|  |  |  |
| --- | --- | --- |
|  | Settlements & Billing | |
|  | |  |
|  | |  |
| Configuration Guide: | | Real Time Assistance Energy Transfer Allocation |
|  | |  |
|  | | 6479 |
|  | |  |
|  | | Version 5.1 |

Table of Contents

1. Purpose of Document 3

2. Introduction 3

2.1 Background 3

2.2 Description 3

3. Charge Code Requirements 4

3.1 Business Rules 4

3.2 Predecessor Charge Codes 4

3.3 Successor Charge Codes 4

3.4 Inputs – External Systems 6

3.5 Inputs - Predecessor Charge Codes or Pre-calculations 6

3.6 CAISO Formula 7

3.7 Outputs 9

4. Charge Code Effective Dates 11

# 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

The purpose of this initiative is to continue to enhance the accuracy of the WEIM resource sufficiency evaluation (RSE).

As part of the RSEE Phase 2 Initiative, Settlements will implement:

* + Facilitate assistance energy transfer between WEIM BAAs into the WEIM BAAs that failed RSE upward test:
    - Added as ex-post surcharge through Settlements.
    - Market broadcasts needed data to Settlements.

## Description

Charge Code “CC 6479 – Real Time Assistance Energy Transfer 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 calculate on a daily basis. |
|  | For adjustments to the Charge Code that cannot be accomplished by correction of upstream data inputs/recalculation or operator override Pass Through Bill Charge logic will be applied. |
|  | 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.) |
|  | Settlements shall allocate the sum of real time assistaince energy transfer surcharge revenue that are collected from all insufficient WEIM BAAs to all other sufficient WEIM BAAs that have passed both RSE Capacity Test and Flexible Ramping Test, pro rata to their net exports beyond base transfer. |
|  | Settlements shall sub- allocate the received assistance energy transfer surcharge revenue by CISO BAA to the SCs that are providing incremental net RT imbalance energy (FMM IIE,RTD IIE and/or UIE), excluding non-participating loads. |
|  | WEIM Entities sub allocation of the received assistance energy transfer ex-post surcharge revenue will be performed per their defined OATT of these WEIM Entities (outside CAISO’s Settlements system). |
|  | EDAM BAAs in the EDAM RSE downward pool will not be charged/receive AET surcharge/revenue. |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Real Time Energy Quantity Pre-Calculation |
| CC 6476 Real Time Assistance Energy Transfer Surcharge |

## Successor Charge Codes

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

## Inputs – External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
|  | EIMEntitySCFlag BQ'md | A flag input that, when = 1, relates an EIM Balancing Authority Area (EIM BAA) with the associated Business Associate of the Scheduling Coordinator ID. |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration |
| --- | --- | --- |
| 1 | BAResourceTotalFMMIIEQuantity BrtuT’I’Q’M’F’S’mdhcif | Real Time Energy Quantity Pre-Calculation |
| 2 | BAResourceTotalRTDIIEQuantity BrtuT’I’Q’M’F’S’mdhcif | Real Time Energy Quantity Pre-Calculation |
| 3 | SettlementIntervalRealTimeUIE *BrtuT’I’Q’M’F’S’mdhcif* | Real Time Energy Quantity Pre-Calculation |
| 4 | BAA5MAllETSRTotalTransferQuantity Q’mdhcif | CC 6476 Real Time Assistance Energy Transfer Surcharge |
| 5 | BAA5MRTAssistanceEnergyTransferAmount Q’mdhcif | CC 6476 Real Time Assistance Energy Transfer Surcharge |
| 6 | BAA5MRSETestResultsFlag Q’mdhcif | CC 6476 Real Time Assistance Energy Transfer Surcharge |

## CAISO Formula

The daily settlement of Real Time Assistance Energy Transfer Allocation 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.

**BA5MRTAssistanceEnergyTransferAllocationAmount BQ’mdhcif =**BA5MCAISORTAssistanceEnergyTransferAllocationAmount BQ’mdhcif +   
BA5MEIMRTAssistanceEnergyTransferAllocationAmount BQ’mdhcif

**BA5MCAISORTAssistanceEnergyTransferAllocationAmount BQ’mdhcif =**   
(BA5MCAISOIncrementalNetRTImbalanceEnergyQuantity BQ’mdhcif / CAISOTotalIncrementalNetRTImbalanceEnergyQuantity Q’mdhcif )  
\* BAA5MRTAssistanceEnergyTransferAllocationAmount Q’mdhcif

**CAISOTotalIncrementalNetRTImbalanceEnergyQuantity Q’mdhcif =**  
Sum (B)BA5MCAISOIncrementalNetRTImbalanceEnergyQuantity BQ’mdhcif

**BA5MCAISOIncrementalNetRTImbalanceEnergyQuantity BQ’mdhcif =**Sum ( r,t,u,T’,I’M’F’S’ )Max(0,BAResourceTotalFMMIIEQuantity BrtuT’I’Q’M’F’S’mdhcif +BAResourceTotalRTDIIEQuantity BrtuT’I’Q’M’F’S’mdhcif +SettlementIntervalRealTimeUIE *BrtuT’I’Q’M’F’S’mdhcif*)Where Q’ = CISOand S’ <> NPL

**BA5MEIMRTAssistanceEnergyTransferAllocationAmount BQ’mdhcif =**

(BAA5MRTAssistanceEnergyTransferAllocationAmount Q’mdhcif\* EIMEntitySCFlag BQ'md)

**BAA5MRTAssistanceEnergyTransferAllocationAmount Q’mdhcif =**If   
(BAA5MNetExportsBeyondBaseTransferQuantity Q’mdhcif >= 0or BAA5MRSETestResultsFlag Q’mdhcif = 1)Then  
BA5MRTAssistanceEnergyTransferAllocationAmountBQ’mdhcif= 0  
Else  
(-1)\*(BAA5MNetExportsBeyondBaseTransferQuantity Q’mdhcif / EIMArea5MNetExportsBeyondBaseTransferQuantity mdhcif)  
**\***EIMArea5MRTAssistanceEnergyTransferTotalAmount mdhcif

**EIMArea5MNetExportsBeyondBaseTransferQuantity mdhcif =**  
Sum (Q’)  
  
If   
BAA5MRSETestResultsFlag Q’mdhcif = 1  
Then  
EIMArea5MNetExportsBeyondBaseTransferQuantity mdhcif = 0  
ElseBAA5MNetExportsBeyondBaseTransferQuantity Q’mdhcif

**BAA5MNetExportsBeyondBaseTransferQuantity Q’mdhcif =**  
Min(0,BAA5MAllETSRTotalTransferQuantity Q’mdhcif)

**EIMArea5MRTAssistanceEnergyTransferTotalAmount mdhcif**Sum (Q’) BAA5MRTAssistanceEnergyTransferAmount Q’mdhcif

#### 

## Outputs

| Output Req 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. |
|  | BA5MRTAssistanceEnergyTransferAllocationAmount BQ’mdhcif | The Total Real Time Assistance Energy Transfer Allocation Amount for each BA (B) in each BAA (Q’). |
|  | BA5MCAISORTAssistanceEnergyTransferAllocationAmount BQ’mdhcif | The Total Real Time Assistance Energy Transfer Allocation Amount for each BA (B) in CAISO BAA (Q’). |
|  | CAISOTotalIncrementalNetRTImbalanceEnergyQuantity Q’mdhcif | The Total Incremental Net Real Time Imbalance Energy Quantity in CAISO BAA (Q’).\_ |
|  | BA5MCAISOIncrementalNetRTImbalanceEnergyQuantity BQ’mdhcif | The Total Incremental Net Real Time Imbalance Energy Quantity for each BA (B) in CAISO BAA (Q’).\_ |
|  | BA5MEIMRTAssistanceEnergyTransferAllocationAmount BQ’mdhcif | The Total Real Time Assistance Energy Transfer Allocation Amount for each BA (B) in the WEIM Area excluding CAISO (Q’). |
|  | BAA5MRTAssistanceEnergyTransferAllocationAmount Q’mdhcif | The Real Time Assistance Energy Transfer Allocation Amount for each BAA (Q’). |
|  | EIMArea5MNetExportsBeyondBaseTransferQuantity mdhcif | The Total Net Exports Beyond Base Transfer Quantity in the WEIM Area. |
|  | BAA5MNetExportsBeyondBaseTransferQuantity Q’mdhcif | The Net Exports Beyond Base Transfer Quantity for each BAA (Q’). |
|  | EIMArea5MRTAssistanceEnergyTransferTotalAmount mdhcif | The Total Real Time Assistance Energy Transfer Amount in the WEIM Area. |

# Charge Code Effective Dates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Charge Code/  Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| Real Time Assistance Energy Transfer Allocation | 5.0 | 07/01/2023 | 6/30/23 | Documentation Edits and Configuration Impacted |
| Real Time Assistance Energy Transfer Allocation | 5.1 | 07/01/2023 | 4/30/26 | Documentation Edits and Configuration Impacted |
| Real Time Assistance Energy Transfer Allocation | 5.1a | 5/1/26 | Open | Documentation Impacted |