Maximum Import Capability Enhancements

Issue Paper

March 11, 2021

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1. Introduction

The purpose of this initiative is to explore perceived shortcomings and potential improvements to all aspects of the Resource Adequacy (RA) - Maximum Import Capability (MIC) calculation, allocation, and usage.

MIC represents the maximum simultaneous deliverability of all imports used in the RA process. It does not influence the real-time energy schedules that are driven by market energy prices. The CAISO performs deliverability studies several times a year in its new Generation Interconnection Process (GIP) and in its Transmission Planning Process (TPP). These studies are conducted for the entire CAISO controlled grid, to test both the deliverability of internal resources and the deliverability of imports, in order to ensure that all resources are simultaneously deliverable to the aggregate of load. Unlike the deliverability of internal resources, which is granted on an ongoing basis to the resource owner, the deliverability of imports is granted to Load Serving Entities (LSEs) on an annual basis through an assignment process. New changes to the Tariff and Reliability Requirements Business Process Manual (RR BPM), when approved, will allow LSEs to lock Remaining Import Capability (RIC) at the branch group level on a multi-year basis subject to certain conditions.

Stakeholders have requested the CAISO review the MIC calculation, allocation and usage provisions. The CAISO is listing herein some of the most common issues raised by stakeholders. However during this stakeholder process the CAISO will also seek to explore other new issues and solutions raised during the stakeholder process itself.

1.1. Background

The CAISO assesses the deliverability for imports using the established MIC calculation methodology. The CAISO calculates the MIC MW amount mainly based on a historic methodology that utilizes the actual schedules into the CAISO's BAA for highest net imports obtained simultaneously during peak system load hours over two years with highest imports among the last five years. The CAISO examines the highest two years among the prior five years of historical import schedule data during high load periods. Sample hours are selected by choosing two hours in each year, and on different days within the same year, with the highest total import level when peak load was at least 90% of the annual system peak load. The CAISO then calculates the historically-based MIC values based on the scheduled net import values for each intertie, plus the unused Existing Transmission Contract (ETC) rights and Transmission Ownership Rights (TOR), averaged over the four selected historical hours. This concept is an important fundamental principle of the MIC framework, intended to ensure that existing ownership rights and pre-existing RA commitments and contracts should be recognized and respected.

MIC may be increased on a prospective basis at specific interties to meet state and federal policy goals with the completion of the related necessary policy-driven transmission upgrades. The CAISO assures through deliverability studies that both the increased MIC and internal generation are deliverable to the aggregate of load. If necessary, through the CAISO annual transmission planning process (TPP),

transmission upgrades are approved and subsequently built before the additional deliverability is made available to increased imports and new internal resources.

MIC values for each intertie are calculated annually for a one-year term and a 13-step process is used to allocate MIC to LSEs. MIC allocations are not assigned directly to external resources, rather they are assigned to LSEs who choose the portfolio of imported resources they wish to elect for utilization of their MIC allocations. This is also an important principle underlying the MIC framework. MIC is allocated to LSEs because LSEs pay for the transmission system and, thus, they should receive the benefits from it and choose which external resources are ultimately selected for providing RA capacity that relies on the import capability. Once the allocation process is complete, LSEs can use their MIC allocations on each intertie to support their procurement of RA capacity of external resources. The 13-step import capability allocation process is detailed further below.

Table 1 lists the 13 steps of the Available Import Capability Assignment Process.[1]

Table 1: Available Import Capability Assignment process overview

Step	Process description
Step 1	Determine Maximum Import Capability (MIC)
	- Total ETC
	- Total ETC for non-ISO BAA Loads
Step 2	Available Import Capability
	- Total Import Capability to be shared
Step 3	Existing Contract Import Capability (ETC inside loads)
Step 4	Total Pre-RA Import Commitments & ETC
	- Remaining Import Capability after Step 4
Step 5	Allocate Remaining Import Capability by Load Share Ratio
Step 6	CAISO posts Assigned and Unassigned Capability per Steps 1-5
Step 7	CAISO notifies SCs of LSE Assignments
Step 8	Transfer [Trading] of Import Capability among LSEs or Market Participants
Step 9	Initial SC requests to CAISO to Assign Remaining Import Capability by Intertie
Step 10	CAISO notifies SCs of LSE Assignments & posts unassigned Available Import Capability
Step 11	Secondary SC Request to CAISO to Assign Remaining Import Capability by Intertie

[1] See Section 40.4.6.2.1 of CAISO Tariff.

Step 12	CAISO Notifies SCs of LSE Assignments & posts unassigned Available Import Capability
Step 13	SCs may submit requests for Balance of Year Unassigned Available Import Capability

RA showings designating import MWs to meet RA obligations across interties using either Non-Resource-Specific System Resources, Pseudo-ties, or Dynamically Scheduled System Resources are required to be used in conjunction with a MIC allocation and are considered a firm commitment to deliver those MWs to CAISO at the specified interconnection point with the CAISO system.

Reference for Tariff and business practice manual (BPM) as follows:

1. ISO Tariff section 40.4.6.2: http://www.caiso.com/Documents/Section40-ResourceAdequacyDemonstration-for-SchedulingCoordinatorsintheCaliforniaISOBalancingAuthorityArea-Oct1-2020.pdf

2. Reliability Requirements BPM sections 6.1.3.5, 6.1.3.6 and Exhibit A-3: https://bpmcm.caiso.com/BPM%20Document%20Library/Reliability%20Requirements/BPM%20for%20Reliability%20Requirements%20Version%2054.docx

2. Issue Paper: Maximum Import Capability Enhancements

As a result of the 2020 stakeholder process related to the Maximum Import Capability stabilization and multi-year allocation, the calculation of MIC has a more constant value across years (starting RA year 2021) and the Load Serving Entities (LSEs) are permitted to lock MIC at the branch group level based on multi-year executed RA import contracts (starting RA year 2022) under certain conditions.

During the stakeholder process last year stakeholders raised additional concerns and suggestions for improvements to the calculation of MIC as well as its allocation and tracking through the entire RA process. The CAISO is opening this stakeholder process in order to explore those stakeholder concerns and suggestions. The CAISO is not open to completely eliminating MIC or its allocation process, because the sum of the Total Transfer Capability (TTC) of each individual intertie is about 44,400 MW whereas MIC (simultaneous deliverability for all imports) is around 15,500 MW and the CAISO control area cannot physically receive imports beyond the simultaneous limit.

The following are descriptions of some of the stakeholder suggestions during the previous initiative.

2.1. Technical issues related to MIC

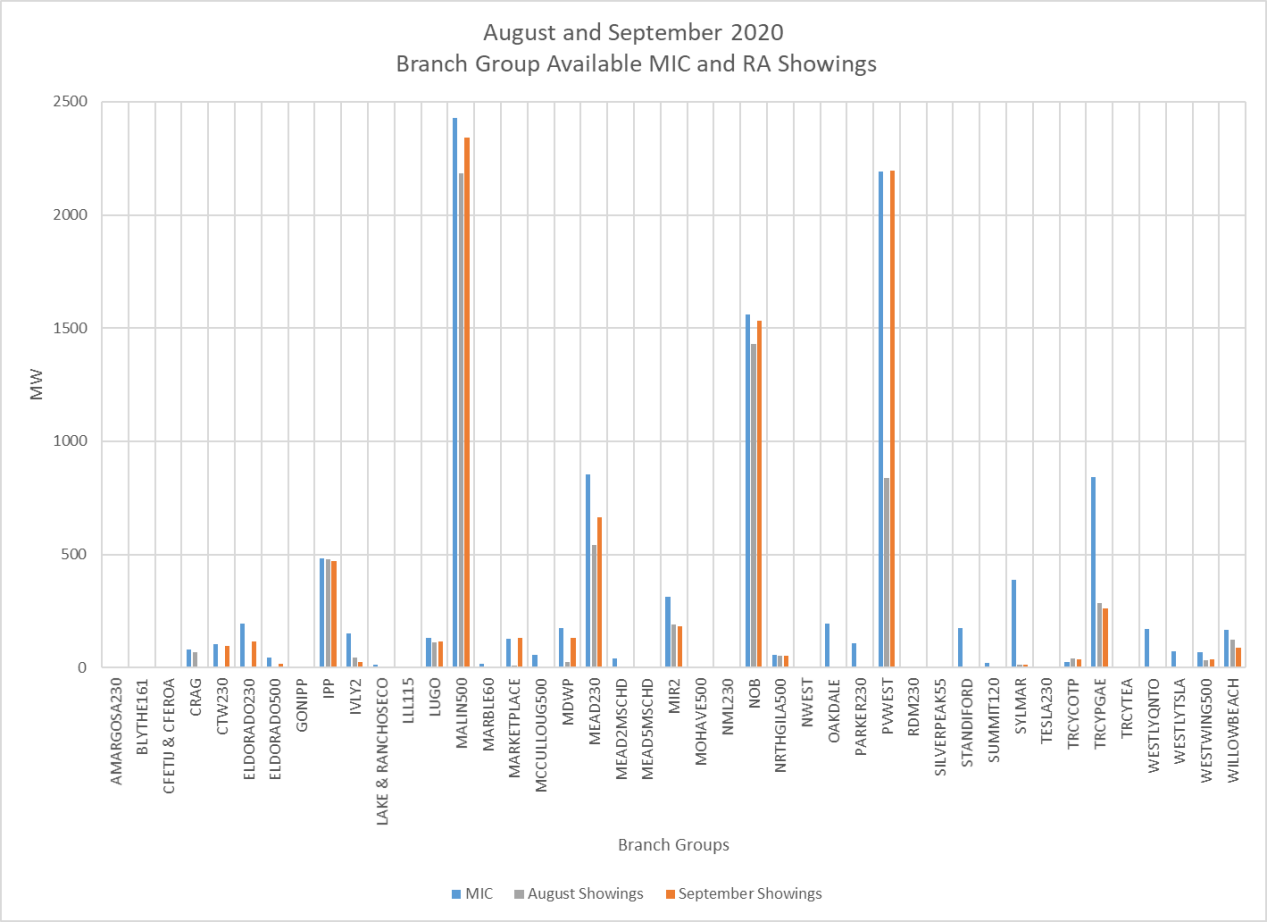
Change in methodology for calculating MIC:

Stakeholders suggested that there may be ways to improve the calculation by considering “liquidity” at certain branch groups (hubs) or considering the magnitude of RA showings. For example, branch groups

with high liquidity or high RA showings will be given additional MIC allocations in the next RA year and branch groups with low liquidity or low RA showings will have their allocations reduced in the next RA year. Figure 1 is a visual representation of the RA showings for the months of August and September 2020 in relation to the maximum import capability for each individual branch group and the discrepancy in RA showings usage between branch groups.

Challenges would arise from the fact that MIC is limited and if the allocation on a certain branch group is going up another has to go down. Furthermore most branch groups have already reached their own deliverability limit, due to other CAISO internal resources interconnecting in the same general area.

Figure 1: Highest RA showings in relation to MIC allocated to CAISO internal LSEs



Conduct deliverability studies at the end of the RA showings process:

In order to avoid the MIC allocation process and in order to first allow LSEs to procure whatever RA imports they can, certain stakeholders suggested that the CAISO should run deliverability studies at the end of the RA process after all RA import contracts are known.

Challenges would include leaving LSEs with stranded assets, requiring far more time for year-ahead showings validation and possibly having high ramifications on CPM back-stop costs allocations regarding

system RA. It is not possible to do these proposed deliverability studies in the month ahead process because deliverability studies take over one month to conduct.

2.2. Improve transparency

Enhance ownership transparency of Import Capability allocations and their usage as well as the provisions for reassignment, trading, or other forms of sales of Import Capability among LSEs:

The CAISO remains open to changes that facilitate transparency regarding ownership of MIC allocations and its use as well as increase LSE access to the trading of import capability.

The current process is transparent on each of the 13 steps of the MIC allocation process. The, step by step data, including final allocation and bilateral trading are published here:

http://www.caiso.com/planning/Pages/ReliabilityRequirements/Default.aspx

New Tariff language will also provide additional transparency by publishing relevant contractual data for resource contracts used to lock MIC at the branch group level on a multi-year bases.

Where transparency can be improved the most is during annual and monthly trading process and the actual usage after the showings are in and validated.

Improving the trading and usage aspect of the process may be necessary to better facilitate the transfer of Import Capability among LSEs and improve the efficient utilization of Import Capability.

2.3. MIC allocation issues

Incorporate an auction or other market based mechanism into the assignment process:

Stakeholders suggest that the CAISO incorporate an auction or other market based mechanism into the Available Import Capability Assignment process. They assert that this will provide alternatives or additional opportunities for LSEs to procure import capability greater than their pro rata load ratio share of MIC on any given branch group/intertie to support a particular RA contract. Alternative mechanisms could allow for more efficient procurement of import capability by LSEs that place a greater value on the Import Capability for various reasons. The CAISO could allocate all, or only a portion of the remaining Available Import Capability through a mechanism similar to the current process, but the CAISO could retain all, or a portion of the remaining Available Import Capability, to be auctioned to or otherwise procured by LSEs. Additional auction revenues could potentially be used to reduce the TAC Transmission Revenue Requirement, or allocated back to LSEs on a pro rata load share basis.

Challenges include the diminishing availability of year ahead Available Import Capability that needs to be split to LSEs after each LSE may exercise its right to lock multi-year Remaining Import Capability at the branch group level due to new RA contracts as established per last year's stakeholder process. Furthermore, there are significantly higher start-up and maintenance costs associated with such auctions as well as challenges regarding allocations of auction revenues.

Recapture and then release the unused MIC allocations:

Each LSE receives MIC allocations commensurate with their load share ratio and currently LSEs get to use them as they see fit. Some use them in the year ahead timeframe, some in the month ahead timeframe and some hold it for unit substitution (avoid RAAIM penalty).

Certain stakeholders suggest that unused allocations (after the month ahead showings) should be recaptured and released to other LSEs.

Challenges arise from the fact that MIC is a traded commodity and a right that, once allocated, deserves just compensation. Additionally, some LSEs will not be able to avoid RAAIM (although this is not an issue after the elimination of RAAIM). Furthermore, all LSEs need to be RA compliant by T-45 days (monthly showing), and LSEs will have an incentive to come short in order to see if MIC gets released; otherwise a new timeline for all RA showings needs to be envisioned when time is set aside for the release of MIC every month before the showings are final.

2.4. Reservation of import capability and transmission for wheel-through transactions

Based on the recommendations from the *Market Enhancements for Summer 2021 Readiness* initiative, the CAISO will explore developing a process for requesting and reserving import capability and transmission to support wheel-through transactions across the CAISO system on a basis comparable to the allocation of import capability for delivery of Resource Adequacy (RA) imports to serve load in the BAA. This process will facilitate review of the scheduling priority for wheel-through transactions with reserved import capability and transmission across the CAISO system.

Other stakeholder proposed changes and improvements:

Please provide other suggestions related to the calculation of MIC or its allocation and tracking through the RA process.

3. Straw Proposal: Maximum Import Capability Enhancements

The CAISO intends to move forward with the MIC enhancements stakeholder process in order to provide stakeholders the opportunity in providing suggestions for improvements to all parts of the MIC allocation process, from calculation to allocation and tracking.

The CAISO currently does not have a specific proposal. The intent is to allow stakeholders to rally their efforts behind certain improvement suggestions that can later have enough stakeholder support in order to become concrete proposals.

4. Stakeholder Engagement and EIM Governing Body Role

Stakeholder input is critical in both identifying potential shortcoming in the current calculation of maximum import capability, its allocation and tracking as well as improvements to the process. The schedule proposed below allows opportunity for stakeholder involvement and feedback.

This initiative will require briefing to EIM Governing Body, because of real-time priority of RA imports and wheel-through schedules. The changes to the MIC calculation methodology requires changes to the Reliability Requirements Business Process Manual (RRBPM) whereas changes to the allocation process will need to be approved by the CAISO Board of Governors before changes to the CAISO Tariff need to be approved by the Federal Energy Regulatory Commission (FERC).

4.1. Schedule

Table 3 lists the proposed schedule for the updates to the Maximum Import Capability enhancements process.

Table 3: Schedule for Maximum Import Capability enhancements process

Item	Date
Post Issue Paper	March 11, 2021
Stakeholder Call	March 18, 2021
Stakeholder Comments Due	April 1, 2021
Post Straw Proposal	May 6, 2021
Stakeholder Meeting	May 13, 2021
Stakeholder Comments Due	May 27, 2021
Post Revised Straw Proposal (tentative)	*June 24, 2021*
Stakeholder Meeting (tentative)	*July 1, 2021*
Stakeholder Comments Due (tentative)	*July 15, 2021*
Post Draft Final Proposal	September 1, 2021
Stakeholder Call	September 8, 2021
Stakeholder Comments Due	September 22, 2021
CAISO Board of Governors Meeting	November, 2021

The CAISO proposes to present its proposal to the CAISO Board of Governors on November 2021. The CAISO is committed to providing many opportunities for stakeholder input into its market design, policy development, and implementation activities. Stakeholders should submit written comments to RegionalTransmission@caiso.com.

4.2. Next Steps

The CAISO will discuss the Issue Paper during the stakeholder call on March 18, 2021. The CAISO requests stakeholders submit written comments in response to the Maximum Import Capability stabilization and multi-year assignment process issue paper and stakeholder call by April 1, 2021.