



# Settlement User Group

February 1, 2023

10:00 a.m. – 11:00 a.m. (Pacific Time)

Web Conference Information	Conference Call Information
<p>Web Address: <a href="https://caiso.webex.com/meet/settlementuser">https://caiso.webex.com/meet/settlementuser</a></p> <p>Meeting Number: 961 854 046</p> <p>Audio connection instructions will be available after connecting to the web conference. When prompted, select "Call me" and enter your phone number you will use during the call.</p>	<p>US Toll Free: 1-844-621-3956</p> <p>US Toll : 1- 650-479-3208</p> <p>Access Code: 961 854 046</p>

Calls and webinars are recorded for stakeholder convenience, allowing those who are unable to attend to listen to the recordings after the meetings. The recordings will be publically available on the ISO web page for a limited time following the meeting. The recording, and any related transcriptions, should not be reprinted without the ISO's permission. Hyperlinks in blue in PDF version.

The recording will be posted on our website and be available for a short period of time until February 15<sup>th</sup>, 2023. Please mute your phone

while the discussion is going on in order to eliminate background noise, to unmute press and hold the spacebar to temporarily unmute, double mute. Calls are structured to stimulate an honest dialogue and engage different perspectives.

To ask a question after each topic, unmute yourself before asking your question, or enter question on the chat

please state your name and affiliation. Thank you.



[mute](#)

# Settlement User Group Agenda

Wednesday, February 1, 2022

10:00 a.m. – 11:00 a.m. (Pacific Time)

Time	Topic	Presenter
▪ 10:00 – 10:02	▪ Welcome and Introduction	▪ Massih Ahmadi
▪ 10:02 – 11:00	▪ Settlements <ul style="list-style-type: none"><li>▪ Pre-Summer Settlements Release 2023</li><li>▪ Market Simulation Calendar</li><li>▪ Settlement of AS SOC Constraint</li><li>▪ Proposed Revision Requests Update</li><li>▪ Training Update</li></ul>	<ul style="list-style-type: none"><li>▪ Massih Ahmadi</li><li>▪ Assad Al-Baijat</li><li>▪ Tyler DuBeshter</li><li>▪ Massih Ahmadi</li><li>▪ Massih Ahmadi</li></ul>

# 2023 Pre-Summer Settlements Release

- Project scope with direct settlement impact, **tentative**
  - Ancillary Service Start of Charge Constraint – *retro activation (9/20/22)*
  - Energy Storage Enhancements Phase 1 Track 1 – Ancillary Services & Exceptional Dispatch
  - WEIM Resource Sufficiency Evaluation Enhancements Phase 2 Track 1
  - Hybrid Resources Phase 2C
- Non-project scope: *to be communicated 2/27*
- Anticipated targets
  - Tech doc posting:
    - A/S SOC & Hybrid Phase 2C: **2/13**
    - Energy Storage & WEIM: **2/20**
  - 1<sup>st</sup> draft config file + release component summary: **2/27**
  - Prod deployment: **5/31**
  - Prospective activation: **6/1**

# Parallel Operation 2023 Calendar (STAGE)



## Parallel Operation 2023 Calendar (STAGE) Feb 01, 2023 through March 31, 2023

Calendar Day	Day	CMRI T+1B	Submit Meter Data by T+2B 10:00 for T+9B	Publish Initial Statement T+5B T+9B	Submit Meter Data by T+5B 18:00 T+70B	Publish Recalc Statement T+8B T+70B	Publish Market Invoice
30-Jan-23	Monday						
31-Jan-23	Tuesday						
01-Feb-23	Wednesday						
02-Feb-23	Thursday						
03-Feb-23	Friday	2-Feb					
04-Feb-23	Saturday						
05-Feb-23	Sunday						
06-Feb-23	Monday		2-Feb				
07-Feb-23	Tuesday						
08-Feb-23	Wednesday	7-Feb					
09-Feb-23	Thursday		7-Feb	2-Feb	2-Feb		
10-Feb-23	Friday	9-Feb					
11-Feb-23	Saturday						
12-Feb-23	Sunday						
13-Feb-23	Monday						
14-Feb-23	Tuesday			7-Feb	7-Feb	2-Feb	
15-Feb-23	Wednesday	14-Feb					
16-Feb-23	Thursday		14-Feb	9-Feb	9-Feb		
17-Feb-23	Friday	16-Feb		Monthly Initial 02-Feb - 09-Feb		7-Feb	Daily Initial 02-Feb; Initial 07-Feb; Initial 09-Feb Monthly Initial 02-Feb - 09-Feb
18-Feb-23	Saturday						
19-Feb-23	Sunday						
20-Feb-23	Monday						
21-Feb-23	Tuesday		16-Feb				
22-Feb-23	Wednesday	21-Feb		14-Feb	14-Feb	9-Feb	
23-Feb-23	Thursday		21-Feb			Monthly Recalc 02-Feb - 09-Feb	Daily Recalc 02-Feb; Recalc 07-Feb; Recalc 09-Feb Monthly Recalc 02-Feb - 09-Feb
24-Feb-23	Friday	23-Feb		16-Feb	16-Feb		
25-Feb-23	Saturday						
26-Feb-23	Sunday						
27-Feb-23	Monday		23-Feb	Monthly Initial 14-Feb - 16-Feb		14-Feb	Daily Initial 14-Feb; Initial 16-Feb Monthly Initial 14-Feb - 16-Feb
28-Feb-23	Tuesday			21-Feb	21-Feb		
01-Mar-23	Wednesday	28-Feb				16-Feb	
02-Mar-23	Thursday		28-Feb	23-Feb	23-Feb	Monthly Recalc 14-Feb - 16-Feb	Daily Recalc 14-Feb; Recalc 16-Feb Monthly Recalc 14-Feb - 16-Feb
03-Mar-23	Friday	2-Mar				21-Feb	



California ISO

# Settlement of AS SOC Constraint

MSDC – Tyler DuBeshter

# Real Time BCR Example for a Battery

5M Interval	164	165	166	167	168	~	235	236	237	238	239	240
AS SOC Constraint	1	1	1		1	~	1	1				
Dispatch (MW)	-1	-1	-1	0	-1	~	1	1	0	1	1	1
Bid (Chg)	-100	-100	-100	-100	-100	~	-100	-100	-100	-100	-100	-100
Bid (Gen)	100	100	100	100	100	~	100	100	100	100	100	100
Price	6	-1	0	1	5	~	5	5	5	150	15	150
BCR Eligibility	N	N	N	Y	N	~	N	N	Y	Y	Y	Y
Cost	100	100	0	-	100	~	100	100	-	100	100	100
Revenue	0	1	0	-	0	~	5	5	-	150	15	150
Cost-Revenue	100	99	0	0	100		95	95		-50	85	-50
Impacted	Y	Y	N	N	Y	~	Y	Y	N	N	N	N

When AS SOC Constraint Flag present, battery would not get BCR when Cost > Revenue

- Resource would otherwise be eligible for \$85 to \$100 BCR payment in intervals 164-236
- Resource in Interval 238,240 cost < revenue, indicating a surplus, flows in BCR regardless
- Resource in Interval 239 cost > revenue and AS SOC Constraint not present, therefore eligible for BCR

- It is assumed that the Battery performs as expected, therefore Persistent Deviation and Performance Metrics do not apply

# AS SOC Constraint

- The AS SOC Constraint BCR eligibility flag will be by interval
- A secondary indicator will evaluate cost vs revenue on an interval basis:
  - If  $RT \text{ Bid Cost} > RTM \text{ Market Revenue}$  (shortfall), set to 0
  - If  $RT \text{ Bid Cost} < RTM \text{ Market Revenue}$  (surplus), no change
- Retro to 9/20/22

# PRR and BPM Updates

To view all details for the PRRs in the [BPM Change Management application](#)

PRR	PRR Title	Stage
1476	Emergency PRR - Updated multiple BPM Configuration guides to accommodate configuration issue related to PTO Vernon leaving CAISO Market mid-month	Final
1481	Emergency PRR - Settlement configuration changes from market sim review to support Hybrid Resources Phase 2B initiative and ensure non-hybrid resources selecting ISO forecast receive forecast fee	Final



# ISO Training Schedule

Training Course	Date and time
ISO Workshop: Introduction to ISO Markets	March 7 and 8 9am – 12pm PPT
ISO Workshop: Market Transactions	March 14 and 15 9am – 12pm PPT
ISO Workshop: ISO Settlements	March 21 and 22 9am – 12pm PPT

Are you looking for more training?

The ISO Learning Center has computer based training available for lots of topics. Check out the Learning Center: <http://www.caiso.com/participate/Pages/LearningCenter/default.aspx>



# Next SUG Meeting: February 15<sup>th</sup>, 2023 at 10:00 A.M

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# Settlement User Group Calendar 2023

January						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

April						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

May						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

June						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

July						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

# RC West Initial and Recalculation Statement and Invoice Published January 3, 2023

- RC West has published the Reliability Coordinator (RC) Services Initial and recalculation statements and invoices for the period provided below to the Market Results Interface-Settlements (MRI-S) and the Secure File Transfer Protocol (SFTP) server on **Jan. 3, 2023**.

Statement	Bill Period
RC Services Initial	1/1/2023 - 12/31/2023
RC Services Recalculation	1/1/2022 - 12/31/2022

- The above RC Services statement and invoice files can be retrieved in MRI-S under the Reliability Coordination tab by selecting RC Services Initial, RC Services Recalc, or RC Services Invoices as the file types and setting the post date to Jan. 3, 2023.
- Statement and invoice file sets are available on MRI-S and SFTP for 45 calendar days after publication. RC Customers are advised to download the files for validation purposes and future reference.
- Payments for the invoices are due no later than 10 a.m. (Pacific Time) on **Feb. 2, 2023**.

# RC Services

## RC Services

- RC Info Submittal Window – 09/01/2022 – 09/30/2022
  
- Informational Statement:
  - **Publishes: 10/31/2022**
  - Customer Review Period Resubmittal Window: 11/01/2022 – 11/30/2022
  
- Statement and Invoice:
  - 2023 Initial & 2022 Recalculation Publishes: 01/03/2023
  - Payment Due: Thursday, 02/02/23
  
- RC West Payment Calendar:  
<http://www.caiso.com/Documents/RCWestAnnualPaymentsCalendar.pdf>

## HANA Services

- No updates

## Settlement References

- Unscheduled Directed Recalculation Statements and Invoices – presented Jul 20
- NERC/WECC Invoice – presented Sep 14
- Knowledge Articles
- Ways to Participate in Settlements

# Unscheduled Directed Recalculation Statements and Invoices

- The California ISO will publish unscheduled directed recalculation settlement statements under run type Daily Rerun Market on July 25, 2022 for the trading days April 1, 2017 thru July 30, 2018. The statements will reflect the outcome of updated wheeling access charge rates under Federal Energy Regulation Commission (FERC) order ER-17-998.
- A calendar reflecting the publication date, review period and invoicing is available on the ISO website at <http://www.caiso.com/market/Pages/Settlements/Default.aspx> under the *Retroactive settlements > Recalculation settlements > Unscheduled directed* subheading.
- The California ISO has posted the following updated wheeling access charge rates effective as noted below on its [settlements webpage](#), under the Transmission access charge rates/Wheeling rates/Wheeling rates 2017 and 2018 subheadings.

# Unscheduled Directed Recalculation Statements and Invoices

- These rates will be included in the unscheduled directed recalculation settlement calculation of transmission access charge transactions starting on the following trade dates:

Wheeling Access Rates	FERC Order	FERC Order Date
Rates effective Apr. 21, 2017	DATC Path 15, LCC 2017 TRR information under Docket Number ER17-998	May. 26, 2022
Rates effective Jan. 1, 2018	DATC Path 15, LCC 2017 TRR information under Docket Number ER17-998	May. 26, 2022
Rates effective Ju1. 22, 2018	DATC Path 15, LCC 2017 TRR information under Docket Number ER17-998	May. 26, 2022

- Disputes may be submitted in accordance with section 11.29.8.4.8 of the ISO Tariff. Adjustments for any valid disputes related to incremental data changes will be reflected on a subsequent recalculation settlement statement.
- The market notice can be found in the <http://www.caiso.com/dailybriefing/Pages/default.aspx>



# NERC/WECC for AY 2023

- The California ISO published the final North American Electric Reliability Corporation/Western Electricity Coordinating Council (NERC/WECC) charge statements and invoices for assessment year 2023 to the Market Results Interface-Settlements (MRI-S) and the Secure File Transfer Protocol (SFTP) server on Dec. 1, 2022. Statement and invoice files can be retrieved in MRI-S by setting the post date to 12/01/2022. Statement and invoice file sets are available on MRI-S and SFTP for 45 calendar days after publication. Scheduling coordinators (SCs) are advised to download the files for validation purposes and future reference.
- The charges appear on the NERC/WECC final statements and invoices under charge code (CC) 6490, with Jan. 1, 2021 as the trade date.
- Payments for the final NERC/WECC charges are due by 10 a.m. (Pacific Time) on Dec. 22, 2022, pursuant to ISO Tariff section 11.20.5.
- The final NERC/WECC charge rate for assessment year 2023 is provided below for scheduling coordinators' information pursuant to Section 11.20.4 of ISO Tariff.

Item	Value	Unit
Total NERC/WECC Charge for Assessment Year 2023	9,044,037.00	\$
Total NERC/WECC Metered Demand for Calendar Year 2021	216,037,246.08	MWh
Final NERC/WECC Charge Rate for Assessment Year 2023	0.041863323	\$/Mwh

# NERC/WECC Preliminary Statements and Invoices for AY 2023 Published

- The California ISO has published preliminary NERC/WECC statements and invoices for 2023 NERC/WECC charges to the Market Results Interface-Settlements (MRI-S) and the Secure File Transfer Protocol (SFTP) server on August 15, 2022. The charges for assessment year 2023 appear on the NERC/WECC Initial statement under charge code (CC) 6490, with January 1, 2021 as the trade date.
- The preliminary NERC/WECC charge rate for assessment year 2023 is provided below for scheduling coordinators' information pursuant to ISO Tariff section 11.20.4.

Item	Value	Unit
Total NERC/WECC Charge for Assessment Year 2023	10,390,938.72	\$
Total NERC/WECC Metered Demand for Calendar Year 2021	216,037,246.08	MWh
Preliminary NERC/WECC Charge Rate for Assessment Year 2023	0.048097904	\$/MWh

- Payments for the preliminary NERC/WECC charges are due by 10:00 a.m. (Pacific Time) on September 14, 2022, pursuant to ISO Tariff section 11.20.5.
- On May 9, 2022, the ISO posted NERC/WECC information files to the MRI-S and the SFTP server in accordance with the approved tariff provisions for review by scheduling coordinators.

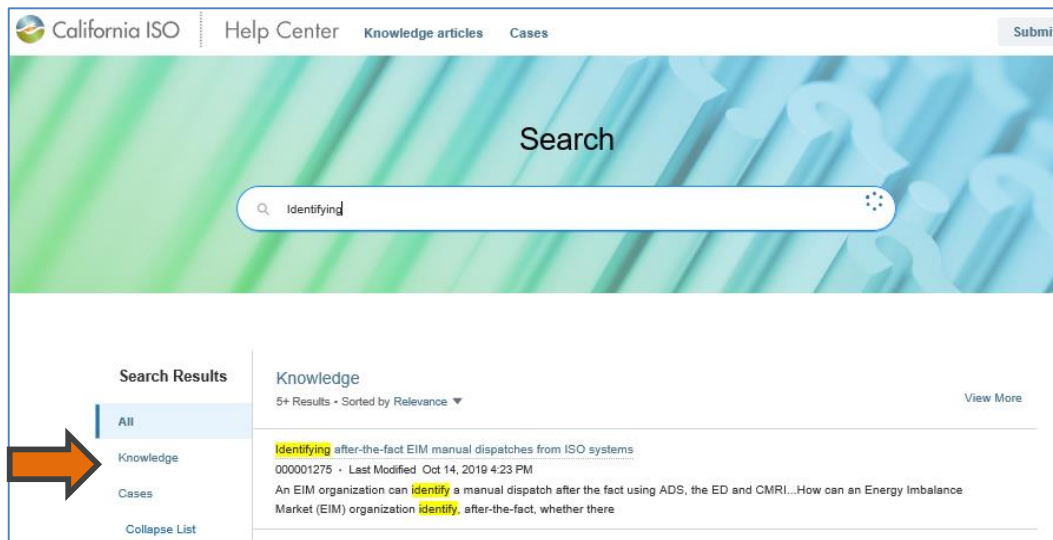
# Knowledge Articles

CAISO has posted **Knowledge Articles** for FAQs in CIDI.

To access the articles in CIDI, you either:

**Option 1:** Type in the keyword “**Identify**” in the search field to pull up the article, or

**Option 2:** Click on the **Knowledge Articles** tab, and then click the **Settlements and Metering** category link to pull up a list of the Settlements related articles.



California ISO Help Center Knowledge articles Cases Submit a

Search

Identifying

Search Results Knowledge 5+ Results • Sorted by Relevance View More

All Knowledge Cases Collapse List

**Identifying** after-the-fact EIM manual dispatches from ISO systems  
000001275 • Last Modified Oct 14, 2019 4:23 PM  
An EIM organization can **identify** a manual dispatch after the fact using ADS, the ED and CMRI...How can an Energy Imbalance Market (EIM) organization **identify**, after-the-fact, whether there

## Posted Knowledge Articles to date:

- RC rate location
- RC Informational Statement
- RC services charge
- 2019 prorated RC charge
- Payment calendar
- ED-DPMIN
- After-the-Fact EIM Manual Dispatches from ISO systems
- Validate Mitigated prices in DA, RTPD (FMM) and RTD
- Calculation of meter data for TG resources
- Pricing node (Pnode) price used for CRR Settlement
- In relation to the Day-Ahead Nodal Pricing Model, the California ISO has posted a Market Analysis report to its website for market participant review. [Nodal Pricing Model Report v1](#)

# Ways to participate in settlements

- Visit the Settlements page
  - <http://www.caiso.com/market/Pages/Settlements/Default.aspx>
- Attend web conference meetings
  - Settlement User Group (SUG) bi-weekly meetings
    - Release User Group
    - Market Sim Conference Calls
    - Initiative status with settlement updates
    - <http://www.caiso.com/StakeholderProcesses/>
    - [System change with settlement updates on independent releases](#)
- BPM Change Management monthly web meeting
  - Settlement and Billing BPM status updates
  - <http://bpmcm.caiso.com/Pages/default.aspx>
  - <http://www.caiso.com/rules/Pages/BusinessPracticeManuals/Default.aspx>
  - <http://www.caiso.com/Documents/ISO-AcronymList.pdf>

# Settlement User Group

Thank you for participating in our call

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This is the last slide to this presentation