Settlements & Billing

Configuration Guide: Extended Day-Ahead Market (EDAM) Administrative Charge Market Services Charge
(CC 4560)

 Version 5.6

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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 EDAM Administrative Charge Charge Codes (GMC) are comprised of daily and monthly charges which are assessed to participating Scheduling Coordinators (SC) and EDAM Entities for the purpose of recovering all of the CAISO’s direct and indirect operating costs. The costs are comprised of CAISO Operating Costs, CAISO Other Costs and Revenues, CAISO Financial Costs, CAISO Operating Reserve Credit, and CAISO Out-of-Pocket Capital and Project Costs.

Through the GMC stakeholder process, the CAISO has identified three cost service based Charge Codes, a fixed Transmission Ownership Rights Charge Code, as well as four transactional and administrative Charge Codes. The cost service Charge Codes consist of (1) Market Services Charge; (2) System Operations Charge; and (3) CRR Services Charge. The four transactional fee consist of (1) Bid Segment Fee; (2) CRR Transaction Fee; (3) Inter-Scheduling Coordinator Trade Transaction Fee; and (4) Scheduling Coordinator ID Charge.

## Description

The Market Services Charge is designed to recover costs the ISO incurs for implementing and running the markets. The market system processes and validates all Bids, and then clears Supply Bids against Demand Bids in order to award Energy Schedules and Ancillary Services Capacity, as well as issue Dispatch Instructions. Because Supply Bids and Demand Bids use equivalent market services and impose equivalent costs on the ISO, the Market Services Charge shall be assessed to each Scheduling Coordinator and/or EDAM Entity based upon gross awarded Energy Schedules (MWh), Ancillary Service Capacity (MW), and specific Dispatch Instructions (MWh) of generation, imports, load, and exports in the EDAM, and real-time market.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | The Market Services Charge shall apply to the hourly absolute value of the following Schedules and Awards by resource: * DA Generation Schedules
* DA Import Schedules
* DA Load Schedules
* DA Export Schedules
* DA Ancillary Service Awards, including Reliability Capacity Up (RCU), Reliability Capacity Down (RCD), Imbalance Reserve Up (IRU), and Imbalance Reserve Down (IRD) awarded quantities
* DA Ancillary Service Self Provision
* Convergence Bidding Schedules
* FMM MSS Self Scheduled Load Following Energy
* Real-Time Optimal Energy
* Real-Time Minimum Load Energy
* Derate Energy
* Real-Time Self Schedule
* Real-Time Pumping Energy
* Real-Time Ancillary Service Awards
* Real-Time Ancillary Service Self Provision
 |
|  | The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the EDAM, Virtual Demand Award, Virtual Supply Award, and Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time. |
|  | Each component rate of the EDAM Administrative Charge will be adjusted automatically on a quarterly basis, up or down, so that rates reflect the annual revenue requirement as posted on the CAISO Website. (Fact) |
|  | Settlement Interval Market Services FMM Quantity shall be calculated as absolute value of FMM MSS Self Scheduled Load Following Energy. |
|  | This Charge Code shall provide an output on a daily basis. |
|  | This Charge Code will be billed and invoiced in accordance with the CAISO Payments Calendar. |
|  | A settlement details file shall provide Charge Code details for each daily settlement amount. |
| 4.0 | For adjustments to the Charge Code that cannot be accomplished by correction of upstream data inputs, recalculation or operator override, Pass Through Bill Charge adjustment shall be applied. |
| 5.0 | This Charge Code will apply to all schedules within the CISO BAA. For EDAM BAAs, except for the CISO BAA, this charge code will apply to all schedules with a special ramp-in ratio for load beginning June 1, 2026. |
| 5.1 | For the CISO BAA, the Market Services Charge quantity equals the sum of SC Day Ahead Energy Schedules (Generation, Intertie, and Load), Ancillary Service Awards and Self-provisions, Imbalance Reserve Awards, Reliability Capacity Awards, and specific Real Time Instructed Imbalance Energy dispatches. |
| 5.2 | For EDAM BAAs outside the CISO BAA, the Market Services Charge quantity equals the sum of SC Day Ahead Energy Schedules (Generation, Intertie, and Load, with a Transitional Load Ramp-In applying to Load), Ancillary Service Awards and Self-provisions, Imbalance Reserve Awards, Reliability Capacity Awards, and specific Real Time Instructed Imbalance Energy dispatches. |
| 5.3 | Participants within the EDAM are eligible to receive the EDAM Transitional Load Ramp-In mechanism, which applies to the Day-Ahead Load Schedule of the EDAM BAA. This mechanism reduces the EDAM Administrative Charges assessed to EDAM Entities with load with the following annual discounts:First implementation year of EDAM: 95% discountSecond implementation year of EDAM: 75% discountThird implementation year of EDAM: 50% discountFourth implementation year of EDAM: 25% discount |
| 6.0 | This Charge Code will not apply to participating and non-participating resources within the EIM Balancing Authority Area |
| 7.0 | NPM Resources shall be exempted from charges for self schedules. |

## Predecessor Charge Codes

| Charge Code/ Pre-Calc Name |
| --- |
| Ancillary Services Pre-Calculation |
| Real Time Energy Pre-Calculation |
| ETC/TOR/CVR Quantity Pre-Calculation  |
| CC 6013 – Convergence Bidding DA Energy, Congestion, Loss Settlement |
| CC 6011 – Day Ahead Energy, Congestion, Loss Settlement |
| CC 8800 – Residual Unit Commitment (RUC) Reliability Capacity Up Settlement |
| CC 8810 – Residual Unit Commitment (RUC) Reliability Capacity Down Settlement |
| CC 8071 - Day Ahead Imbalance Reserve Up Settlement |
| CC 8081 - Day Ahead Imbalance Reserve Down Settlement |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 4561 – GMC System Operations Charge |
| CC 4563 – GMC Transmission Ownership Rights Charge |

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
| 1 | CAISOGMCMarketServicesChargeRate md | FERC-approved Market Services GMC rate (in $/MWh). The input data is available from the SaMC standing data based on applicable start and end dates. |
| 2 | BAEDAMTransitionalLoadRampFactor BQ’md | For EDAM Entities with load, a ramp-in ratio based on load for early participants in the EDAM. This mechanism reduces the EDAM Administrative Charges assessed EDAM Entities with load with the following annual discounts:First implementation year of EDAM: 95% discountSecond implementation year of EDAM: 75% discountThird implementation year of EDAM: 50% discountFourth implementation year of EDAM: 25% discountFifth implementation year of EDAM: 0% |
| 2 | DispatchIntervalRerateEnergy BrtQ’uT’I’M’R’W’F’S’VL’mdhcif | RTD IIE Energy produced or consumed by a resource due to a rerated Pmin or derated Pmax (as logged in SLIC). |
| 3 | DispatchIntervalIIEMinimumLoadEnergy BrtQ’uT’I’M’R’W’F’S’VL’mdhcif | RTD Energy produced or consumed from resource in order to sustain a Minimum Load operating level. |
| 4 | DispatchIntervalRTPumpingEnergy BrQ’tuT’I’M’R’W’F’S’VL’mdhcif | RTD Pumping Energy is the RTD IIE Energy from a Participating Load Pumped-Storage Unit or Pumping Load consumed or produced during pumping operation. |
| 5 | PTBChargeAdjustmentGMCMarketServicesSettlementAmount BQ’Jmd | PTB adjustment variable for this Charge Code, with amount per SC (in $).  |
| 6 | GMCMarketServicesExclusionFlag B | Flag indicating TOR exception from Charge Code, where exception is represented by “1”. |
| 7 | BAEDAMEntityFlag BQ’md  | Flag indicating an EIM entity that specifically participates in EDAM. |
| 8 | NPMDARegUpQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh | Day Ahead NPM Regulation Up Qualified Self-Provision capacity for resource r, Contract Reference Number N, and Contract Type z’. **(MW)** |
| 9 | NPMDARegDownQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh  | Day Ahead NPM Regulation Down Qualified Self-Provision capacity for resource r, Contract Reference Number N, Contract Type z’. **(MW)** |
| 10 | NPMDASpinQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh | Day Ahead NPM Spinning Reserve Qualified Self-Provision capacity for resource r, Contract Reference Number N, Contract Type z’. **(MW)** |
| 11 | NPMDANonSpinQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh | Day Ahead NPM Non-Spinning Reserve Qualified Self-Provision capacity for resource r, Contract Reference Number N, Contract Type z’. **(MW)** |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration / Description |
| --- | --- | --- |
| 1 | SettlementIntervalDayAheadEnergy BrtuT’I’Q’M’F’S’mdhcif | Settlement Interval Day Ahead Scheduled Energy for Resource r. (MWh). Quantity representing the total of DA Awarded Bid Energy, Self-Schedule Energy, and Minimum Load. |
| 2 | BAHourlyDAVirtualSupplyAwardQuantity BQ’mdh | DA Virtual Supply Awards for BA\_ID **B**, Trading Month **m**, Trading Day **d**, and Trading Hour **h**. (MW) |
| 3 | BAHourlyDAVirtualDemandAwardQuantity BQ’mdh | DA Virtual Demand Awards for BA\_ID **B**, Trading Month **m**, Trading Day **d**, and Trading Hour **h**. (MW) |
| 4 | HourlyTotalRegUpQSP BrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Regulation Up Qualified Self-Provision for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 5 | HourlyTotalRegDownQSPBrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Regulation Down Qualified Self-Provision for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 6 | HourlyTotalSpinQSP BrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Spinning Reserve Qualified Self-Provision for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 7 | HourlyTotalNonSpinQSP BrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Non-Spinning Reserve associated with Qualified Self-Provision for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 8 | HourlyTotalAwardedRegUpBidCapacityBrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Regulation Up Awarded Bid Capacity for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 9 | HourlyTotalAwardedRegDownBidCapacityBrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Regulation Down Awarded Bid Capacity for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 10 | HourlyTotalAwardedSpinBidCapacityBrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Spinning Reserve Awarded Bid Capacity for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 11 | HourlyTotalAwardedNonSpinBidCapacityBrtT’uQ’I’M’R’W’F’S’VL'mdh | Hourly Total Non-Spinning Reserve Awarded Bid Capacity for resource r. **(MW)**Intermediate computation value required to be accessible for review by analysts |
| 12 | BAHourlyResRCUAwardedQuantity BrtQ’F’S’mdh | CC 8800 – Residual Unit Commitment (RUC) Reliability Capacity Up Settlement. The hourly awarded Reserve Capacity Up MW quantity for each resource for every hour for each trading day.(MW) |
| 13 | BAHourlyResRCDAwardedQuantity BrtQ’F’S’mdh | CC 8810 – Residual Unit Commitment (RUC) Reliability Capacity Down Settlement. The hourly awarded Reserve Capacity Down MW quantity for each resource for every hour for each trading day.(MW) |
| 14 | BAHourlyResIRUScheduleQuantity BrtQ’mdh | CC 8071 - Day Ahead Imbalance Reserve Up Settlement. The Hourly IFM Imbalance Reserve Up Schedule Quantity for each Resource for every hour for each trading day. (MW) |
| 15 | BAHourlyResIRDScheduleQuantity BrtQ’mdh | CC 8081 - Day Ahead Imbalance Reserve Down Settlement. The Hourly IFM Imbalance Reserve Down Schedule Quantity for each Resource for every hour for each trading day. (MW) |
| 16 | BASettlementIntervalResourceFinalBalancedContractCRNQuantity BrtNz’mdhcif | The final valid and balanced contract quantity at resource r across all markets for a Single or Chain contract N. If contract N is a Chain CRN, then contract type z’ is either the contract type of the first CRN leg of the Chain, if resource type t is “GEN” or “ITIE”; or the contract type of the last CRN leg of the Chain, if resource type t is “LOAD” or “ETIE”. |
| 17 | SettlementIntervalTotalFMMPart1Qty BrtQ’uT’I’M’F’S’mdhcif | Settlement Interval Total FMM Part 1 Quantity (FMM Optimal, FMM Minimum Load, FMM Rerate, FMM Pumping Energy) for Resource r. (MWh) |
| 18 | SettlementIntervalFMMMSSLFSelfSchdEngy BrtuT’I’Q’M’F’S’mdhcif | FMM Load Following Self Schedule Energy for Resource r.Represents incremental and decremental Self Scheduled changes to the DASE for Load Following System Resources.  |
| 19 | SettlementIntervalRTDOptimalIIE BrtQ’uT’I’M’R’W’F’S’VL’mdhcif  | Represents the Total RTD Optimal IIE Energy for resource r. (MWh) |
| 20 | SettlementIntervalResNPMDayAheadEnergy BrtuT’I’Q’M’F’S’mdhcif | The settlement interval Day Ahead Schedule for NPM resource. (MWh) |

## CAISO Formula

The daily settlement Market Services EDAM Administrative Charges for each Business Associate is derived according to the formulation below.

### BADayMarketServicesAmount BQ’md = (BADayMarketServicesQuantity BQ’md + BABAADayMarketServicesQuantity BQ’md ) \* CAISOGMCMarketServicesChargeRate md

### IF

GMCMarketServicesExclusionFlag B = 1

### THEN

### BADayMarketServicesQuantity BQ’md = 0

### ELSE

### BADayMarketServicesQuantity BQ’md = (BAHourlyMarketServicesEnergySchedQuantity BQ’mdh + BAHourlyMarketServicesCBSchedQuantity BQ’mdh + BAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh + BAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh + BAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh)

### IF

GMCMarketServicesExclusionFlag B = 1

### THEN

### BABAADayMarketServicesQuantity BQ’md = 0

### ELSE

### BABAADayMarketServicesQuantity BQ’md = (1 - BAEDAMTransitionalLoadRampFactor BQ’md) \* (BABAAHourlyMarketServicesEnergySchedQuantity BQ’mdh + BABAAHourlyMarketServicesCBSchedQuantity BQ’mdh + BABAAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh + BABAAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh + BABAAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh)

### BAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh = ABS (BAResHourlyMarketServicesAncillaryServicesQuantity BrtQ’F’S’mdh)

 WHERE Q’ = ‘CISO’

### BABAAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh =

### IF

### BAEDAMEntityFlag BQ’md = 1

 THEN

### ABS (BAResHourlyMarketServicesAncillaryServicesQuantity BrtQ’F’S’mdh)

 ELSE

 0

 WHERE Q’ <> ‘CISO’

### BAResHourlyMarketServicesAncillaryServicesQuantity BrtQ’F’S’mdh = HourlyTotalRegUpQSP BrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalRegDownQSPBrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalSpinQSP BrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalNonSpinQSP BrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalAwardedRegUpBidCapacityBrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalAwardedRegDownBidCapacityBrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalAwardedSpinBidCapacityBrtT’uI’Q’M’R’W’F’S’VL'mdh + HourlyTotalAwardedNonSpinBidCapacityBrtT’uI’Q’M’R’W’F’S’VL'mdh + BAResHourlyTotalNPMMSAncillaryServicesQuantity BrtT'uI'Q’M'R'W'F'S'VL'mdh

### BAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh = sum over (r, t, F’, S’) BAHourlyResRCUAwardedQuantity BrtQ’F’S’mdh+ BAHourlyResRCDAwardedQuantity BrtQ’F’S’mdh

 WHERE Q’ = ‘CISO’

### BABAAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh = sum over (r, t, F’, S’)

###  IF

### BAEDAMEntityFlag BQ’md = 1

 THEN

### BAHourlyResRCUAwardedQuantity BrtQ’F’S’mdh+ BAHourlyResRCDAwardedQuantity BrtQ’F’S’mdh

### ELSE

### 0

 WHERE Q’ <> ‘CISO’

### BAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh = sum over (r, t) BAHourlyResIRUScheduleQuantity BrtQ’mdh + BAHourlyResIRDScheduleQuantity BrtQ’mdh +

 WHERE Q’ = ‘CISO’

### BABAAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh = sum over (r, t)

### IF

### BAEDAMEntityFlag BQ’md = 1

 THEN

### BAHourlyResIRUScheduleQuantity BrtQ’mdh + BAHourlyResIRDScheduleQuantity BrtQ’mdh

### ELSE

### 0

 WHERE Q’ <> ‘CISO’

### BAResHourlyTotalNPMMSAncillaryServicesQuantity BrtT'uI'Q’M'R'W'F'S'VL'mdh =

SUM (N, z') + NPMDARegUpQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh + NPMDARegDownQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh + NPMDASpinQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh + NPMDANonSpinQSPBrtT’uI’Q’M’R’W’F’S’Nz’VL'mdh

### BAHourlyMarketServicesCBSchedQuantity BQ’mdh = ABS (BAHourlyDAVirtualDemandAwardQuantity BQ’mdh ) + ABS(BAHourlyDAVirtualSupplyAwardQuantity BQ’mdh)

 WHERE Q’ = ‘CISO’

### BABAAHourlyMarketServicesCBSchedQuantity BQ’mdh =

### IF

### BAEDAMEntityFlag BQ’md = 1

 THEN

### ABS (BAHourlyDAVirtualDemandAwardQuantity BQ’mdh ) + ABS(BAHourlyDAVirtualSupplyAwardQuantity BQ’mdh)

### ELSE

### 0

 WHERE Q’ <> ‘CISO’

### BAHourlyMarketServicesEnergySchedQuantity BQ’mdh =  BAResHourlyMarketServicesEnergySchedQuantity BrtQ’mdh

 WHERE Q’ = ‘CISO’

### BABAAHourlyMarketServicesEnergySchedQuantity BQ’mdh =

### IF

### BAEDAMEntityFlag BQ’md = 1

 THEN

### BAResHourlyMarketServicesEnergySchedQuantity BrtQ’mdh

### ELSE

### 0

 WHERE Q’ <> ‘CISO’

###  BAResHourlyMarketServicesEnergySchedQuantity BrtQ’mdh =  MAX ((BAResSettlementIntervalMarketServicesDASchedQuantity BrtuT’I’Q’M’F’S’mdhcif + BAResSettlementIntervalMarketServicesFMMQuantity BrtuT’I’Q’M’F’S’mdhcif + BAResSettlementIntervalMarketServicesRTSchedQuantity BrtuT’I’Q’M’F’S’mdhcif - BAResSettlementIntervalMarketServicesTORQuantity BrtQ’mdhcif ), 0 )

### BAResSettlementIntervalMarketServicesTORQuantity BrtQ’mdhcif = ABS(BAResSettlementIntervalTORFinalBalancedQuantity BrtQ’mdhcif)

### BAResSettlementIntervalTORFinalBalancedQuantity BrtQ’mdhcif =  (0 \* BAEDAMEntityFlag BQ’md) + BASettlementIntervalResourceFinalBalancedContractCRNQuantity BrtNz’mdhcif

 Where z’ = ‘TOR’

 *Implementation Note: Both inputs will serve as business drivers to the output, such that the output can carry Q’ without impacting other charge codes involving BASettlementIntervalResourceFinalBalancedContractCRNQuantity BrtNz’mdhcif.*

### BAResSettlementIntervalMarketServicesRTSchedQuantity BrtuT’I’Q’M’F’S’mdhcif = ABS (( SettlementIntervalRTDOptimalIIE BrtQ’uT’I’M’R’W’F’S’VL’mdhcif + DispatchIntervalRerateEnergy BrtQ’uT’I’M’R’W’F’S’VL’mdhcif + DispatchIntervalIIEMinimumLoadEnergy BrtQ’uT’I’M’R’W’F’S’VL’mdhcif + DispatchIntervalRTPumpingEnergy BrtQ’uT’I’M’R’W’F’S’VL’mdhcif ))

### BAResSettlementIntervalMarketServicesDASchedQuantity BrtuT’I’Q’M’F’S’mdhcif = ABS (SettlementIntervalDayAheadEnergy BrtuT’I’Q’M’F’S’mdhcif + SettlementIntervalResNPMDayAheadEnergy BrtuT’I’Q’M’F’S’mdhcif)

### BAResSettlementIntervalMarketServicesFMMQuantity BrtuT’I’Q’M’F’S’mdhcif = ABS (BAResSettlementIntervalEDAMTotalFMMPart1Quantity BrtuT’I’Q’M’F’S’mdhcif – SettlementIntervalFMMMSSLFSelfSchdEngy BrtuT’I’Q’M’F’S’mdhcif)

### BAResSettlementIntervalEDAMTotalFMMPart1Quantity BrtuT’I’Q’M’F’S’mdhcif =

###  IF

 BAEDAMEntityFlag BQ’md = 1

 THEN

###  SettlementIntervalTotalFMMPart1Qty BrtQ’uT’I’M’F’S’mdhcif

 ELSE

 0

## Outputs

| Output Req ID | Name | Description |
| --- | --- | --- |
| 1 | In addition to any outputs listed below, all inputs shall be included as outputs. | All inputs |
| 2 | BAResSettlementIntervalMarketServicesRTSchedQuantity BrtuT’I’Q’M’F’S’mdhcif  | Settlement Interval Market Services Real Time Schedule (Optimal, Minimum Load, Rerate, Real Time Pumping Energy) for Resource r. (MWh) |
| 3 | BAResSettlementIntervalTORFinalBalancedQuantity BrtQ’mdhcif | Settlement Interval TOR Final Balanced Quantity for Resource r,. (MWh) |
| 4 | BAResHourlyMarketServicesEnergySchedQuantity BrtQ’mdh | Hourly Market Services Energy Schedule (Optimal, Minimum Load, Rerate, Real Time Pumping Energy, Day Ahead Schedule Energy, Day Ahead Load Schedule, FMM Schedule Energy) for Resource r. (MWh)Less TOR Final Balanced Quantities |
| 5 | BAHourlyMarketServicesEnergySchedQuantity BQ’mdh | Hourly Market Services Energy Schedule (Optimal, Minimum Load, Rerate, Real Time Pumping Energy, Day Ahead Schedule Energy, Day Ahead Load Schedule, FMM Schedule Energy) for Business Associate B. (MWh) |
| 6 | BAHourlyMarketServicesCBSchedQuantity BQ’mdh | Hourly Market Services Convergence Bidding Scheduled Quantities for Business Associate B. (MWh) |
| 7 | BADayMarketServicesQuantity BQ’md | Daily sum of Energy Schedules, Ancillary Services, Reliability Capacity, Imbalance Reserves, and Convergence Bidding. |
| 8 | BABAADayMarketServicesQuantity BQ’md | For EDAM BAAs excluding the CISO BAA, the daily sum of Energy Schedules, Ancillary Services, Reliability Capacity, Imbalance Reserves, and Convergence Bidding. |
| 9 | BAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh | Hourly Reliability Capacity Quantity, taken as the sum of Reliability Capacity Up and Reliability Capacity Down quantities. (MW) |
| 10 | BAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh | Hourly Imbalance Reserve Quantity, taken as the sum of Imbalance Reserve Up and Imbalance Reserve Down quantities. (MW) |
| 11 | BAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh | Hourly Market Services Ancillary Services Awards and Self Provisions for Business Associate B. (MWh) |
| 12 | BABAAHourlyMarketServicesEnergySchedQuantity BQ’mdh | For EDAM BAAs excluding the CISO BAA, hourly Market Services Energy Schedule (Optimal, Minimum Load, Rerate, Real Time Pumping Energy, Day Ahead Schedule Energy, Day Ahead Load Schedule, FMM Schedule Energy) for Business Associate B. (MWh) |
| 13 | BABAAHourlyMarketServicesCBSchedQuantity BQ’mdh | For EDAM BAAs excluding the CISO BAA, hourly Market Services Convergence Bidding Scheduled Quantities for Business Associate B. (MWh) |
| 14 | BABAAHourlyMarketServicesReliabilityCapacityQuantity BQ’mdh | For EDAM BAAs excluding the CISO BAA, hourly Reliability Capacity Quantity, taken as the sum of Reliability Capacity Up and Reliability Capacity Down quantities. (MW) |
| 15 | BABAAHourlyMarketServicesImbalanceReserveQuantity BQ’mdh | For EDAM BAAs excluding the CISO BAA, hourly Imbalance Reserve Quantity, taken as the sum of Imbalance Reserve Up and Imbalance Reserve Down quantities. (MW) |
| 16 | BABAAHourlyMarketServicesAncillaryServicesQuantity BQ’mdh | For EDAM BAAs excluding the CISO BAA, hourly Market Services Ancillary Services Awards and Self Provisions for Business Associate B. (MWh) |
| 17 | BAResHourlyMarketServicesAncillaryServicesQuantity BrtQ’F’S’mdh | Hourly Market Services Ancillary Services Awards and Ancillary Services Self Provisions for Resource r. (MW) |
| 18 | BADayMarketServicesQuantity BQ’md | Daily Market Services Quantity. |
| 19 | BADayMarketServicesAmount BQ’md | Daily Market Services Amount. |
| 20 | BAResSettlementIntervalMarketServicesFMMQuantity BrtuT’I’Q’M’F’S’mdhcif  | Settlement Interval Market Services FMM Schedule Energy Quantity for, Resource r. (MWh) |
| 21 | BAResSettlementIntervalMarketServicesDASchedQuantity BrtuT’I’Q’M’F’S’mdhcif  | Settlement Interval Market Services Day Ahead Scheduled Energy for Resource r. (MWh) |
| 22 | BAResSettlementIntervalMarketServicesTORQuantity BrtQ’mdhcif | Settlement Interval Market Services TOR Quantity for Resource r. (MWh) |
| 23 | BAResSettlementIntervalEDAMTotalFMMPart1Quantity BrtuT’I’Q’M’F’S’mdhcif | Settlement Interval EDAM Balancing Authority specific Total FMM Part 1 Quantity (FMM Optimal, FMM Minimum Load, FMM Rerate, FMM Pumping Energy) for Resource r. (MWh) |
| 24 | BAResHourlyTotalNPMMSAncillaryServicesQuantity BrtT'uI'Q’M'R'W'F'S'VL'mdh | NPM summation for Ancillary Self schedules. |

# Charge Code Effective Date

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 4560 GMC Market Services Charge | 5.0 | 01/01/12 |  12/31/11 | Configuration Impacted |
| CC 4560 GMC Market Services Charge | 5.1 | 01/01/12 | 04/30/14 | Configuration Impacted |
| CC 4560 GMC Market Services Charge | 5.2 | 05/01/14 | 09/30/2014 | Configuration Impacted |
| CC 4560 GMC Market Services Charge | 5.3 | 10/01/2014 | 6/30/15 | Configuration and Documentation Edits |
| CC 4560 GMC Market Services Charge | 5.4 | 7/1/15 | 12/31/20 | Configuration and Documentation Edits |
| CC 4560 GMC Market Services Charge | 5.5 | 1/1/21 | 12/31/25 | Configuration and Documentation Edits |
| CC 4560 GMC Market Services Charge | 5.6 | 1/1/26 | Open | Configuration and Documentation Edits |