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|  | Settlements & Billing |
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|  |  |
| Configuration Guide:  | RUC Reliability Capacity Up Tier 2 Allocation |
|  |  |
|  |  CC 8807 |
|  |  |
|  | Version 5.0 |

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# Purpose of Document

The purpose of this document is to capture the requirements and design specification for a Settlements Charge Code in one document.

# Introduction

## Background

During the Day Ahead Market, if the scheduled Demand is less than the CAISO Forecast of CAISO Demand, Residual Unit Commitment (RUC) Reliability Capacity Up (RCU) is procured to ensure that enough committed capacity is available and on line to meet the forecasted Demand as well as any forecasted shortfalls of minimum Generation requirements.

RUC RCU Bids (above the minimum Load) may only be submitted if an Energy Bid has also been submitted in the IFM. If a resource is under Resource Adequacy (RA) obligation for a specific amount of capacity, the RA capacity must participate in RUC RCU with a RUC Bid Price of $0/MW. If a RUC RCU Bid is not submitted for the RA capacity, then CAISO will insert a $0/MW proxy bid per hour for the full amount of RA capacity. Non-zero RUC RCU Bids may be submitted for the portion of a resource’s capacity that is not RA capacity. Capacity not pre-dispatched as RMR may also submit non-zero RUC RCU Bids.

Resources that have Compliance Recission due to an FMM capacity range that does not support their DA Energy Schedule plus the Reliabiltiy Capacity Up will be charged at a resource specific RCU No-Pay Penalty Price for the undelivered MW quantity.

RUC RCU payments are the product of Awarded RUC RCU capacity and the RUC RCU Price specified for each PNode. Together, RUC RCU settlements and Unavailability No-Pay Settlements are under CC 8800, and RUC RCU Bid Cost Recovery Uplifts under CC 6620 are allocated in two tiers. First, CC 8806 RUC Reliability Capacity Up Tier 1 Allocation is based upon Net Positive Demand Deviation. Next, any remaining costs are allocated pro-rata to metered Demand under CC 8807RUC Reliability Capacity Up Tier 2 Allocation.

## Description

Charge Code “CC 8807 – RUC Reliability Capacity Up Tier 2 Allocation” will perform the calculations necessary to implement the business rules identified in the Business Rules of the following section here below.

# Charge Code Requirements

## Business Rules

| Bus Req. ID | Business Rule |
| --- | --- |
|  | This Charge Code shall be calculated on a daily basis.  |
|  | Actual Scheduling Coordinators (SCs) are referenced by Business Associate ID, and CAISO shall settle with Business Associates (BA) through these IDs. |
|  | The formulas herein adopt the convention that payments made by CAISO to BAs will be negative, while payments received by the CAISO from BAs (charges to BAs) will be positive. (In other words, the signs reflect the flow of money from the point of view of the CAISO.) |
|  | **Tier-2 RCU Cost Allocation**For each BAA, and on hourly basis:* System shall calculate Tier-2 RCU BAA Allocation Cost as the remainder (left over) of unallocated RCU costs from Tier-1, as follows:
* Tier-2 RCU BAA Allocation Cost = [Sum of RCU Payments across BAA – Sum of RCU No Pay Amounts across BAA - Sum of Tier-1 RCU Cost Allocation across BAA]
* System shall allocate Tier-2 RCU BAA Allocation Cost proportional to Metered Demand within each BAA, except for:
* If a BAA is Gen-only (does not have metered demand), Tier-2 RCU BAA Allocation Cost shall be directly allocated to the Entity of the BAA.
 |
|  | Treatment of MSS* If MSS operator has elected to load follow to manage its own load variability, it shall NOT get RCU Tier-1 nor RCU Tier-2 cost allocations based on the MSS operator’s net portfolio uninstructed deviations. This is because MSS Operator that has elected to Load Follow is required to provide sufficient resources in DAM to follow its Load within the MSS Deviation Band.
* Otherwise, for both RCU Tier-1 and RCU Tier 2 cost allocations, MSS resources shall be settled in a similar manner as non-MSS resources, regardless of their Net versus Gross selection.
 |
|  | Treatment of ETC, and TOR* System shall exclude the ETC and TOR self-schedules from RCU Tier-1 and RCU Tier-2 allocations up to the valid and balanced portion of ETC and TOR self-schedules.

In contrast, System shall consider quantities above the valid and balanced portion of the ETC or TOR self-schedules in RCU Tier-1 and RCU Tier-2 cost allocations. |
|  | For each BAA, if the RCU obligation is higher than the RCU awards, all of the RCU cost will be allocated to RCU Tier-1, otherwise, RCU cost will be split between Tier-1 and Tier-2. |
|  | This cost allocation does not apply to WEIM-Only BAAs. WEIM-Only BAAs do not participate in EDAM and will not be cost allocated for Reliability Capacity. |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| PC MSS Netting |
| CC 8077– Day Ahead Imbalance Reserve Up Settlement |
| CC 8806 –RUC Reliability Capacity Up Tier 1 Allocation |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 4989 – Rounding Adjustment Settlement |

## Inputs – External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
|  | WEIMOnlyBAAFlag Q’md | Flag indicating an EIM BAA that participates in the WEIM only, not EDAM. |
|  | PTBAdjBAHourlyRCUTier2AllocAmtBQ’JM’mdh | PTB Adjustment for the Tier 2 RCU cost allocation amount portion |
|  | BADayGenOnlyBAAFlag BQ’md | Flag indicating a Gen-Only BAA with 1 |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration |
| --- | --- | --- |
|  | BAHourlyBAAMeteredDemandQuantity BQ’M’mdh | PC MSS Netting |
|  | BAHourlyTotalLoadBalancedContractQuantityBmdh | CC 8077– Day Ahead Imbalance Reserve Up Settlement |
|  | BAMSSLoadFollowingFlagBM'md | CC 8077– Day Ahead Imbalance Reserve Up Settlement |
|  | DailyGenOnlyBAAFlagQ’mdh | CC 8077– Day Ahead Imbalance Reserve Up Settlement |
|  | EDAMBAAFlagQ’md | CC 8077– Day Ahead Imbalance Reserve Up Settlement |
|  | BAAHourlyRCUTier2CostAmountQ’mdh | CC 8806 –RUC Reliability Capacity Up Tier 1 Allocation |

## CAISO Formula

The daily settlement for this charge code for each Business Associate by Trading Day is derived according to the formulation below.

**Note:** The following calculation is listed starting with the final charge calculation and progressively detailing the intermediate calculations and Settlement input.

**BAHourlyRCUTier2FinalAllocAmount BQ’M’mdh =**
{BAHourlyRCUTier2AllocAmountBQ’M’mdh + PTBAdjustmentBAHourlyRCUTier2AllocAmountBQ’M’mdh}

**BAHourlyBAA\_RCUTier2BaseAllocQuantity BQ’M’mdh =**
(1-BAMSSLoadFollowingFlagBM'md)\* [BAHourlyBAAMeteredDemandQuantityBQ’M’mdh - BAHourlyTotalLoadBalancedContractQuantityBmdh]

Excluding records where WEIMOnlyBAAFlag Q’md exists.

**BAAHourlyTotal\_RCUTier2AllocQuantity Q’mdh =**
Sum (B, M’) {BAHourlyBAA\_RCUTier2BaseAllocQuantityBQ’M’mdh }

**BAHourlyBAA\_RCUTier2AllocPrice Q’mdh =**
BAAHourlyRCUTier2CostAmountQ’mdh / BAAHourlyTotal\_RCUTier2AllocQuantityQ’mdh

**BAHourlyBAA\_RCUTier2BaseAllocAmount BQ’M’mdh =**
BAHourlyBAA\_RCUTier2BaseAllocQuantityBQ’M’mdh \* BAHourlyBAA\_RCUTier2AllocPriceQ’mdh

**BAHourlyBAA\_RCUTier2CISOAllocAmount BQ’M’mdh =**
BAHourlyBAA\_RCUTier2BaseAllocAmountBQ’M’mdh

Where Balancing\_Authority\_Area (Q’) = ‘CISO’

**BAHourlyBAA\_RCUTier2EDAMAllocAmount BQ’M’mdh =**
(EDAMBAAFlag Q’md )\*[(1- DailyGenOnlyBAAFlagQ’mdh)\*BAHourlyBAA\_RCUTier2BaseAllocAmountBQ’M’mdh ) + BADayGenOnlyBAAFlag BQ’md\*(BAAHourlyRCUTier2CostAmountQ’mdh)]

Where Balancing\_Authority\_Area (Q’) <> ‘CISO’

**BAHourlyRCUTier2AllocAmount BQ’M’mdh =**
BAHourlyBAA\_RCUTier2CISOAllocAmountBQ’M’mdh + BAHourlyBAA\_RCUTier2EDAMAllocAmountBQ’M’mdh

**PTBAdjustmentBAHourlyRCUTier2AllocAmount BQ’M’mdh =**
Sum (J) { PTBAdjBAHourlyRCUTier2AllocAmt BQ’JM’mdh }

## Outputs

| ID | Name | Description |
| --- | --- | --- |
| -- | In addition to any outputs listed below, all inputs shall be included as outputs.  | All inputs. Refer to section 3.6 and 3.7 above for input descriptions. |
|  | BAHourlyRCUTier2FinalAllocAmount BQ’M’mdh | Tier 2 RCU cost final allocation amount per BA |

|  |  |  |
| --- | --- | --- |
|  | BAHourlyBAA\_RCUTier2BaseAllocQuantity BQ’M’mdh | Tier 2 RCU base allocation quantity per BA, BAA and MSS combination |
|  | BAAHourlyTotal\_RCUTier2AllocQuantity Q’mdh | Tier 2 RCU allocation quantity per BAA |
|  | BAHourlyBAA\_RCUTier2AllocPrice Q’mdh | Tier 2 RCU allocation price per BAA |
|  | BAHourlyBAA\_RCUTier2BaseAllocAmount BQ’M’mdh | Tier 2 RCU base allocation amount per BA, BAA and MSS combination |
|  | BAHourlyBAA\_RCUTier2CISOAllocAmount BQ’M’mdh | Tier 2 RCU base allocation amount per BA in the CISO BAA |
|  | BAHourlyBAA\_RCUTier2EDAMAllocAmount BQ’M’mdh | Tier 2 RCU allocation amount per BA in an EDAM BAA |
|  | BAHourlyRCUTier2AllocAmount BQ’M’mdh | Tier 2 RCU cost allocation (interim) amount per BA |
|  | PTBAdjustmentBAHourlyRCUTier2AllocAmount BQ’M’mdh | PTB adjustment for Tier 2 RCU cost allocation amount per BA, if any |
|  |  |  |

# Charge Code Effective Dates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Charge Code/Pre-calc Name | Document Version  | Effective Start Date | Effective End Date | Version Update Type |
| RUC Reliability Capacity Up Tier 2 Allocation | 5.0 | 05/01/2026 | Open | Configuration Impacted |