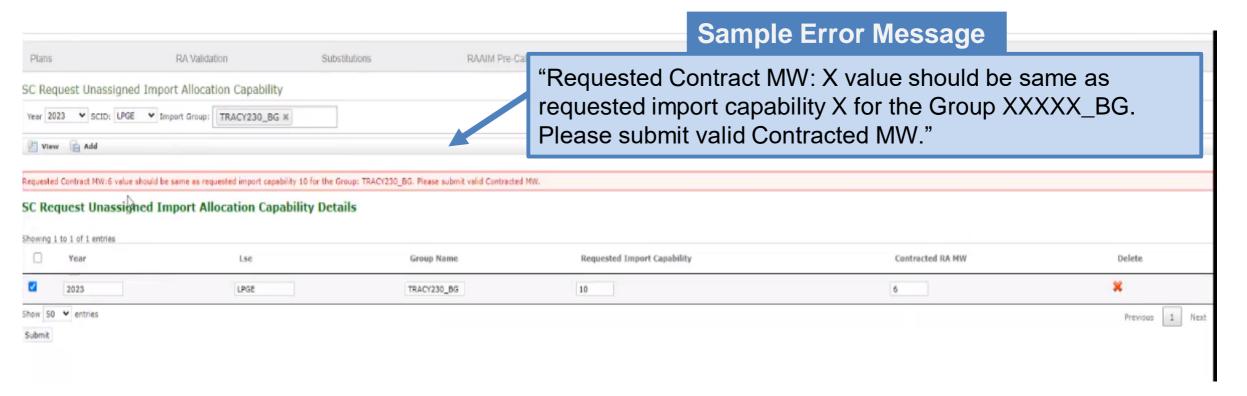
Note: If you have an RA Contract, CAISO will give you preference on priority.



CIRA

Error message 2

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





Assigned MWs based on Proration 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.

Total Unassigned Available Import Capability at the Branch Group (BG)

X

LSE's eligible RA
Contract amount



Sum value of eligible portions of the applicable RA contract

Note: CIRA will apply the proration formula to calculate the assigned MW when the MW request exceeds the total unassigned available import capability.

Link to Reliability Requirements BPM



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



Intertie (BG) = PALOVRDE_ITC

Unassigned Import Capability = 2311.01

Requstor ID	Requestor Priority based on	Requested MW	RA Contract	RA Contracted	Total Unassigned Available Import Capability at the Branch Group (BG) Sum of eligible portions of the	Assigned MW
	submission	10100	·	MW	applicable RA contract	
LSE 1	1	2300	No			
LSE 2	2	1700	Yes	1700	$\frac{2311.01}{(1700 + 1500)} \times 1700 = 12$	227.72
LSE 3	3	1500	Yes	1500	$\frac{2311.01}{(1500 + 1700)} \times 1500 = 10$	083.29

Remember:

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



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



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 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 MWs based on LSE proportion formula as the total requested contracted MW exceeds Unassigned Import Capability.

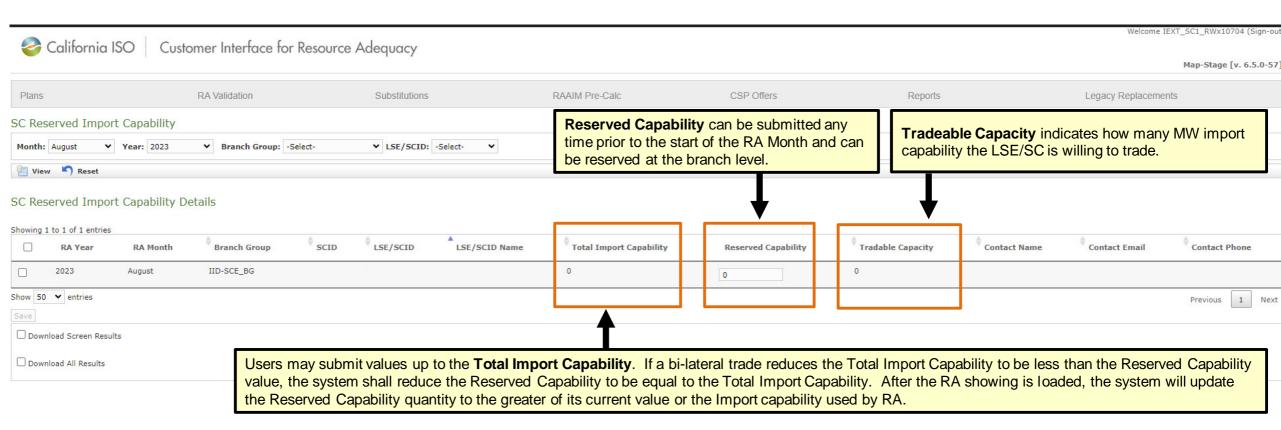


Reserved Import Capability

New screen



CIRA > Plans > Manage Import Allocation > Reserved Import Capability



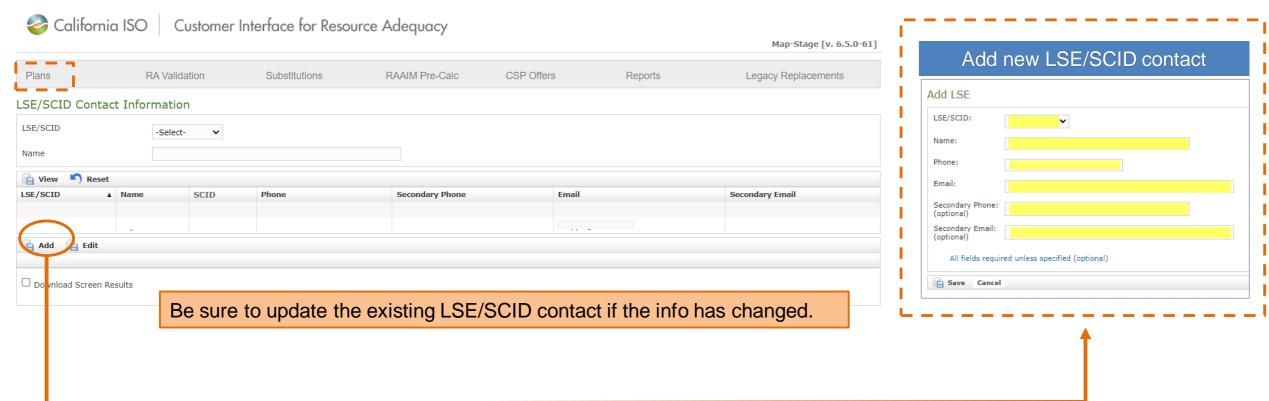


Contact Information (for LSEs and SCID)

New screen



CIRA > Plans > Manage Import Capability > Contact Information

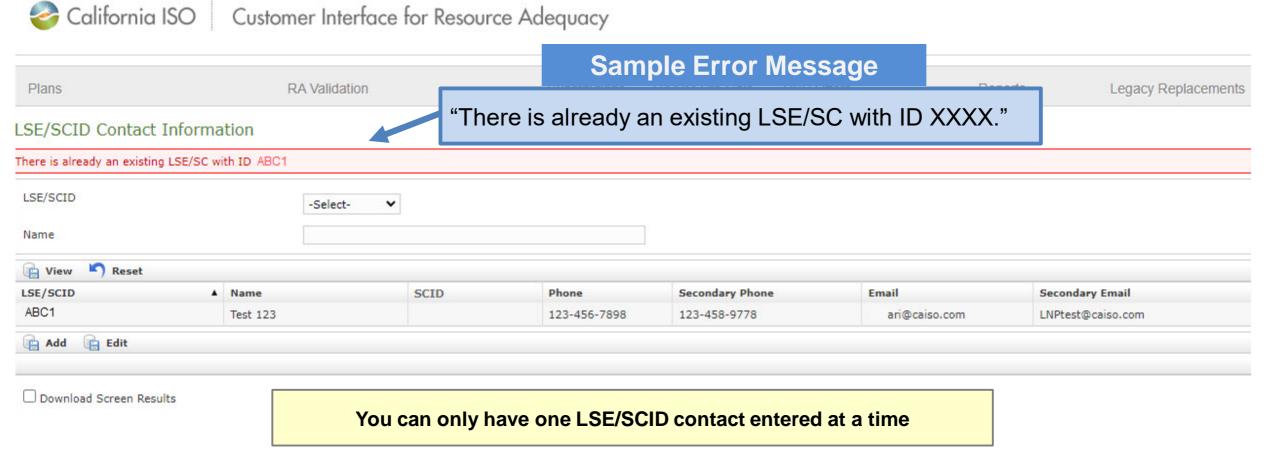




Contact Information (for LSEs and SCID)

CIRA

Error message



California ISO

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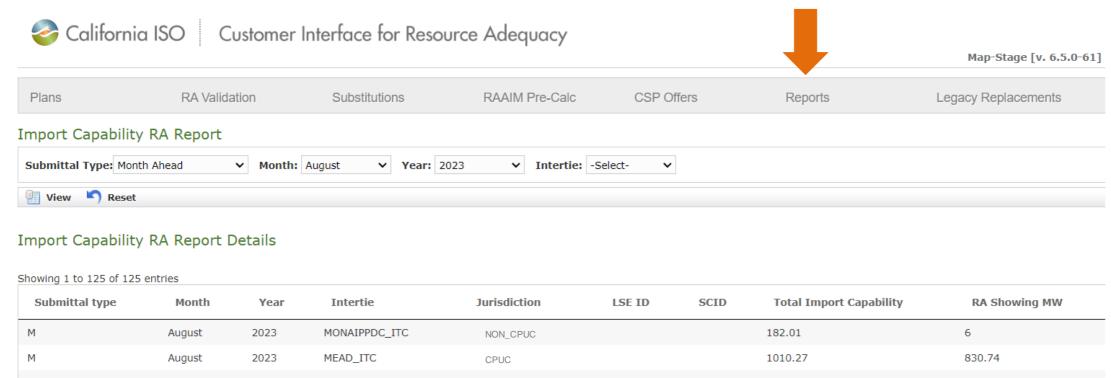
Import Capability RA Plan Data

New Report



28

CIRA > Reports > Import Capability RA Report



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)



Questions



Open Access Same-Time Information System (OASIS)

Updates to UI and API



ATLAS REFERENCE REPORT DEFINITION PRICES TRANSMISSION



CSP Offer

OASIS

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

Two New Reports

Standards Information

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

status, market prices and market result data.

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

7 ~ **CPM Designations** Available Import Capability Import Capability Used in RA Plan Data **NP15 ZP26 SP15**

Resource Adequacy and Minimum Load

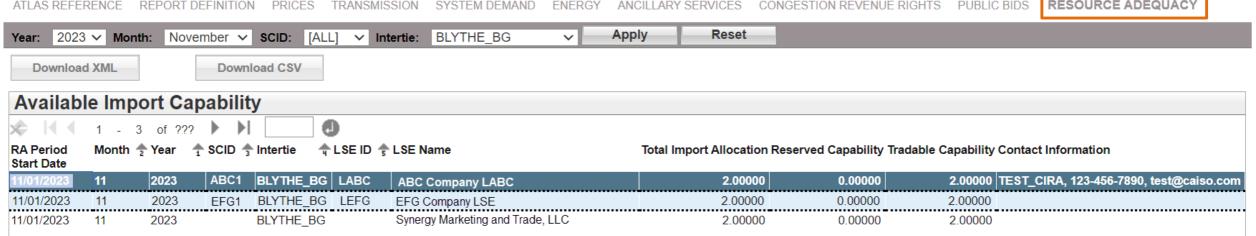
Open Access Same-Time System (OASIS) link



Available Import Capability

New report





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

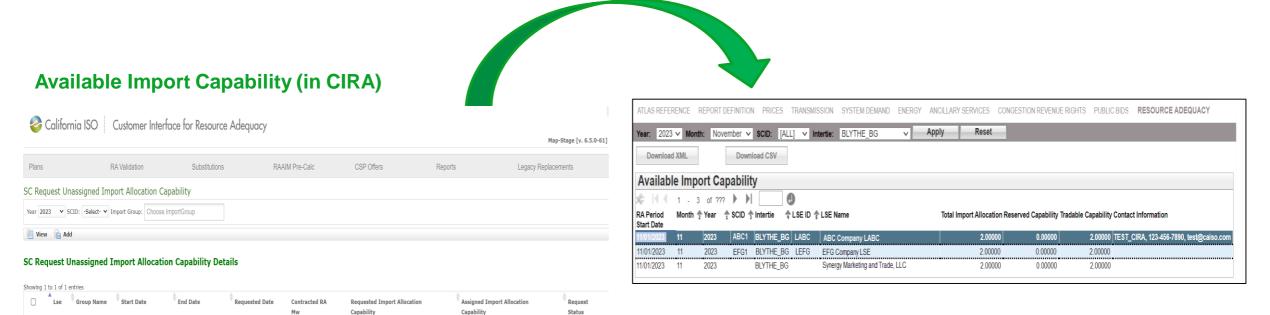
PRR 1524 for Market Instrument BPM



Import Capability Used in RA Plan Data report

Data from CIRA to OASIS





PRR 1524 for Market Instrument BPM

Previous 1 Next

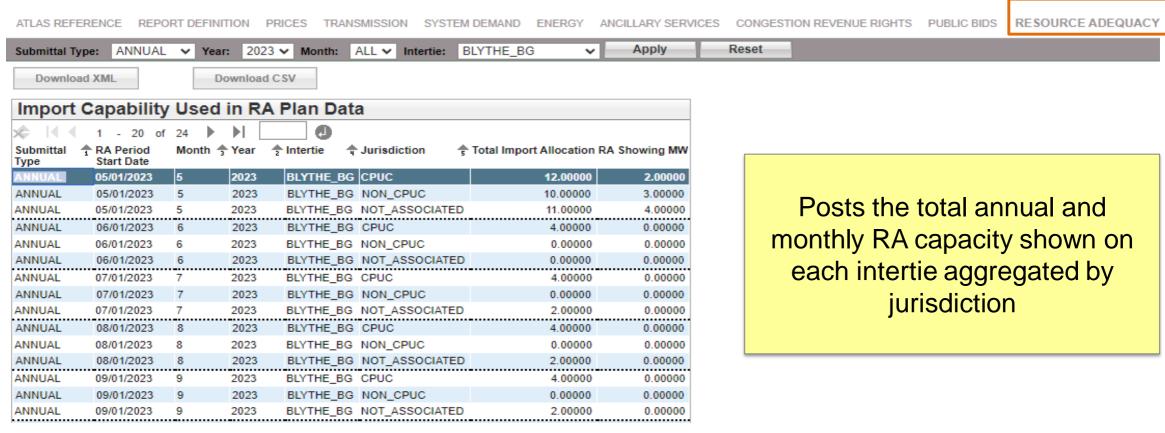


Download All Results

Import Capability Used in RA Plan Data

New report





PRR 1524 for Market Instrument BPM



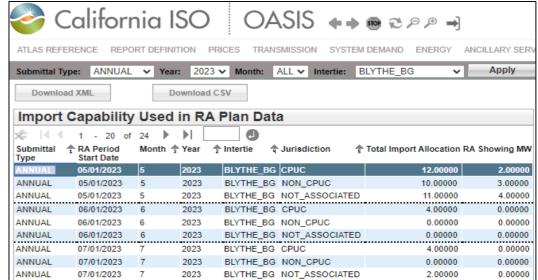
Import Capability Used in RA Plan Data report

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



Market Simulation

READINESS ACTIVITIES



Market Simulation Timeline

- Register for Market Sim by email <u>MarketSim@caiso.com</u>.
 - 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 <u>CAISO public calendar</u> for full schedule
- MIC Market Sim starts on August 17, 2023



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

- 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



Market Sim Scenario – Expected Outcome

Participants to verify:

- 1. Submission of Step 13 request for Unassigned import capability
- 2. Daily available import capability
- 3. Annual available import capability
- 4. Monthly import capability in RA plan
- 5. Annual import capability in RA plan
- 6. OASIS reports:
 - OASIS > Resource Adequacy > Available Import Capability
 - OASIS > Resource Adequacy > Import Capability Used in RA Plan Data (Monthly & Annually)

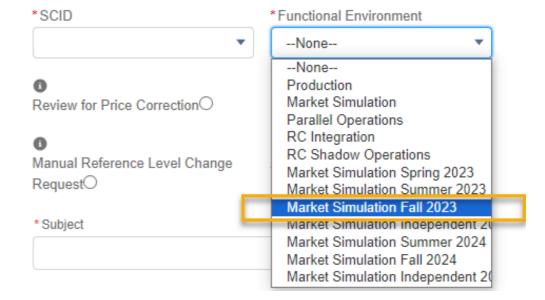


Market Simulation Questions?

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





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: <u>CustomerReadiness@caiso.com</u>

For any other questions or stakeholder specific questions or concerns, please <u>submit a ticket</u>.







REFERENCE MATERIALS



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



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.



Post Training Q&As

New slide

Q1: Is the Contact information for the Import Allocation going to be made public?

Answer: Yes. The contact info is going to be made public OASIS. The information is voluntary but if you want to let other LSEs/SCs know that you are willing to trade some of your import amounts, please update the Contact Information screen so that you can submit the MWs you're willing to trade in the Reserve Import Capability screen.

Q2: Will LSEs and SCs with existing Resource Adequacy (RA) receive same-day priority for RA Year 2025 or 2024? Which RA year will this new process be applied to?

Answer: This new process will be applied to RA year 2025. For RA year 2024, please continue to use the existing submission request process via email.

Q3: Once this enhancement goes live on 11/01/23, will the Reserved Import Capability screen be available for the 2024 MIC allocations for LSEs/SCs to use to trade their imports in CIRA?

Answer: Yes. Once this enhancement goes live, the ability to trade import capability will be available for RA year 2024. Also, this information will be publicly visible in the new 'Available Import Capability' report in OASIS under the Resource Adequacy tab.



Post Training Q&A (Continued)

New slide

Q4: What does the term 'NOT ASSOCIATED' or 'Other' mean under the Jurisdiction column in the 'Import Capability RA Report Details' screen in CIRA?

Answer: These new terms are used to break down the Resource Adequacy (RA) capacity on the enterprise by Local Regulatory Area (LRA) jurisdictions. They are brokered by two jurisdictions California Public Utility Commission (CPUC) and Non-CPUC. Providing this information allows us to be transparent. Interties that are not aggregated under the CPUC or Non-CPUC jurisdictions, are considered Scheduling Coordinators (SCs) acting on behalf of a supplier. Only LSEs are associated with the CPUC or Non-CPUC jurisdictions.



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 <u>ISO's Developer Site</u>, which provides detailed descriptions of the API changes for:

Open Access Same-Time Information System (OASIS)

Note: The ISO Developer site requires an account set-up if you do not already have one.

