



California ISO

Settlement User Group

April 10, 2024

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

Web Conference Information	Conference Call Information
<p>Web Address: https://caiso.webex.com/meet/settlementuser</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>
<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.</p> <p>The recording will be posted on our website and be available for a short period of time until April 24th, 2024. 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.</p> <p>To ask a question after each topic, unmute yourself before asking your question, or enter question on the chat</p> <p style="text-align: center;">please state your name and affiliation. Thank you.</p>	



[mute](#)

Settlement User Group Agenda

Wednesday, April 10, 2024

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">▪ Summer 2024 Release▪ Market Sim Calendar▪ Walkthrough example of AS SOC▪ Settlements Upgrade Project▪ PRR/BPM▪ DAME and EDAM Draft Tech Docs	<ul style="list-style-type: none">▪ Massih Ahmadi▪ Assad Al-Baijat▪ Anthony Stalter▪ Justin Wong▪ Massih Ahmadi▪ Massih Ahmadi

2024 Summer Settlements Release

- 2 Projects with direct settlement impact
 - **Transmission Exchange Agreement Renegotiation (TEA) from Western:**
 - **Transmission Service and Market Scheduling Priorities Phase 2 (TS+MSP)**
- 8 Non-Projects with direct settlement impact
 - **A/S SOC Retro Enhancement**
 - **Resolve WEIM Pumped Storage issue**
 - **Assistance Energy Transfer (AET)**
 - **Change to RT Congestion Pre-Calculation guide**
 - **Remove exclusion of NGR-REM from RAIM PC**
 - **Split Acquired Rights to two BDs**
 - **Hybrid TG → New item**
 - **RT Energy PC → New item**

2024 Summer Settlements Release

- 2 new non-project scope:
 - **Hybrid TG**
 - It was found that Hybrid TG resource attribute combination was being incorrectly filtered, leading to incorrect settlement for UIE. Similar filters outside of UIE require updates to filter Hybrid TG resources correctly as well, but only financial impact is to Hybrid TGs with UIE.
 - Retro effective start date from TD 07/01/2023
 - **RT Energy PC**
 - BAANodaIETSRTotalFMMIIEQuantity Q'AA'Qpmdhcif and BAANodaIETSRTotalRTDIIEQuantity Q'AA'Qpmdhcif Reportable update to reflect Balancing Authority Area reporting rather than SC reporting.
 - Retro effective start date from TD 02/01/2021

2024 Summer Settlements Release

- Release Scope:
 - 1st draft tech docs targeting: **2/12**, *TEA and TS MSP published already* → *Completed*
 - 1st draft config output file + release component summary posted: **3/4** → *Completed*
 - 2nd draft config output file + updated release component summary targeting: **3/27** → *Completed*
- BPM/PRR: **Posted on 3/25**
 - 8 PRRs posted
 - Scheduled to be discussed in **4/23 & 5/21** BPM calls
 - External notification was sent on 3/25 at 3:51pm
- Settlements Market Sim start:
 - TSMSP2: Start Date **4/15 with Start TD 4/16 & 4/18**
 - TEA: **TBD**
 - A/S SOC: Start Date **4/15 with Start TD 4/16 & 4/18**
- Pre-prod configuration output file + release artifacts target: **5/22**
- Anticipated prod deployment: **5/29**
- Prospective activation: **6/1**

Market Simulation Summer 2024 Calendar (MAP STAGE)



Market Simulation Summer 2024 Calendar (MAP STAGE) April 15, 2024 through May 03, 2024

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



Ancillary Service State of Charge (AS SOC) Constraint Example

Settlement User Group

April 10, 2024

Market Settlement Design and Configuration (MSDC)

Background – AS SOC Retro Enhancement

- **Legal Obligation:**
 - Per Tariff Section 11.6.6, the ISO is required to detect when storage resources are uneconomically dispatched to have sufficient state of charge (SOC) to meet Ancillary Service schedules and make the storage resource ineligible for RTM Bid Cost Shortfalls.
- **Market Action:**
 - Because all advisory intervals in a market run may drive an uneconomical dispatch of the storage resource in the financially-binding interval when the storage resource has an Ancillary Service schedule within the market horizon, the A/S SOC constraint should also indicate these uneconomical dispatches that were necessary to meet future Ancillary Service schedules.
- **Settlement Issue:**
 - When the Energy Storage Enhancements Track 1 project went to production on July 1, 2023, the logic for the time index for the State-of-Charge (SOC) term in the A/S SOC constraint formulation changed to the first advisory interval instead of the first binding interval.
 - However, the indication of an uneconomic dispatch related to an A/S SOC constraint did not also change.

Resolution

- Configuration updates to RTM Net Amount Pre-Calculation:
 1. Remove AS Awards check from settlement configuration
 2. Remove the below Charge Types from RTM Net Amount Pre-Calculation:
 - ResourceASSOCConASRevenueAmount rm dhcif
 - BAResourceRTMASSOCConASRevenueAmount BrtuT'I'M'F'S'm dhcif
- Updates to the following AS SOC Bill Determinants to allow for zeroes:
 - Resource5mAncillaryServiceSOCConstraintFlag rm dhcif
 - Resource15mAncillaryServiceSOCConstraintFlag rm dhc
- Retroactive effective date: 7/1/2023
- Planned date to be fixed: 5/29/2024 (summer release)

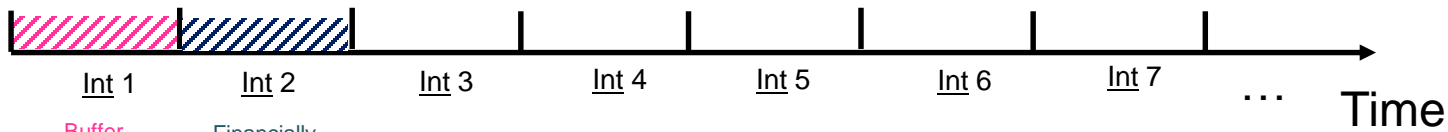


AS SOC Example: RESOURCE_ABC

Trade Date *7/2/23*, Trade Hour 5

Intervals

RTPD



Buffer Interval

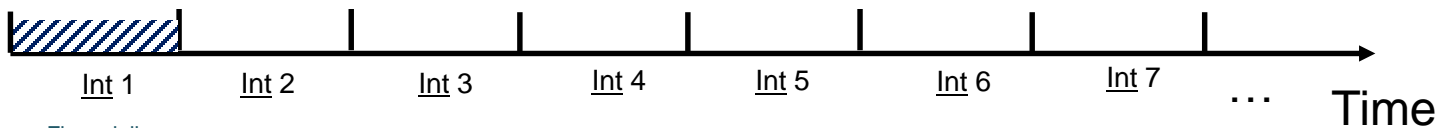
Financially-binding Interval

Only interval susceptible to being flagged in this optimization

Advisory intervals

(where we check for binding ASSOC constraints with appropriate AS awards -- Cannot be flagged in this optimization)

RTD



Financially-binding Interval

Real Time BCR Example for a Battery

RT AS SOC Change Example for RESOURCE_ABC													
Trade Date	July 2, 2023	Trade Hour 5											
	5M Interval	INT49	INT50	INT51	INT52	INT53	INT54	INT55	INT56	INT57	INT58	INT59	INT60
Existing	RSRC_5M_RTM_AS_SOC@FLAG												
Update	RSRC_5M_RTM_AS_SOC@FLAG	1	1	1	1	1	1	1	1	1	1	1	1
Existing	RSRC_15M_AS_SOC_CONST_FLAG	1			1								
Update	RSRC_15M_AS_SOC_CONST_FLAG	1			1			0			0		
3	Advisory	Y			Y								
4	Advisory	Y			Y								
5	Advisory	Y											
6	Advisory												
Existing	RSRC_5M_AS_SOC_CONST_FLAG	0	0	0	0	0	0	0	0	0	0	0	0
Update	RSRC_5M_AS_SOC_CONST_FLAG	1	1	1	1	1	1	1	1	1	1	1	1
4	Advisory		Y	Y	Y						Y	Y	Y
5	Advisory	Y								Y			
6	Advisory								Y				
7	Advisory				Y			Y					
8	Advisory			Y			Y						
9	Advisory					Y							
10	Advisory							Y	Y	Y	Y	Y	
Existing	BA_BCR_INELIG@FLAG	1	1	1	1	1	1	0	0	0	0	0	0
Update	BA_BCR_INELIG@FLAG	1	1	1	1	1	1	1	1	1	1	1	1

AS SOC and BCR Flag Impacts

Current				
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE2	INTERVAL_TOTAL
7/2/2023	DAILY_RECALC_MARKET	RSRC_15M_AS_SOC_CONST_FLAG	RESOURCE_ABC	27
7/2/2023	DAILY_RECALC_MARKET	RSRC_5M_AS_SOC_CONST_AS_REV@AMOUNT	RESOURCE_ABC	26982.0595
7/2/2023	DAILY_RECALC_MARKET	RSRC_5M_RTM_NET_LESR_ELIG@AMOUNT	RESOURCE_ABC	68966.18407
7/2/2023	DAILY_RECALC_MARKET	RSRC_5M_RTM_AS_SOC@FLAG	RESOURCE_ABC	26

Should be				
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE2	INTERVAL_TOTAL
7/2/2023		RSRC_5M_AS_SOC_CONST_FLAG	RESOURCE_ABC	168
7/2/2023		RSRC_5M_RTM_NET_LESR_ELIG@AMOUNT	RESOURCE_ABC	68966.18407
7/2/2023		RSRC_5M_RTM_AS_SOC@FLAG	RESOURCE_ABC	159

Current				
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE2	INTERVAL_TOTAL
7/2/2023	DAILY_RECALC_MARKET	RSRC_5M_RTM_AS_SOC@FLAG	RESOURCE_ABC	26
7/2/2023	DAILY_RECALC_MARKET	RSRC_5M_HRLY_EOH_SELFS_BCR@FLAG	RESOURCE_ABC	49
7/2/2023	DAILY_RECALC_MARKET	BA_BCR_INELIG@FLAG	RESOURCE_ABC	63

Should be				
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE2	TOTAL_INTERVALS
7/2/2023		RSRC_5M_RTM_AS_SOC@FLAG	RESOURCE_ABC	159
7/2/2023		RSRC_5M_HRLY_EOH_SELFS_BCR@FLAG	RESOURCE_ABC	49
7/2/2023		BA_BCR_INELIG@FLAG	RESOURCE_ABC	181

BCR Financial Impacts

Current						
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE1	ATTRIBUTE2	ATTRIBUTE10L	INTERVAL_TOTAL
7/2/2023	DAILY_RECALK_MARKET	BA_5M_RSRC_RT_TOT_BID_COST@AMOUNT	1234	RESOURCE_ABC	ABC	\$122,183.64
7/2/2023	DAILY_RECALK_MARKET	BA_5M_RSRC_RT_TOT_REVENUE@AMOUNT	1234	RESOURCE_ABC	ABC	\$53,217.46
7/2/2023	DAILY_RECALK_MARKET	BA_5M_RSRC_RT_NET@AMOUNT	1234	RESOURCE_ABC	ABC	\$68,966.18
7/2/2023	DAILY_RECALK_MARKET	BA_RSRC_5M_RTM_AS_SOC_CONST_AS_REV@AMOUNT		RESOURCE_ABC	ABC	848.331336
7/2/2023	DAILY_RECALK_MARKET	BA_5M_RSRC_IFM_AS_REVENUE@AMOUNT		RESOURCE_ABC	ABC	26133.72816
7/2/2023	DAILY_RECALK_MARKET	RSRC_5M_AS_SOC_CONST_AS_REV@AMOUNT		RESOURCE_ABC		26982.0595
7/2/2023	DAILY_RECALK_MARKET	RSRC_5M_RTM_NET_LESR_ELIG@AMOUNT		RESOURCE_ABC		\$68,966.18
7/2/2023	DAILY_RECALK_MARKET	RSRC_5M_HRLY_EOH_SELFBS_BCR@FLAG		RESOURCE_ABC		49
7/2/2023	DAILY_RECALK_MARKET	RSRC_5M_RTM_AS_SOC@FLAG		RESOURCE_ABC		26
7/2/2023	DAILY_RECALK_MARKET	BA_BCR_INELIG@FLAG		RESOURCE_ABC		63
7/2/2023	DAILY_RECALK_MARKET	BAA_BA_5M_RSRC_RT_NET@AMOUNT	1234	RESOURCE_ABC	ABC	\$41,612.13
7/2/2023	DAILY_RECALK_MARKET	BAA_BA_DAY_RSRC_BCR_NET@AMOUNT	1234	RESOURCE_ABC	ABC	\$41,612.18
7/2/2023	DAILY_RECALK_MARKET	BAA_BA_DAY_RSRC_OR_MSS_BCR_STLMT@AMOUNT	1234	RESOURCE_ABC	ABC	(\$41,612.18)
Should be						
TRADE_DATE	BPID	CHARGE_NAME	ATTRIBUTE1	ATTRIBUTE2	ATTRIBUTE10L	INTERVAL_TOTAL
7/2/2023		BA_5M_RSRC_RT_TOT_BID_COST@AMOUNT	1234	RESOURCE_ABC	ABC	\$122,183.64
7/2/2023		BA_5M_RSRC_RT_TOT_REVENUE@AMOUNT	1234	RESOURCE_ABC	ABC	\$53,217.46
7/2/2023		BA_5M_RSRC_RT_NET@AMOUNT	1234	RESOURCE_ABC	ABC	\$68,966.18
7/2/2023		RSRC_5M_AS_SOC_CONST_FLAG		RESOURCE_ABC		168
7/2/2023		RSRC_5M_RTM_NET_LESR_ELIG@AMOUNT		RESOURCE_ABC		68966.18407
7/2/2023		RSRC_5M_HRLY_EOH_SELFBS_BCR@FLAG		RESOURCE_ABC		49
7/2/2023		RSRC_5M_RTM_AS_SOC@FLAG		RESOURCE_ABC		159
7/2/2023		BA_BCR_INELIG@FLAG		RESOURCE_ABC		181
7/2/2023		BAA_BA_5M_RSRC_RT_NET@AMOUNT	1234	RESOURCE_ABC	ABC	(\$5,217.79)
7/2/2023		BAA_BA_DAY_RSRC_BCR_NET@AMOUNT	1234	RESOURCE_ABC	ABC	(\$5,217.79)
7/2/2023		BAA_BA_DAY_RSRC_OR_MSS_BCR_STLMT@AMOUNT	1234	RESOURCE_ABC	ABC	\$0.00

AS SOC Constraint Recap

- Example Shows:
 - Advisory impact to creating an AS SOC Flag indicator for both the Fifteen-Minute Market and the Real-Time Market.
 - 5M and 15M AS SOC Flag changes
 - RSRC_5M_AS_SOC_CONST_FLAG
 - RSRC_15M_AS_SOC_CONST_FLAG
 - RSRC_5M_RTM_AS_SOC@FLAG
 - Settlement impact to BCR allocation amount to the SC of Resource ABC:
 - \$41,612 of BCR with existing configuration, \$0 of BCR with updated configuration



Questions?

Settlements Upgrade Project: CalcLevel Field

California ISO Market Results Interface - Settlements

Settlements Meter Data Reliability Coordination

Statements Publication Status Administration Job Status Exceptions Standing Data

File Type [ALL] SCID [ALL] Run Type [ALL] Trade Date [] Post Date From: 04/01/2024 Post Date To: 04/08/2024

Version [ALL]

Settlements

1 - 20 of 993

SELECT XML	CSV	PDF	SCID	Name	Trade Date	Post Date	Version	External
[ALL]	[ALL]	[ALL]	CISO	CISO-DETERMINANT S-2024040413-DAILY_INITIAL_MARKET-1-APPROVED-20240326	03/26/2024	04/08/2024	1	[ALL]

<BillDeterminant name="TOT_DAY_INTERTIE_REV_ALLOC@PERCENT" calcLevel="6"

- **Impact:** BA and CISO Bill Determinants Files
- **Proposed Change:** Removal of the “calcLevel” Field
- **Market Participant Survey:**

Please respond by Friday, April 19th, 2024, via CIDI Ticket with the subject line “SUP Survey: CalcLevel Field”

- Do MPs use the data provided by this field?
- How do MPs use the data provided by this field?
- What impacts, if any, may the MPs experience should this field be removed?

PRR/BPM for Summer Settlements Release

- We've posted 8 PRRs below for Summer Release:
 - **PRR 1559 for TEA:**
 - BPM - CG PC ETC TOR CVR Quantity_5.9.0a
 - **PRR 1560 for TSMSP:**
 - BPM - PC_Wheel_Export_Quantity_5.6
 - **PRR 1561 for AS SOC Retro:**
 - BPM - PC RTM Net Amount 5.37.1
 - BPM - PC RTM Net Amount 5.38.1
 - **PRR 1562 for WEIM Pump Storage:**
 - BPM - PC Real Time Energy Quantity
 - **PRR 1563 for AET:**
 - BPM - CC 6476 Real Time Assistance Energy Transfer Surcharge 5.1
 - BPM - CC 6479 Real Time Assistance Energy Transfer Allocation 5.1

PRRS for Summer Settlements Release

- **PRR 1564 for RT Congestion:**
 - BPM - PC Real Time Congestion 5.8

 - **PRR 1565 for Split Acquired Rights:**
 - BPM - CG PC RA Availability Incentive Mechanism_5.11

 - **PRR 1566 for Hybrid TG:**
 - BPM - CG CC 6475 Real Time Uninstructed Imbalance Energy Settlement_5.7
 - BPM - CG CC 6636 IFM Bid Cost Recovery Tier1 Allocation_5.5
 - BPM - CG CC 7077 Daily Flexible Ramp Up Uncertainty Award Allocation_5.5
 - BPM - CG PC Spin Non-Spin No Pay Quantity_5.24
 - BPM - CG PC Ancillary Services_5.12
 - BPM - CG CC 7087 Daily Flexible Ramp Down Uncertainty Award Allocation_5.5
-
- Please review “Announcements” section of PRRs for more detail. Here is link to [BPM Library](#).

DAME and EDAM Tier 1 Draft Tech Docs

- Draft Tech Docs:
 - **Tier 1** = Completed: 39 Tech Docs - Posted on 01/16/24
 - **Tier 2** = Completed: 32 Tech Docs - Posted on 03/26/24
 - **Tier 3** = Tech Docs – approximately by 08/26/24
- Location of Tier 2 Draft Tech Docs:
 - ***Release Planning > 2025 releases > Fall 2025 > Fall 2025 settlements release DAME and EDAM tier 2 technical document***
- External notification was sent out to the Settlements User Group on 03/26/24



Next SUG Meeting: April 24th, 2024 at 10:00 A.M



Settlement User Group Calendar 2024

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				

February						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

March						
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31						

April						
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28	29	30				

May						
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June						
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30						

July						
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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				

 Meeting

 Holiday

Settlement User Group

Thank you for participating in our call
