

EIM-S Informational Meeting

09.07.2023



Agenda

GRID Modernization 

- Opening Remarks
- EIM-S schedule
- New sub-allocated EIM Charge Codes
- CAISO Software Defect – March 6-22 Impacts
- Detailed Data File Frequency Discussion
- Closing remarks

Opening Remarks

EIM-S schedule

EIM-S Schedule

GRID Modernization

2023 Monthly EIM Services Bill Schedule

January 2023		May 2023		September 2023	
Initial	Recalc	Initial	Recalc	Initial	Recalc
October 2022	May 2022	April 2023	Nov 2022 - 70B	August 2023	Apr 2023 - 70B
			Dec 2022 70B		Sep 2022 - 234B
			May 2022 - 234B		
February 2023		June 2023		October 2023	
Initial	Recalc	Initial	Recalc	Initial	Recalc
November 2022	June 2022	May 2023	Jan 2023 - 70B	September 2023	May 2023 - 70B
December 2022			June 2022 - 234B		Oct 2022 - 234B
March 2023		July 2023		November 2023	
Initial	Recalc	Initial	Recalc	Initial	Recalc
January 2023	July 2022	June 2023	Feb 2023 - 70B	October 2023	Jun 2023 - 70B
February 2023			July 2022 - 234B		Nov 2022 - 234B
April 2023		August 2023		December 2023	
Initial	Recalc	Initial	Recalc	Initial	Recalc
March 2023	Aug 2022 - 70B	July 2023	Mar 2023 - 70B	November 2023	Jul 2023 - 70B
	Sep 2022 - 70B		Aug 2022 - 234B		Dec 2022 - 234B
	Oct 2022 - 70B				

- EIM Services Bill Schedule for the remainder of 2023
- Monthly EIM Services Bills eventually will include four market months:
 - T+9B Initial
 - T+70B Recalc
 - T+234B Rerun
 - T+446B Rerun
- BPA will begin receiving T+446B Reruns in Feb 2024.

New Sub-Allocated EIM Charge Codes

Flexible Ramping Charge Codes

Flexible Ramping Charge Codes

GRID Modernization

- Initially, these charges were not suballocated as they were thought to be relatively small, and the positive/negative amounts would roughly net out.
- They were rolled into the rate case revenue requirement; however, they were not forecast in BP-22 as there was no substantial basis to do so.
- As part of the Phased In Approach to evaluating EIM Charge Codes, a review of preliminary data took place in BP-24 to determine if any changes were necessary.

BP-22

Begin Charge Code Allocation and Modify Existing Rate Structures

BP-24

Review Preliminary Data to Modify Charge Code Allocation and/or Rate Structures

BP-26

Utilize Two Years of Data to Complete Refinement of Charge Code Allocation and/or Rate Structures

Flexible Ramping Charge Codes

A blue arrow pointing to the right, containing the text "GRID Modernization" in white.

- Flexible Ramping Charge Codes
 - EIM Entity Scheduling Coordinators are billed costs to fund resources to address future interval forecast ramp needs (interchange schedule ramps, change in net load forecast) and uncertainty (net load forecast error).
 - Payments to resources represents the opportunity cost of awarding flexible ramping, so prices are marginal or the delta between resource's bid and Locational Marginal Price.
 - Specifically:
 - 7070 – Flexible Ramp Forecast Movement Settlement
 - 7076 – Flexible Ramp Forecast Movement Allocation
 - 7077 – Daily Flexible Ramp Up Uncertainty Award Allocation
 - 7087 – Daily Flexible Ramp Down Uncertainty Award Allocation
 - 7078 – Monthly Flexible Ramp Up Uncertainty Award Allocation
 - 7088 – Monthly Flexible Ramp Down Uncertainty Award Allocation
 - [Link to BPA General Rate Schedule Provisions: Appendix C.Final Proposal Transmission Rates Schedules and GRSPs.BP-24-A-02-AP02 \(bpa.gov\)](#)

BP-24 Data Evaluation

GRID Modernization 

- When reviewing the available data for BP-24, it was apparent that the charges were larger than initially expected and it was determined that those charges should be passed through to customers.
- Based on this information, they will be allocated to Transmission Customers based on EIM Measured Demand, which is in line with other entities.

Changes to Sub-allocations

GRID Modernization 

- Starting October 1, 2023, BPA will begin sub-allocating the Flex Ramp charge codes
- These will appear on the EIM Services Bills similar to the remainder of the EIM Charge Codes
- For trade dates prior to October 1, 2023, customers will not receive sub-allocations for those charge codes

Impacts of CAISO Software Defect

March 6-22

CAISO Software Defect – Trade Dates 3/6-3/22/2023



GRID Modernization

- What was the issue?
 - CAISO software patch deployed on 3/6 had unintended impacts
 - Hour-Ahead Scheduling Process (HASP) advisory awards were incorrectly used to set the Fifteen Minute Market (FMM) binding awards, when the base schedule at T-40 or the Pre-hour tag values were higher than the T-75 base schedule values
- Trade Dates: 3/6 (Trade Hour 18) – 3/22 (Trade Hour 22)
- Summary of impact
 - All WEIM Entities
 - Affects interchange – Transaction IDs (TIDs – both imports/exports) and mirrors
 - Prices were impacted and adjusted consistent with CAISO business practices
 - FMM Awards during market runs were based on the HASP advisory awards at T-75
 - Charge Code amounts on the CAISO invoice were calculated using the FMM Awards that were based on the HASP advisory awards
 - Imbalance: 64600 (FMM), 64700 (RTD)
 - Real-Time Market Offsets: 64770 (Imbalance Energy), 67740 (Congestion) and 69850 (Marg. Losses)
 - Amount CAISO settled with BPA varied more than usual from what BPA suballocated to its Transmission Customers for 64600 and 64700
 - BPA sub-allocated based on tag values which did not match the FMM Awards from CAISO used in the market solution

Steps taken to resolve issue



GRID Modernization

- How was the issue identified?
 - BPA contacted CAISO re: why the Net Scheduled Interchange in FMM was different than the base schedule for 3/19
 - CAISO identified the software issue themselves on 3/21
- What steps were taken to resolve?
 - BPA requested price and volume corrections
 - CAISO corrected prices for trade dates 3/14 – 3/22
 - BPA reviewed the price corrections applied for the affected intervals between 3/14 – 3/22
 - For the T+70B Recalc Settlement Statements, CAISO set the FMM binding Awards to T-40 Base Schedules for the impacted non-participating, non-market optimized Intertie resources
 - CAISO held a workshop on this specific topic for all WEIM entities indicating that this fix would be applied EIM-wide and applied in any similar future instances
 - BPA submitted disputes for the T+70B Recalc Settlement Statements as the fix was explained but only implemented immediately prior to the issuance of the T+70B Recalc Settlement Statements
 - CAISO denied BPA's disputes
 - After more fully reviewing the fix as applied on the T+70B Recalc Settlement Statements, BPA determined that the fix achieved nearly all of the intended results, and decided not to pursue further with the CAISO based on observed settlements statements received to date

Charge Code Results

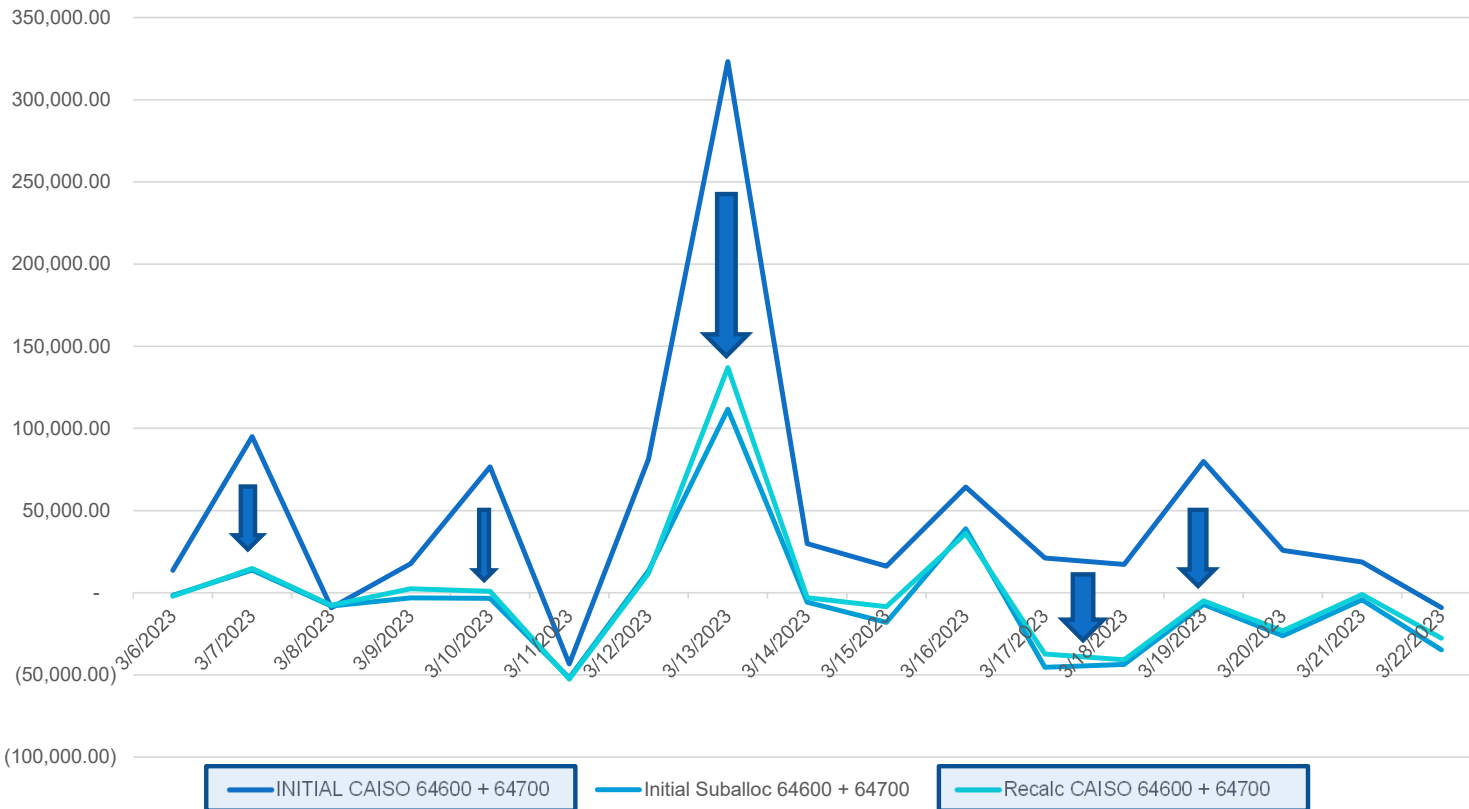
GRID Modernization

- 64600 (FMM Imbalance Energy) and 64700 (RTD Imbalance Energy)
 - Initial suballocation to BPA customers was not impacted by software defect as BPA suballocates based on tags
 - The fix that the CAISO implemented helped BPA reach a result closer to what the settlements should have been, but did not resolve the issue entirely
- Real-time Market Offsets were also impacted when CAISO set the FMM binding Awards to T-40 Base Schedules, resulting in changes to the T+70B values

Charge Codes 64600 and 64700

GRID Modernization

CAISO Settlement (Initial and Recalc) vs. BPA Suballocation
Charge Codes 64600 and 64700 Combined

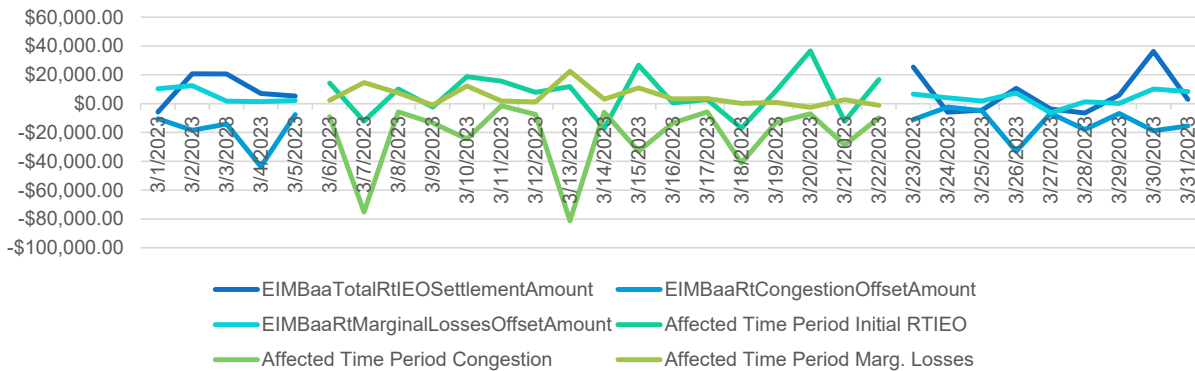


- Initial CAISO Settlement to BPA was a net charge
- Initial Suballocation was a credit
- Recalc Settlement brought BPA settlement closer to sub-allocated values for 64600 and 64700
- The changes made by CAISO impacted real-time market offsets

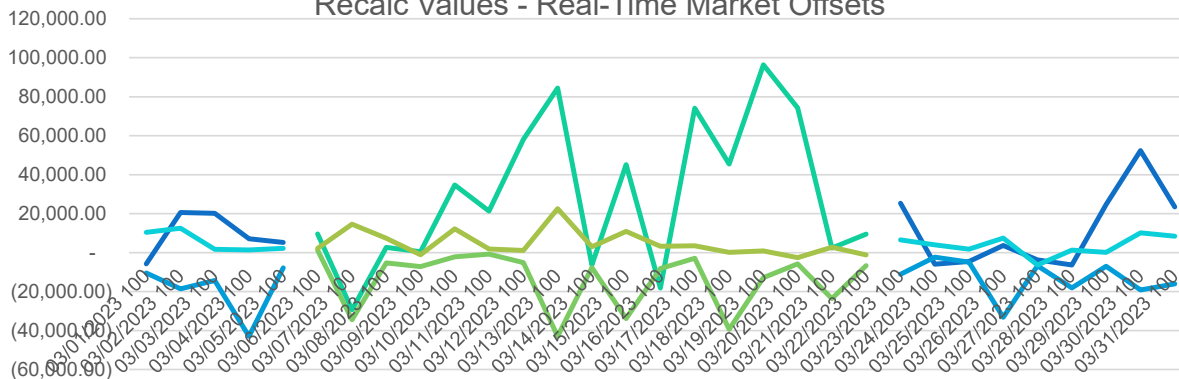
Effect on Real-Time Market Offsets

GRID Modernization

Initial Values Real-Time Market Offsets



Recalc Values - Real-Time Market Offsets

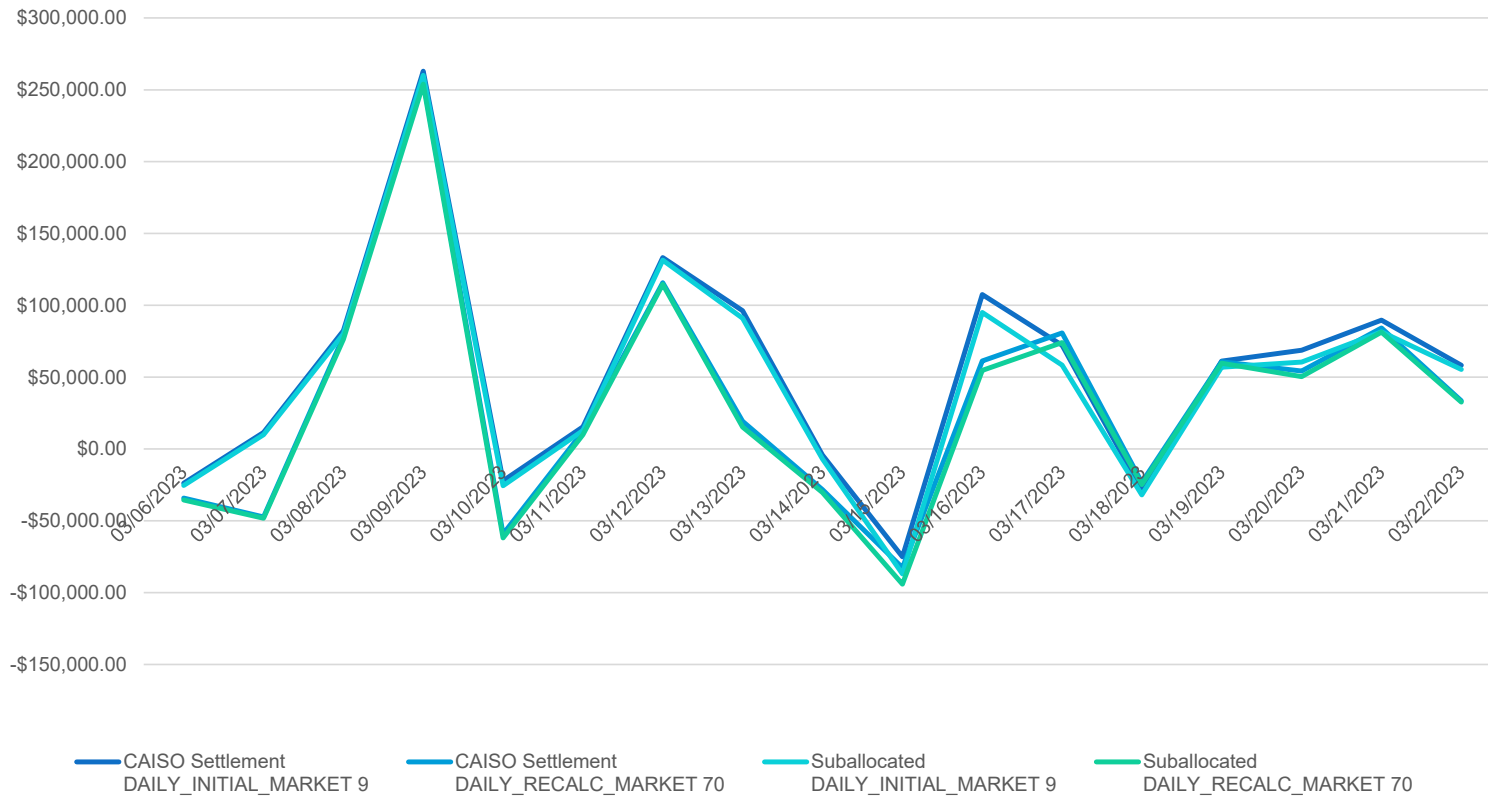


- Real-time Imbalance Energy Offset is calculated for each BAA and is impacted by imbalance and subtracting out the real-time congestion and marginal loss costs
- Modifications to the FMM binding schedule values impacted the real-time market offset charge codes
- Conclusions:
 - Initial values included significant credits for congestion that were subsequently reduced at Recalc
 - Losses were not dramatically affected
 - Imbalance Energy most affected, noticeably higher values – as was seen in the March 2023 Recalc values on customer bills

Looking across all EIM Charge Codes

GRID Modernization

CAISO Settlement vs. BPA Suballocation All EIM Charge Codes



Detailed Data Files Frequency Discussion

Detailed Data Files Frequency Discussion

The logo for GRID Modernization, featuring the text "GRID Modernization" in a white sans-serif font inside a blue arrow pointing to the right.

- Customers requested a workshop prior to BPA changing the frequency of distribution of Detailed Data Files (DDFs)
- BPA is proposing biweekly/semi-monthly frequency for issuing T+9B and T+70B related DDFs
- Values in the preliminary* DDFs may differ from final DDFs
 - Meter data
 - Load meter data can change throughout the month
 - Generating resources – meter data for DDFs (and EIM Services Bills) is T+7B
 - Software defects
 - After validations, may identify missing/incorrect data
- Preliminary DDFs will not have been validated by TSRE staff prior to distribution to BPA's customers

*Preliminary in this context references the first set of DDFs issued some time in the middle of the month

Questions?

BPA Contacts for EIM

GRID Modernization 

Topic / Question Area	Email and Phone	Email (cc)
EIM Services Bill (EESC)	EESCSettlements@bpa.gov or 503-230-EIM1	gridmod@bpa.gov and Power or Transmission Account Executive
Customer Billing		
Accts Payable/Receivable (Payment/Refund Questions)	ar@bpa.gov & accountpayable@bpa.gov	
Metering	mdm@bpa.gov	
Customer Portal	customerportal@bpa.gov	
BPA Outage Office	Planned outages: bpaoutage@bpa.gov Unplanned: Contact BPA's Generation Dispatcher	
After-hours Outage	Contact BPA's Generation Dispatcher	

Closing Remarks

Appendix

Detailed Impacts

A blue arrow pointing to the right, containing the text "GRID Modernization" in white.

- Subset of interchange positions – TIDs and mirrors
- For the impacted non-participating intertie resources, set the FMM binding schedules to T-40 when the following two conditions are met:
 1. HASP advisory < T-40 Base Schedule and
 2. FMM Binding Schedules 1, 2, 3 and 4 is same as HASP Advisory
- The result was a shift of any imbalance from FMM (64600) to Real-Time (64700) for affected intervals