Business Requirements Specification

Energy Imbalance Market Enhancements 2019

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Revision History

Date	Version	Description
2/4/2019	1.0	Initial document release.
3/20/2019	1.1	Update in red: EIM19-BRQ1150 clarify and combine BRQ1150 and BRQ1250, remove BRQ1250 EIM19-BRQ1470 clarify the Flex Ramp Sufficient Test display components, Split to BRQ1471 for ETSR display EIM19-BRQ1510 clarify display data for calculate the Flex ramp capacity at resource level Remove EIM19-BRQ1460, link to BRS of EIM Resource sufficiency enhancements that include the requirements EIM19-BRQ1371, add report for valid resource limits EIM19-BRQ1100, clarify set the explicit ETSR threshold on a BAA basis EIM19-BRQ1195 add EIM regulation energy settlement Add Section 6.3 market simulation requirements
8/12/2019	1.4	Update in dark red: Add EIM19-BRQ2010, BRQ2020, BRQ2030 and BRQ2040 for EIM threshold of Startup/shutdown and ETSR displays and calculation. Clarify EIM19-BRQ1095 All Resources show the previous results while RTD is running. Clarify EIM19-BRQ1370 Transmission Loss Clearing display in OASIS

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1 Introduction

1.1 Purpose

The purpose of this document is to capture and record a description of what the Users and Business Stakeholders of the project wish to obtain by providing high-level business requirements. This document establishes the basis for the agreement between the initiators and implementers of the project. The information in this document serves as input to determining the scope of projects and to all Business Process Modeling and System Requirements Specifications efforts.

The purpose of this project, Energy Imbalance Market Enhancements 2019, is to collectively address important issues identified by Energy Imbalance Market (EIM) participants that would improve resource modeling and EIM design.

2 Intellectual Property Ownership

Intellectual property covers a broad array of information and materials, including written works, computer programs, software, business manuals, processes, symbols, logos, and other work products. Determining ownership of intellectual property is very important in preserving rights of the California ISO and helps to avoid intellectual property infringement issues. In considering the business requirements or service requirements to be performed, the business owner of the project must determine intellectual property Ownership.

2.1 Checklist

CAISO retains intellectual property ownership of the following:

- Design of EIM; includes graphical user displays, business processes, and design constructs
- Related Business Practice Manuals
- Software codes to implement the EIM display and design changes
- All rights reserved for works included within this BRS document

3 Acronym Definitions

Acronym	Definition
API	Application Programmable Interface
BAA	Balancing Authority Area
BAAOP	Balancing Authority Area Operations Portal
BPM	Business Process Manual
BRS	Business Requirements Specification
BSAP	Base Schedule Aggregation Portal
CAISO	California Independent System Operator
CISO	California Independent System Operator
CMRI	CAISO Market Results Interface
DA	Day-Ahead
DAM	Day-Ahead Market
DAME	Day-Ahead Market Enhancements
EIM	Energy Imbalance Market
FMM	Fifteen Minute Market
HASP	Hour-Ahead Scheduling Process
IFM	Integrated Forward Market
ISO	Independent System Operator
MF	MasterFile
OASIS	Open Access Same Time Information System
RTBS	Real-Time Base Schedule

Acronym	Definition
RTD	Real-Time Dispatch
RTM	Real-Tim Market
RTPD	Real-Time Pre-Dispatch
RUC	Residual Unit Commitment
SC	Scheduling Coordinator
SIBR	Scheduling Infrastructure and Business Rules
STUC	Short-Term Unit Commitment
UI	User Interface

4 Details of Business Need/Problem

4.1 Description

From a compilation of Customer Inquiry, Dispute, and Information System (CIDI) tickets, the ISO customer service and technology teams received and reviewed EIM enhancement requests provided by EIM entities to improve market transparency, functions, and usability features with no impact to policy or tariff. From the list of EIM enhancement requests, some of which were deferred as they required additional review through the policy stakeholder process, or were consolidated with other requests due to their duplicative nature, the amount reduced to 67 enhancement requests and were determined as follows:

- 22 requests are included in the EIM Enhancements 2019 release

- 8 requests will apply to EIM initiatives after 2019

- 16 requests require further study; their implementation will be determined once assessment is complete

- 21 requests will not be implemented, and the CIDI Tickets will be closed

The following 22 enhancement requests are included in the EIM Enhancements 2019 project scope. ISO will provide the associated CIDI tickets with updates so the submitting participants are aware of their status.

Request ID	Category	Requirements summary
1	BAAOP	BAAOP UI shall display: TOTAL generation (and split by type), TOTAL Non-Generation, Load, TOTAL Dynamics, and TOTAL NSI (and split import/exports)
2	BAAOP	BAAOP shall display unit deviation (SE/DOT/configuration) for PR and NPR
3	RTM	System shall use trigger to prevent ETSR swing using the explicit ETSR threshold per BAA
4	BAAOP	BAAOP shall display load bias used in market
5	BAAOP	BAAOP shall display EIM transfer limits when the Flex Ramp test fail In RTBS user display
6	BAAOP	BAAOP shall indicate the contingency flag of BAAs

Request ID	Category	Requirements summary
7	~~RTM~~ ADS	System shall display current DOP in the MSG transition period
8	BAAOP	BAAOP shall display summary data per BAA the components related market energy requirements
9	Settlements ~~OASIS~~ TBD	Post information that allows for an entity to calculate its Unaccounted for Energy, post Real time network loss, UFE, CC 64740 for EIM
10	CIDI	Ability to download all CIDI requests into a CSV and easy sorting
11	CIDI	Improve CIDI reporting by enabling users to: select/filter/display/download CIDI requests
12	BAAOP	Display BAA under Contingency irrespective of which BAA is selected
13	BSAP	Allow Base Schedule modification in BSAP UI
14	BAAOP	Add the transformer flow to the BAAOP display
15	BAAOP	Bid Range Capacity information added to Bid Range Capacity Test display. GUI is in EIM - System - Base Schedule Test Results - Bid Range Capacity Test display new GUIs
16	BAAOP	Default sorting and layouts for displays Flex Ramp Sufficient Test and ETSR override limits
17	BAAOP	Change ETSR Limit naming of 5 min and 15 min override
18	BAAOP	Modify Resource Flex Ramping display layout. GUI is in EIM - System - Base Schedule Test Results - Resource Flex Ramping display
19	BAAOP	Provide visibility of Self Schedules - Provide visibility of Marginal Bids
20	BAAOP	Enhancement to market thresholds using a NET change threshold
21	BSAP	ADD "Aggregate BS Deviation" to BSAP API for RetrieveBalancingTestResults
22	OASIS	Request for OASIS (and API) ADD RTD (5 Min) load forecast (advisory intervals)

New market enhancements, in addition to the selected CIDI:

- Regulation energy settlement for EIM resource (Settlement, integration)
- CMRI report for overlapping resource aggregation move from EIM winter 2017 (Integration, CMRI)
- Update displays for Startup/Shutdown threshold and ETSR thresholds (BAAOP)

5 Business Impacts

5.1 Business Practice Manual (BPM)

BPM	Description of Impact(s)
Energy Imbalance Market (EIM)	- On a BAA basis, add "net" ETSR Threshold feature to consider large offsetting INC and DEC that concurrently exceed respective INC/DEC market thresholds, but algebraically sum to a net transfer value within defined thresholds

Market Instruments	- BSAP API to add "Aggregate Base Schedule Deviation"
	 - OASIS or CMRI will provide:
	     ○ Information to provide shadow calculation capability for Unaccounted for Energy (UFE)
	     ○ Real-Time transmission losses for ISO and EIM BAA Addition of 5-minute Real-Time Load Forecasts (include advisory intervals)

BPM Change Management	Non-Applicable
Candidate CRR Holder	Non-Applicable
Compliance Monitoring	Non-Applicable
Congestion Revenue Rights	Non-Applicable
Credit Management	Non-Applicable
Definitions & Acronyms	Non-Applicable
Direct Telemetry	Non-Applicable
Distributed Generation for Deliverability	Non-Applicable
Generator Interconnection and Deliverability Allocation Procedures	Non-Applicable
Generator Interconnection Procedure (GIP)	Non-Applicable

BPM	Description of Impact(s)
Generator Management	Non-Applicable
Managing Full Network Model	Non-Applicable
Market Operations	Non-Applicable
Metering	Non-Applicable
Outage Management	Non-Applicable
Reliability Requirement	Non-Applicable
Rules of Conduct Administration	Non-Applicable
Scheduling Coordinator Certification & Termination	Non-Applicable
Settlements & Billing	Non-Applicable
Transmission Planning Process	Non-Applicable

Additionally, the following documents will be updated to reflect changes in user-interface displays, functions:

- Balancing Authority Area Operations Portal (BAAOP) User Guide
- Customer Inquiry, Dispute, and Information (CIDI) User Guide

5.2 Other

Impact:	Description: (optional)
Market Simulation	Yes
Market Participant Impact	Yes (for EIM Entities)
External Training	Yes
Policy Initiative	No

6 Business Requirements

The sections below describe the Business Processes and the associated Business Requirements involved in the project. These may represent high level functional, non-functional, reporting, and/or infrastructure requirements. These business requirements directly relate to the high level scope items determined for the project.

6.1 Business Process: Manage Energy Imbalance Markets

6.1.1 Business Requirements: BAAOP Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1010	**Add New BAA Balancing Overview Display:** For each BAA, system shall display the following aggregate values by time stamp in both RTD and RTPD market runs: • Total Generation (grouped by unit type, as defined by MasterFile) • Total Non-Generation, Load • Total Dynamics • Total NSI (grouped by import, export)	Core	- BAAOP
EIM19-BRQ1110	**Add Active Load Bias to RTD/RTPD ~~Dispatch Control~~ Displays:** For each BAA, system shall display the following: • Active RTD Load Bias • Active RTPD Load Bias	Core	- BAAOP
EIM19-BRQ1180	**Display All Data Used to Calculate BA MW** For each BAA, system shall display all data used to calculate BA MW requirement for RTD and RTPD markets. The data shall include the following: • Net Schedule Interchange • DOT (as used by market) • All components related the calculation of the market requirement including MSG_IC, Loss component, and load forecast.	Core	- BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1090	**Add Unit Deviations Display for Participating and Non-Participating Resources** For each BAA, system shall display the BAA's associated unit deviations for Participating and Non-Participating Resources from a dedicated GUI, in a similar layout as Dispatchable resources GUI.	Core	- BAAOP
EIM19-BRQ1095	**Resolve "All Resources" Display Issues** For each BAA, system's "All Resources" display shall show the previous RTD results while RTD application is running. Once RTD run finishes, it should update the UI. ~~correct the following usability issues:~~ • ~~Page does not completely load all resource records when initialized or refreshed~~ • ~~Export to Excel function produces xls files with no records (all displayed records should export)~~	Core	- BAAOP
EIM19-BRQ1120	**Add GUI for EIM Import/Export Transfer Limit when Flexible Ramping Sufficiency Test Fails** For each BAA, system shall display the EIM import and export transfer limits that the market (RTD and RTPD) uses for failed Flexible Ramping Sufficiency test in RTBS user display.	Core	- BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1150	**Include BAA contingency list and EIM transfer Import and Export totals in RTD dispatch control display** • RTD Dispatch Controls will require updates for both import and export directions for EIM transfer in the display box for totals • RTD Dispatch Control will exclude the BAA Contingency list from the global display page's BAA filter (this will allow EIM Operator the ability to view all BAAs to have their contingency status reported to each other) • RTD Dispatch Control's Contingency Status display will have advanced filtering (by BAA, Contingency Status) and sorting capability features added to display • Effective December 2018, EIM BAA Contingency Events are now reported in the OASIS (Energy > BAA Market Events report)- Existing • In BAAOP, BAA contingency flag(s) will be displayed regardless which BAA selected **Increase Visibility of Events that Trigger Price Spikes** For each BAA, system shall display a contingency events, whether interchange schedules/tags were not timely submitted, etc. This would help reduce second guessing on what an event did or did not cause a price spike. **Notes:** • Effective December 2018, EIM BAA Contingency Events are now reported in the OASIS. • BAAOP the contingency flag will be displayed (see BRQ1250) • Other items like lag of timely submission of tags will not be considered due to practicality	Core ~~Existing Functionality~~	- BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted
~~EIM19-BRQ1250~~	~~**Display Which BAA is in Contingency Irrespective of Which BAA is Selected**~~ ~~For EIM entities with multiple-BAAs, system shall provide user with the capability to view which BAA is in contingency mode, irrespective of which BAA is selected in the RTD Dispatch Control display.~~	~~Core~~	~~- BAAOP~~
EIM19-BRQ1440	**Display Transformer Flows** System shall display transformer flows and limit enforcements for RTD and RTPD markets.	Core	- BAAOP

EIM19-BRQ1470	**Displays' Default Sorting & Layouts**
	
	• For Flexible Ramping Sufficiency Test display:
	
	  o System shall display Flexible Ramping Sufficiency Results Summary
	
	  o System shall display each components and formula operators used to calculate Flexible Ramping Up and Down requirements
	
	  o System shall display the data used to calculate value for each components
	
	  o System shall update the defaults sorting in priority order, as follows:
	
	    ▪ BAA (asc.)
	
	    ▪ Ramp Type (asc.)
	
	    ▪ Test Type (asc.)
		Core	- BAAOP

EIM19-BRQ1471	For ETSR Details (Override Limits Box) display:
	
	  o System shall set default view to List View.
	
	  o System shall update the defaults sorting in priority order, as follows:
	
	    ▪ Limit Type (dec.)
	
	  o System shall fix column widths.
	
	  o Limit field shall be modified to "Incremental Delta Limit" or "Absolute Delta Limit" to match the actual use of that field.
		Core	BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted

EIM19-BRQ1510	**Resource Flex Ramping Layout Modification**
	
	• System shall display Up/Down Flex Ramping Capacity by Resource Type and Test Intervals
	
	• System shall display resource level data for calculating Flex Ramp up and down capacity
	
	~~System shall modify Resource Flex Ramping display layout to enhance the ability of users to troubleshoot Flex Ramp issues.~~
	
	~~The Resource Flex Ramping display layout shall be modified using pivot function to the following columns:~~
	
	    o ~~UP Capacity~~
	    o ~~Down Capacity~~
	    o ~~BAA~~
	    o ~~Resource~~
	    o ~~Start Time~~
	    o ~~End Time~~
	    o ~~Intervals 1-4 (crosstab)~~
		Core	- BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted

~~EIM19-BRQ1460~~	**Bid Range Capacity information**
	• ~~System shall modify Bid Range Capacity Test display layout to enhance the ability of users to troubleshoot Bid Range Capacity issues.~~
	• ~~The Bid Range Capacity Test display shall be modified to add the following information, regardless of PASS/FAIL status:~~
	   o ~~Capacity Insufficiency/Sufficiency~~
	   o ~~Requirement~~
	• ~~More information regarding the inputs to this test shall be displayed on dedicated GUIs.~~
	• ~~The naming conventions shall be consistent between all applications posting Bid Range Capacity information (mainly CMRI and BAAOP).~~
	
	~~**Notes:**~~
	• ~~The results of this test, and the line violation is listed in CMRI Transmission Violation Test results.~~
		Core
		
		in <u>BRS</u> EIM Resource Sufficiency Enhancements project scope CSTE-BRQ-010
			- BAAOP
			
			- CMRI

EIM19-BRQ1520	**Display Self Schedules & Marginal Bids** System shall display the following: • Self-Schedules • Marginal Bids **Notes:** • For Self Schedules: It is existing. There is a display EIM →EIM → Bid Overview- Generation (RTPD) → *Self Schedule* and EIM → Bid Overview- MSG (RTPD) → *Self Schedule.* • For Marginal Bids: It is existing. There are displays that show this information on "Marg Bid" field column in EIM →EIM → Bid Schedules - Generators → RTPD and EIM →EIM → Bid Schedules - Generators → RTD GUIs.	Core Existing Functionality	- BAAOP

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1550	**Market Thresholds Enhancement** System shall be updated to display and account for NET change threshold for both generation and interchange.	Core	- BAAOP
EIM19-BRQ2010	System shall display Threshold Alert for Unit Startup/Shutdown UI • display alert when Startup/Shutdown count threshold is exceeded by interval 1 and interval 2 separately on the Unit Startup/Shutdown UI and RTPD Dispatch Control screen	Core	- BAAOP, RTPD
EIM19-BRQ2020	Auto block RTPD commitment and dispatch instructions if Startup/Shutdown count threshold is exceeded • Exclude VER and DR resource commitments in counting logic of Startup/Shutdown, Transition instructions • Count instructions of interval 1 and instructions of interval 2 separately • Count all instructions, including startup, shutdown and transition instructions. • If the count exceeds the threshold for the interval, auto block the commitment instructions and dispatch instructions for all the resources; include normal resources, VER and DR.	Core	- BAAOP, RTPD
EIM19-BRQ2030	RTPD/RTD remove Actuals from EIM Thresholds table displays • Remove Actual Generation, Actual Intertie, Actual ETSR from all EIM Thresholds displays • Keep Net Generation, Net Intertie, Net ETSR in all EIM Thresholds displays in RTD and RTPD • Keep Startup/Shutdown Count in EIM Thresholds displays in RTPD	Core	- BAAOP, RTPD, RTD

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ2040	Remove Base Schedules from ETSR Threshold calculation • For RTPD, keep Static and Dynamic ETSR movements; remove Base ETSR schedule movement from the ETSR threshold calculation. • For RTD, keep Dynamic ETSR movement; remove Base and Static ETSR schedule movement from the ETSR threshold calculation.	Core	- BAAOP, RTPD, RTD

6.1.2 Business Requirements: BSAP Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1270	System shall allow users the ability to modify their base schedule via the BSAP UI by utilizing *copy* and *"copy forward"* of previously submitted base schedules.	Core	- BSAP
EIM19-BRQ1560	For each BAA, systems shall calculate and publish Aggregate BS Deviation (will also be included in BSAP API).	Core	- BSAP - Integration

6.1.3 Business Requirements: CIDI Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1210	System shall allow user to download CIDI requests report into a CSV file: The CIDI report can include: 1. All CIDI requests 2. CIDI requests with selected fields, time range, SCID, filtered and sorted on items.	Core	- CIDI
EIM19-BRQ1211	Track CIDI last modified date: • System shall track CIDI ticket status and display its last modified date. • System shall allow user to sort the CIDI requests by last modified date. Note: This functionality is provided in communities; dashboards tracking status, and "case last modified date".	Core Existing	- CIDI
EIM19-BRQ1212	System shall allow user to view ALL of a Utility's (multiple SCID) CIDI cases. Note: this is existing functionality that requires a user to be provisioned for the other SCID's within their organization.	Core Existing	- CIDI, AIM
EIM19-BRQ1220	System shall allow user to select and filter CIDI tickets for reporting: • allow user to select fields • allow user to select date ranges; • allow user to filter on other items; • Display the CIDI ticket report with selected fields, date range, and filtered result. • create a page showing selection of fields Date and filter criteria Note: These features are provided with the communities; dashboard and filtering capabilities.	Core Existing	- CIDI

6.1.4 Business Requirements: OASIS Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1360	System shall display and provide API access to RTD (5 Min) load forecast (includes both binding and advisory intervals) **Note:** • Existing in OASIS/System Demand/Advisory CAISO Demand Forecast • OASIS already has RTD data & the API for this report available externally in production "**SLD_ADV_FCST**" API name.	Core Existing	OASIS
EIM19-BRQ1370	For each BAA, system shall publish, and broadcast via an API, the RTD transmission loss clearing.	core	Integration, OASIS
EIM19-BRQ1371	System shall display (UI) and publish (API) valid resource-specific resource limit values for all EIM participating and non-participating resources	core	Integration CMRI

6.2 Business Requirements: Manage Real-Time Markets

6.2.1 Business Requirements: Real-Time Market Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1100	System shall prevent ETSR swing using the explicit ETSR threshold per BAA, by performing the following: • through using the explicit ETSR threshold limits on a BAA basis, in RTD and RTPD • ~~Activate Limit of change of every 5-minute total ETSR for BAA within the threshold~~	Core	- RTM

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1160	Systems shall display current DOP during the MSG transition period (instead of zero).	Core	- ADS, RTM

6.2.2 Business Requirements: Settlements Enhancements

ID#	Business Feature	Req Type	Potential Application(s) Impacted
EIM19-BRQ1190	System shall post bill determinants for shadow settlement calculation of Unaccounted for Energy (UFE) for EIM entities (CC 64740). **Notes:** • Generation, Load, and Intertie data submissions from EIM entities are available in MRI-S. • RT losses will be posted on OASIS or CMRI • Settlement calculation information is included in either BA or CAISO bill determinant files.	Core Existing Functionality	- Settlements
EIM19-BRQ1195	Settle the EIM resource deviation amount that within the resource Regulation or ABC range as instructed regulation energy, 1. Receive the resource limit from RTM that include validated interval high and low limits of the resource 2. For EIM PR and NPR base schedule with regulation/ABC provision, calculate the regulation energy as difference between meter and market schedule of the resource 3. The regulation energy is limited by the regulation capacity provision of the resource 4. Regulation capacity shall be adjusted by the resource validated max and min capacity 5. Settle Regulation energy as instructed energy, in the same manner as for CAISO resource	Core	Integration Settlements

6.3 Market / Business Simulation

6.3.1 Business Requirements

ID#	Guidance on Market Participant Impacts	Source System	Sink System	Reason for Potential Scenario
EIM19-BRQ9001	BAAOP UI changes: 1. EIM Area Summary Display (BRQ1010,1110,1180) 2. Resource Flex Ramping Display (BRQ1510) 3. Flexible Ramping Sufficiency Results display (BRQ1470) 4. RTD Dispatch Control Display (BRQ1150) 5. Transformer Flow display (BRQ1440) 6. EIM Import/Export Transfer Limits in ETSR Total display (BRQ1120) 7. NPR resource display (BRQ1090)	BAAOP	EIM Entity operator	*User Interface changes*
EIM19-BRQ9002	BSAP Copy forward function in BSAP display (BRQ1270)	BSAP	EIM Entity operator	*New system process*
EIM19-BRQ9003	Retrieve aggregate BS deviation from BSAP API (BRQ1560)	BSAP	EIM Entity operator	*API changes*
EIM19-BRQ9004	View the display and Retrieve RT Transmission Loss from OASIS(BRQ1370) View and retrieve resource valid limits (BRQ1371)	OASIS or CMRI	EIM Entity Settlement	*UI and API changes*
EIM19-BRQ9005	Shadow UFE calculation (BRQ1190)	Settlement	EIM Entity	*New data*

Appendix 1: Non-Implemented CIDI Tickets

Number	Category	Request Summary	Reason(s)
A-1	BAAOP	Provide an API to extract real-time BAAOP information.	BAAOP is a real-time system with continuous data streaming such that previous data will always be overwritten by new data; therefore, the API will not be able to extract consistent data since the BAAOP application was not designed to function as a historian.
A-2	CMRI	Publish RTPD/RTD Critical Constraints (binding and future)	The data processing and publishing requirements would involve too much data to perform on a continuous basis. Critical constraints already exists in the BAAOP. Unit dispatch and LMP calculation results are based on these binding constraints. If not visible by EIM operator, these constraints can be made feasible. Another obstacle is that each BA operator may only see the constraints in their BA, not other BAs. For reference, the BPM for Market Instruments section 10.2 provides that: Access may be obtained per provisions defined in Tariff Section 6.5.10, which details the process for completing the *Non-Disclosure Agreement for Transmission Constraints Enforcement Lists*. Transmission Limits report: Displays the transmission limits for all critical constraints in the IFM, HASP, and RTED markets. The term "critical" shall be defined as being at, *or within a specific proximity to*, the transmission limit. Transmission limits for critical constraints in other markets such as RTCD are not included. Trigger: Trade Date + 3 days by 6:00 AM PPT.
A-3	ADS	ADS publish internal DOT	Market participant should follow the external DOTs that are financially binding. Market participants can contact their customer service representative or the Market Validation and Analysis group if they need to review save cases for after-the-fact analysis
A-4	BAAOP	BAAOP Web UI MODIFY "Total Delta SUM" to remove VER/Wind calculation in Total Delta	The delta here is the change value for any reason. The breakdown is not supported.

Number	Category	Request Summary	Reason(s)
A-5	BAAOP	Remove Contingency Status Box in ETSR detail	Keep Contingency Status Box in ETSR detail display to help understand ETSR values
A-6	CMRI	CMRI (and API) ADD RTD/RTPD Dispatch-able Generation (active binding and future intervals)	CMRI is for publish Market Results. This is not market result.
A-7	BAAOP	BAAOP API ETSR lock	There is currently no API support for BAAOP
A-8	BAAOP	BAAOP API ADD Manual Dispatch - Submit and Retrieve	There is currently no API support for BAAOP
A-9	BAAOP	BAAOP API for Contingency Flag - Submit and Retrieve	There is currently no API support for BAAOP
A-10	BAAOP	BAAOP API for ETSR Override - Submit and Retrieve	There is currently no API support for BAAOP
A-11	BAAOP	BAAOP API for Transmission Constraint Conforming - Submit and Retrieve	There is currently no API support for BAAOP
A-12	BAAOP	BAAOP API for RTSI submission retrieve	There is currently no API support for BAAOP
A-13	BAAOP	SVG One Lines display use State Estimator or Telemetry modes.	The SVG one line displays the NA solution in the Market.
A-14	CMRI	ADS/CMRI/OASIS (and APIs) ADD RTD/RTPD Internal Generation DOTs	Market participant should follow the external DOTs that are financial binding. Market participants can contact customer service and Market Validation and Analysis group if they need save cases for after-fact analysis.
A-15	CMRI	CMRI (and API) ADD Transmission Constraint Conforming	This value is input data from the EIM operator In BPM for Market Instruments section 10.2 Transmission Limits report Displays the transmission limits for all critical constraints in the IFM, HASP, and RTED markets. For all transmission elements, indicates whether the limit is associated with a contingency or not. If a contingency is associated, the contingency name is displayed; otherwise "base case" is displayed. Trigger: Trade Date + 3 days by 6:00 AM PPT.
A-16	CMRI	CMRI (and API) ADD Manual Dispatches	This data already resides in ADS.

Number	Category	Request Summary	Reason(s)
A-17	CMRI	CMRI (and API) ADD RTPD/FMM Advisory Schedules	CMRI publish market results that are financially binding.
A-18	CMRI	CMRI (and API) ADD ETSR Locks	There is a complexity in implementing since the transfer lock would have resulted from an override
A-19	CMRI	Allow CMRI to pull more data in a single query for RTM Products	Unfortunately, this enhancement will negatively impact CMRI performance and is against the ISO's acceptable use policies.
A-20	General Inquiries	CAISO Market Daily Report SharePoint stores only 15 days of reports - PGE requests ISO to store 30 days of reports in this SharePoint	Customer has the option to download the files locally to their own systems.
A-21	Master File	GRDT provide new unit restrictions on first hour	Customer may use manual dispatch or base schedule to manage the new unit restrictions.