Settlements and Billing

Configuration Guide: Real Time Unaccounted for Energy EIM Settlement

CC 64740

 Version 5.5

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# Purpose of Document

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

## Introduction

## Background

The CAISO calculates and accounts for Imbalance Energy for each Dispatch Interval and settles Imbalance Energy for each Settlement Interval for each resource within the EIM Area and all System Resources Dispatched in Real-Time.

Imbalance Energy consists of following:

* IIE – instructed imbalance energy
	+ FMM Instructed Imbalance Energy Settlement (CC 6460)
	+ FMM Instructed Imbalance Energy EIM Settlement (CC 64600)
	+ RTD Instructed Imbalance Energy Settlement (CC 6470)
	+ RTD Instructed Imbalance Energy EIM Settlement (CC 64700)
* UIE – Uninstructed Imbalance Energy
	+ Real Time Uninstructed Imbalance Energy Settlement (CC 6475)
	+ Real Time Uninstructed Imbalance Energy EIM Settlement (CC 64750)
* UFE – Unaccounted for Energy
	+ Real Time Unaccounted for Energy Settlement (CC 6474)
	+ Real Time Unaccounted for Energy EIM Settlement (CC 64740)
* GHG - Greenhouse Gas Emission Cost Revenue (CC 491)

To the extent that the sum of the Settlement Amounts for IIE, UIE, and UFE does not equal zero within the CAISO Balancing Authority Area, the CAISO will assess Charges or make Payments in Real Time Imbalance Energy Offset (CC 6477) and in Real Time Imbalance Energy Offset EIM (CC 64770)for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval. To the extent that the sum of the Settlement Amounts for IIE, UIE, UFE, and GHG does not equal zero within the EIM Balancing Authority Area, the CAISO will assess Charges or make Payments in Real Time Imbalance Energy Offset EIM (CC 64770)for the resulting differences to EIM Entity Scheduling Coordinator ID, respectively.

In the Real-Time Market, the negative and positive Congestion Charges associated with a valid post-Day-Ahead TOR and ETC schedule change (including changes submitted to the Hour-Ahead Scheduling Process and changes submitted closer to Real-Time where allowed by the contract) will be reversed in CC 6788 RTM Congestion Credit Settlement. Because Congestion Charges are implicitly collected by the CAISO in the Real-Time settlement and there are no holders of rights to receive Real-Time Congestion revenues, all charges for Real-Time Congestion will be accumulated in special and separate Balancing Authority Area neutrality accounts. The CAISO Real-Time Congestion Charges less Virtual Bid Adjustment shall be distributed back to non-ETC Control Area metered Demand and exports in Real Time Congestion Offset (CC 6774). The EIM Balancing Authority Area Real-Time Congestion Charges shall be distributed to the applicable EIM Entity Scheduling Coordinator in Real Time Congestion Offset EIM (CC 67740).

## Description

In line with CAISO tariff, the CAISO shall calculate and account for Imbalance Energy and UFE for each Settlement Interval. For each Settlement Interval the CAISO shall settle Imbalance Energy in the Real-Time Market for each resource within the CAISO Control Area and all System Resources Dispatched in Real-Time. Imbalance Energy consists of Instructed Imbalance Energy (IIE), Uninstructed Imbalance Energy (UIE), and the pre-dispatched Energy associated with HASP-established Intertie Schedules (i.e., intertie Energy pre-dispatched with the Hour Ahead Scheduling Process). Additionally, the CAISO shall settle UFE as part of the Real-Time Market Settlements. To the extent that the sum of the Settlement Amounts for IIE (CC 6470), HASP pre-dispatched Energy (CC 6051), UIE (CC 6475), and UFE (CC 6474) do not equate to 0, the CAISO will assess Charges or make Payments for the resulting differences to all Scheduling Coordinators based on a pro-rata share of their Metered Demand for the relevant Settlement Interval. The latter cost reconciliation shall be performed in a downstream charge code process, CC 6477 - RT Imbalance Energy Offset

The CC 6474 configuration (as stipulated in this document) provides for the calculation of UFE and its cost allocation to SCs. As stated in the CAISO Tariff, for each Settlement Interval, the CAISO will calculate UFE in the CAISO Control Area, and for each Utility Service Area for which the IOU or Local Public-Owned Electric Utility has requested separate UFE calculation and has met the requirements applicable to a CAISO Metered Entity. The UFE will be settled as Imbalance Energy at the applicable Settlement Interval Locational Marginal Price calculated for each Utility Service Area for which UFE is calculated separately. UFE – attributable to meter measurement errors, Load profile errors, Energy theft, and distribution loss deviations – will be allocated to each Scheduling Coordinator (SC) based on the ratio of the SC’s metered CAISO Demand excluding that portion of Demand of Non-Generator Resources dispatched as Regulation Energy through Regulation Energy Management within the relevant Utility Service Area for which UFE is calculated separately to (divided by) the total metered CAISO Demand excluding that portion of Demand of Non-Generator Resources dispatched as Regulation Energy through Regulation Energy Management within the relevant Utility Service Area.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | The Real Time Unaccounted for Energy EIM Settlement (CC 64740) configuration shall apply to each EIM Entity Scheduling Coordinator who has metered Demand in the EIM Entity Balancing Authority Area and has met the requirements applicable to a CAISO Metered Entity, however if metered demand is not available, 64740 will apply to the EIM Entity Balancing Autority Area. |
|  | This Charge Code shall be computed daily on a 5-minute Settlement Interval basis. |
|  | The Real Time Unaccounted for Energy EIM Settlement (CC 64740) configuration shall both calculate EIM UFE for a EIM Entity Balancing Authority Area and allocate its cost to EIM Entity SCs who have metered Demand excluding that portion of Demand of Non-Generator Resources dispatched as Regulation Energy through Regulation Energy Management from the Utility Service Area.  |
|  | A flag shall be used in the design to identify input data that pertains to a EIM Entity for which the EIM UFE calculations shall be performed. |
|  | The MSS Netting Pre-calculation configuration is expected to provide Metered Demand outputs for the EIM UFE calculation. *(Reference)* |
|  | The CC 64740 configuration shall calculate EIM UFE as the difference of all generation (from Generators, Non-Generator Resource, and Imports) and Demand (from Loads and Exports) adjusted for transmission losses. |
|  | Meter data shall be provided for all Generation sources and Demand sinks, except in the case of import Energy or Export Energy where a meter device is not provided or is inadequate for determining UFE. |
|  | Each EIM Entity Balancing Authority Area shall elect for all of its associated interties with adjacent balancing authorities areas whether the UFE calculation use meter or net schedules for intertie values.  |
|  | Meter option: When CAISO meter data is available for an intertie, the CC 6474 UFE calculation shall reflect the meter data in its UFE determination as Energy entering (import) or leaving (export) the EIM Entity Balancing Authority Area through the associated intertie.  |
|  | Meter option: When CAISO meter data is unavailable for an intertie, the CC 6474 UFE calculation shall employ Hourly Real-Time Checked Out Intertie values to calculate the total quantity of Energy flowing through the intertie and apply the calculated value in the CC 64740 EIM UFE determination as Energy entering (import) or leaving (export) the EIM Entity Balancing Authority Area through the associated intertie. |
|  | Net Schedule Option: When Net Schedule Option is elected, the CC 64740 EIM UFE calculation shall treat the submitted schedules as meter data for the associated intertie. The calculation shall reflect Energy entering (import) or leaving (export) the EIM Entity Balancing Authority Area. |
|  | The intertie reading shall include Energy attributable to TG resources. |
|  | The CC 64740 calculation shall receive transmission loss data that is considered to reflect “actual” transmission losses, as the loss data is determined from real-time market software based on actual power grid network conditions.  |
|  | UFE for an EIM Entity Balancing Authority Area shall be allocated to the associated EIM Entity SC.  |
|  | The allocated UFE settlement amount per EIM Entity Balancing Authority Area is derived as the product of – the LAPs of an EIM Entity Balancing Authority Area UFE and the Service Area’s Locational Marginal Price (LMP). |
|  | Actual 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.) |
|  | When an eligible resource has an interval with a negative MWh meter, CAISO will not charge for the energy of those intervals. |
|  | The CAISO Will allow an EIM Entity using a load derivation approach the following two options: elect to settle Unaccounted for Energy (UFE), or elect not to settle UFE. |
|  | Settlements shall calculate the UFE amount but settle as zero value if an EIM entity elect not to settle UFE. |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Real Time Price Pre-calculation |
| Measured Demand Over Control Area Pre-calculation |
| MSS Netting Pre-calculation |
| Real Time Energy Quantity Pre-calculation |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 64770 – Real Time Imbalance Energy Offset |

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
| 1. | RTED\_Transmission\_Loss uQ’T’I’M’W’VL’mdhcif | Real-time Transmission Loss quantity (in MW) (typically represented as a negative value), calculated using Full Network Model and real time energy flow.  |
| 2. | UFE\_InclusionFlag umd | Flag value that indicates whether the calculations of the CC 6474 Real-Time Unaccounted-for-Energy Settlement configuration apply to EIM Entity Balancing Authority Area.When the UFE\_InclusionFlag umd value is ‘1’, the CC 6474 calculation shall be performed. Likewise, when the flag value is ‘0’, the CC 6474 calculation shall not be performed.  |
| 3 | TIEHourlyCheckedOutInterchangeQuantity rtuT’I’Q’m’M’W’F’S’VL’mdh | The input represents the final (Real Time) Checked Out Hourly Interchange Actual Flow quantity (in MW) for non-polled Interties (in MW) provided by CAS. UDC/MSS export quantities are represented as negative values, while UDC/MSS import quantities are represented as positive values.  |
| 4 | BAAEIMEntityUFEElectSettlementFlag uQ’md | Flag (1/0) that indicates whether the specified EIM entity has elected to settle Unaccounted for Energy (UFE) or not. The flag value defaults to be 1, indicating that the EIM entity settles UFE. If the flag value is set to zero, it indicates that the EIM entity has elected not to settle UFE. (Note: do not suppress zero.) |
| 5 | 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 |
| --- | --- | --- |
| 1 | HourlyUFEUDCLMP umdh | An output from the Real Time Price Pre-calculation.It is the specific UFE price applied to applicable UDC.  |
| 2 | BASettlementIntervalResEntityEIMEntityMeteredGenerationQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif | An output from the MSS Netting Pre-calculation, the EIM BAA metered Generation (represented as a positive value) of resources associated to an EIM Entity. |
| 3 | BASettlementIntervalResEIMEntityMeterLoadQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif  | Resource meter of all load resources within EIM Entity Balancing Authority Area. |
| 4 | TieSettlementIntervalEIMEntityMeteredImportQuantity rtuT’I’Q’M’W’VL’mdhcif | An output from the MSS Netting Pre-calculation, the TieSettlementIntervalMeteredImportQuantity rtuT’I’M’W’VL’mdhcif (represented as a positive value) is the meter quantity (in MWh) for import Energy from either an UDC/MSS intratie or external intertie |
| 5 | TieSettlementIntervalEIMEntityMeteredExportQuantity rtuT’I’Q’M’W’VL’mdhcif | An output from the MSS Netting Pre-calculation, the TieSettlementIntervalMeteredExportQuantity rtuT’I’M’W’VL’mdhcif (represented as a negative value) is the meter quantity (in MWh) for export Energy from either an UDC/MSS intratie or external intertie |
| 6 | ResourceWholesaleExemptionFlag *rmdhcif* | Real Time Energy Pre-calculation |
| 7 | BAA5mLAPMeteredDemandQuantity uQ’AA’mdhcif | MSS Netting PC |
| 8 | BAA5mMeteredDemandQuantityQ’mdhcif | MSS Netting PC |

## CAISO Formula

The 5-minute settlement of UFE Energy for each EIM Entity Scheduling Coordinator by EIM Entity Balancing Authority Area is derived according to the formulation below.

BASettlementIntervalEIMBAAUFEPrice BuQ’mdhcif

BASettlementIntervalEIMBAAUFEPrice BuQ’mdhcif= BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif /BASettlementIntervalEIMBAAUFEQuantity BuQ’mdhcif

Do not calculate when BADayGenOnlyBAAFlag exists

BASettlementIntervalEIMBAAUFEQuantity BuQ’mdhcif

Sum (T’) **IF**

EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE BuT’Q’mdhcif <> 0

**THEN**

BASettlementIntervalEIMBAAUFEQuantity BuQ’mdhcif =

(EIMBAASettlementIntervalUFEQuantity uQ’mdhcif \*

(BAEIMBAASettlementIntervalMeteredDemand BuT’Q’mdhcif /

EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE BuT’Q’mdhcif ))

**ELSE**

BASettlementIntervalEIMBAAUFEQuantity BuQ’mdhcif = 0

BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif

Sum (T’) **IF**

BA5MinuteGenOnlyBAAFlag BuT’Q'mdhcif =1

**THEN**

BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif = BA5MinuteGenOnlyBAAFlag BuT’Q'mdhcif \* EIMBAASettlementIntervalUFEAmount uQ’mdhcif

**ELSEIF**

EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE uT’Q’mdhcif <> 0

**THEN**

BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif =

(EIMBAASettlementIntervalUFEAmount uQ’mdhcif \*

(BAEIMBAASettlementIntervalMeteredDemand BuT’Q’mdhcif /

EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE uT’Q’mdhcif ))

**ELSE**

BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif = 0

BA5MinuteGenOnlyBAAFlag BuT’Q'mdhcif =

#### Sum(r,t,I’,M’,A,A’,F’,R’,p,P,W’,Q,S’,d’,N,z’,V,v,H,n’,L’) BADayGenOnlyBAAFlag BQ'md

#### Where BASettlementIntervalResEntityEIMEntityMeteredGenerationQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif exists

### EIMBAASettlementIntervalUFEAmount uQ’mdhcif

EIMBAASettlementIntervalUFEAmount uQ’mdhcif =

Sum (A,A’) BAAEIMEntityUFEElectSettlementFlag uQ’md \* EIMBAASettlementIntervalLAPUFEQuantity uQ’AA’mdhcif \* HourlyUFEUDCLMP umdh

### EIMBAASettlementIntervalLAPUFEQuantity uQ’AA’mdhcif = BAA5mLAPUDCRatio uQ’AA’mdhcif \* EIMBAASettlementIntervalUFEQuantity uQ’mdhcif

### BAA5mLAPUDCRatio uQ’AA’mdhcif = BAA5mLAPMeteredDemandQuantity uQ’AA’mdhcif/ BAA5mMeteredDemandQuantityQ’mdhcif

### EIMBAASettlementIntervalUFEQuantity uQ’mdhcif

 EIMBAASettlementIntervalUFEQuantity uQ’mdhcif =

Sum (T’) ( EIMBAA\_Import\_Quantity uT’Q’mdhcif +

EIMBAA\_Generation\_Quantity uT’Q’mdhcif+

EIMBAA\_Load\_Quantity uT’Q’mdhcif +

EIMBAA\_Export\_Quantity uT’Q’mdhcif +

EIMBAASettlementIntervalActualTransmissionLoss uT’Q’mdhcif)

### EIMBAA\_Import\_Quantity uT’Q’mdhcif =

EIMBAA\_Import\_Quantity uT’Q’mdhcif =

SettlementIntervalMeteredEIMBAAImportQuantity uT’Q’mdhcif + SettlementIntervalNonMeteredEIMBAAImportQuantity uT’Q’mdhcif

### SettlementIntervalMeteredEIMBAAImportQuantity uT’Q’mdhcif =

SettlementIntervalMeteredEIMBAAImportQuantity uT’Q’mdhcif =

Sum (r,t,I’,M’,W’,V,L’) (UFE\_InclusionFlag **umd** \* TieSettlementIntervalEIMEntityMeteredImportQuantity rtuT’I’Q’M’W’VL’mdhcif)

### SettlementIntervalNonMeteredEIMBAAImportQuantity uT’Q’mdhcif

SettlementIntervalNonMeteredEIMBAAImportQuantity uT’Q’mdhcif =

Sum (r,t,I’,m’,M’,W’,F’,S’,V’,L’) (UFE\_InclusionFlag umd \*

TIEHourlyCheckedOutInterchangeQuantity rtuT’I’Q’m’M’W’F’S’VL’mdh) / 12

Where

m’ = ‘4’, Q’<> ‘CISO’

noting that TIEHourlyCheckedOutInterchangeQuantity rtuT’I’Q’m’M’W’F’S’VL’mdh is divided by 12 for frequency conversion

### EIMBAA\_Generation\_Quantity uT’Q’mdhcif

EIMBAA\_Generation\_Quantity uT’Q’mdhcif =

Sum (B,r,t,I’,M’,A,A’,F’,R’,p,P,W’,Q,S’,d’,N,z’,V,v,H,n’,L’) (UFE\_InclusionFlag umd \* (1- ResourceWholesaleExemptionFlag *rmdhcif* )\* BASettlementIntervalResEntityEIMEntityMeteredGenerationQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif)

### EIMBAA\_Load\_Quantity uT’Q’mdhcif

EIMBAA\_Load\_Quantity uT’Q’mdhcif =

Sum (B,r,t,I’,M’,A,A’,F’,R’,p,P,W’,Q,S’,d’,N,z’,V,v,H,n’,L’) (UFE\_InclusionFlag umd \* BASettlementIntervalResEIMEntityMeterLoadQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif)

### EIMBAA\_Export\_Quantity uT’Q’mdhcif

EIMBAA\_Export\_Quantity uT’Q’mdhcif =

SettlementIntervalMeteredEIMBAAExportQuantity uT’Q’mdhcif + SettlementIntervalNonMeteredEIMBAAExportQuantity uT’Q’mdhcif

### SettlementIntervalMeteredEIMBAAExportQuantity uT’Q’mdhcif

SettlementIntervalMeteredEIMBAAExportQuantity uT’Q’mdhcif =

Sum (r,t,I’,M’,W’,V,L’) (UFE\_InclusionFlag umd \* TieSettlementIntervalEIMEntityMeteredExportQuantity rtuT’I’Q’M’W’VL’mdhcif)

### SettlementIntervalNonMeteredEIMBAAExportQuantity uT’Q’mdhcif

SettlementIntervalNonMeteredEIMBAAExportQuantity uT’Q’mdhcif =

Sum (r,t,I’,m’,M’,W’,F’,S’,V,L’) (UFE\_InclusionFlag umd \*

TIEHourlyCheckedOutInterchangeQuantity rtuT’I’Q’m’M’W’F’S’VL’mdh) / 12

Where

m’ = ‘1’, Q’ <> ’CISO’

noting that TIEHourlyCheckedOutInterchangeQuantity rtuT’I’Q’m’M’W’F’S’VL’mdh is divided by 12 for frequency conversion

### EIMBAASettlementIntervalActualTransmissionLoss uT’Q’mdhcif

EIMBAASettlementIntervalActualTransmissionLoss uT’Q’mdhcif =

Sum (I’,M’,W’,V,L’)

(UFE\_InclusionFlag umd \* RTED\_Transmission\_Loss uQ’T’I’M’W’VL’mdhcif) / 12

Where Q’ <> ‘CISO’

### BAEIMBAASettlementIntervalMeteredDemand BuT’Q’mdhcif

BAEIMBAASettlementIntervalMeteredDemand BuT’Q’mdhcif =

Sum (r,t,I’,M’,A,A’,F’,R’,p,P,W’,Q,S’,d’,N,z’,V,v,H,n’,L’) (UFE\_InclusionFlag umd \*

BASettlementIntervalResEIMEntityMeterLoadQuantity BrtuT’I’Q’M’AA’F’R’pPW’QS’d’Nz’VvHn’L’mdhcif)

### EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE uT’Q’mdhcif

EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE uT’Q’mdhcif=

Sum (B) BAEIMBAASettlementIntervalMeteredDemand BuT’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. |
| 1 | BASettlementIntervalEIMBAAUFEPrice BuQ’mdhcif | Real Time Unaccounted for Energy Settlement price.  |
| 2 | BASettlementIntervalEIMBAAUFEQuantity BuQ’mdhcif | Real Time Unaccounted for Energy Settlement quantity (in MWh) |
| 3 | BA\_EIMBAA\_SettlementInterval\_UnaccountedforEnergy\_SettlementAmount BuQ’mdhcif | Real Time Unaccounted for Energy Settlement amount (in U.S. $).  |
| 4 | EIMBAASettlementIntervalUFEAmount uQ’mdhcif | Total Settlement Interval EIMBAA UFE amount for EIM Entity |
| 5 | EIMBAASettlementIntervalLAPUFEQuantity uQ’AA’mdhcif | The calculated UFE quantity (in MWh) for a(n) LAP of an EIM BAA. |
| 6 | BAA5mLAPUDCRatio uQ’AA’mdhcif | The calculated ratio of UDC LAP to WEIM BAA. |
| 7 | EIMBAASettlementIntervalUFEQuantity uQ’mdhcif | The calculated UFE quantity (in MWh) for a(n) EIM BAA.  |
| 8 | EIMBAA\_Import\_Quantity uT’Q’mdhcif | The sum (in MWh) of meter quantities that corresponds to the import Energy from interties and intra-ties associated to a EIM BAA.  |
| 9 | SettlementIntervalMeteredEIMBAAImportQuantity uT’Q’mdhcif | The sum (in MWh) of all Energy Imports that are metered by an intertie meter upon their entry into a EIM BAA |
| 10 | SettlementIntervalNonMeteredEIMBAAImportQuantity uT’Q’mdhcif | The sum (in MWh) of all Energy Imports entering a EIM BAA that are not metered by an intertie meter upon their entry.  |
| 11 | EIMBAA\_Generation\_Quantity uT’Q’mdhcif | The sum (in MWh) of meter quantities that corresponds to the Energy produced internally in a EIM BAA.  |
| 12 | EIMBAA\_Load\_Quantity uT’Q’mdhcif | The sum (in MWh) of meter quantities that corresponds to the Energy consumed internally in a EIM BAA.  |
| 13 | EIMBAA\_Export\_Quantity uT’Q’mdhcif | The sum (in MWh) of meter quantities that corresponds to the export Energy from interties and intra-ties associated to a EIM BAA.  |
| 14 | SettlementIntervalMeteredEIMBAAExportQuantity | The sum (in MWh) of all Energy Exports metered by an intertie meter upon their leaving a EIM BAA.  |
| 15 | SettlementIntervalNonMeteredEIMBAAExportQuantity uT’Q’mdhcif | The sum (in MWh) of all Energy Exports leaving a EIM BAA that are not metered by an intertie meter. |
| 16 | EIMBAASettlementIntervalActualTransmissionLoss uT’Q’mdhcif | The calculated quantity (in MWh) of actual transmission line and facility losses associated with Energy scheduled for EIM BAA. |
| 17 | BAEIMBAASettlementIntervalMeteredDemand BuT’Q’mdhcif | The EIM BAA Total Gross Metered Demand quantity filtered for specified EIM Entities that are assessed UFE. |
| 18 | EIMBAATotalSettlementIntervalGrossMeteredDemandControlForUFE uT’Q’mdhcif  | The EIM BAA Total Gross Metered Demand quantity.  |
| 19 | BA5MinuteGenOnlyBAAFlag BuT’Q'mdhcif | Indicating a Gen-Only BAA with a value of 1. |

#

# Charge Code Effective Date

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| EIM Real Time Unaccounted for Energy Settlement | 5.0 | 10/01/14 | 3/31/15 | Documentation Edits Only |
| EIM Real Time Unaccounted for Energy Settlement | 5.1 | 4/1/15 | 9/30/20 | Configuration Impact |
| EIM Real Time Unaccounted for Energy Settlement | 5.2 | 10/1/20 | 10/31/2021 | Configuration Impact |
| EIM Real Time Unaccounted for Energy Settlement | 5.3 | 11/1/21 | 11/30/22 | Configuration Impact |
| EIM Real Time Unaccounted for Energy Settlement | 5.4 | 12/1/22 | 4/30/26 | Configuration Impact |
| EIM Real Time Unaccounted for Energy Settlement | 5.5 | 5/1/26 | Open | Configuration Impact |