Settlements & Billing

Configuration Guide: Extended Day-Ahead Market (EDAM) Administrative Charge Bid Transaction Fee

CC 4515

 Version 5.8

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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 Codes 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. The CAISO will charge each EDAM Entity an EDAM Administrative Charge, which consists of the EDAM System Operations Charge and the Day-Ahead and Real-Time portions of the Market Services Charge, both volumetric charges. The CAISO will no longer collect the EIM Administrative Charge from an EDAM Market Participant.

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

In order to participate in ISO Energy Markets, Scheduling Coordinators (SCs) must submit Energy (Physical or Virtual), Regulation Mileage Bids, or Ancillary Services Bids. The Energy Bids comprise of Economic supply or Demand Bids and Self-Schedules. Virtual Bids comprise Economic Supply or Demand Bids only. Ancillary Service Bids comprise Economic Bids or Self-Provisions. All these Bids, Self-Schedules, and Self-Provisions are submitted to the ISO through the Scheduling Infrastructure and Business Rule system (SIBR). The SIBR system provides the Scheduling Coordinators an interface for submitting Bids, Self-Schedules, and Self-Provisions. SIBR also enables ISO systems to process and validate these Bids for correctness based upon business rules. The ISO then utilizes the resulting final Clean Bids, Self-Schedules, and Self-Provisions to manage the source/Demand balance of the electric system within reliability constraints for the Day-Ahead Market (DAM) and Real-Time Market (RTM). During the execution of DAM and RTM, the ISO processes a significant number of bids which do not clear the spot markets and receive Energy (Physical or Virtual), Regulation Mileage Awards, or Ancillary Service Awards. Processing these spot market bids has an impact on the ISO costs and system performance that is directly proportional to the total volume of bid segments submitted, and system performance can be severely degraded as bid segment volumes approach the system limits. The Bid Segment Transaction Fee is designed to recover a portion of the costs the ISO incurs during the execution of the Day Ahead and Real Time markets. As such, this charge code will apply the prevailing rate for Bid Segment Fee per bid segment to each scheduling coordinator resource’s final Clean Bids, Self-Schedules and Self-Provisions. In addition, the credit amounts recovered through this charge code will be applied against the revenue requirements for Market Service Charges (CC 4560).

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each SC resource’s final Clean Bids, Self -Schedules and Self-Provisions.  |
| 1.0.1 | The prevailing rate for Bid Segment Fee under CC 4515 can be found at the CAISO website under Settlements section, and Grid management Charge (GMC) subsection. |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each an SC resource’s Economic Energy Bids and Self-Schedule, which will separately include bid segments for Imbalance Reserve Up (IRU) or Imbalance Reserve Down (IRD). |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each an SC resource’s Economic Virtual Bids. |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each an SC resource’s Economic Ancillary Services Bids and Self Provision per Ancillary Services product type (Regulation Up, Regulation Down, Spin, and Non-Spin). |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each an SC resource’s Reliability Capacity Up (RCU) or Reliability Capacity Down (RCD) Bid segments. |
|  | Eligible resources will include EDAM Administrative Charge costs in their Imbalance Reserves and Reliability Capacity (RC) bids. |
|  | The Bid Segment Transaction Fee will apply the prevailing rate for Bid Segment Fee per bid segment to each an SC resource’s Economic Regulation Up Mileage Bids Price and Regulation Down Mileage Bids Price |
|  | The Bid Segment Transaction quantities shall be calculated based upon total bid segments of submitted bids per relevant product type and relevant market.  |
|  | 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) |
| 4.0 | This Charge Code shall provide an output on a daily basis. |
| 5.0 | This Charge Code shall be billed in accordance to CAISO Payments Calendar. |
| 6.0 | A settlement details file shall provide details for each daily settlement amount. |
| 7.0 | 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. |
| 8.0 | NPM Resources shall be exempted from charges for self schedules and energy & Ancillary Service bids. |

## Predecessor Charge Codes

| Charge Code/ Pre-Calc Name |
| --- |
| None |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| None |

## Inputs - External Systems

| Row # | A | Description |
| --- | --- | --- |
| 1 | CAISOGMCBidSegmentFee md | FERC-approved Bid Segment GMC Transaction Fee. The input data is available from the SaMC standing data based on applicable start and end dates. |
| 2 | BAHourlyDAVirtualBidSegSizeQty BQ’bAA’Qpamdh | The input represents the quantity of Energy offered in association with Business Associate . (MW) |
| 3 | PTBChargeAdjustmentGMCBidSegmentSettlementAmount BQ’Jmd | PTB adjustment variable for this Charge Code, with amount per SC (in $). The input applies to Business Associate B, Trading Month m and Trading Day d. |
| 4 | GMCBidSegmentExclusionFlag B | Flag indicating Bid Segment Transaction exception from Charge Code, where exception is represented by “1”. |
| 5 | BAHourlyResDAMEnergySelfScheduleBidQty BrtuQ’bAA’pF’S’amdh | The input represents the Hourly Day Ahead Market Self Schedule Bid Quantity by Business Associate.The bid segment number for Self Schedule Qty will be set to “0”  |
| 6 | BAHourlyResDAMEnergyBidQty BrtuQ’bAA’pF’S’mdh | The input represents the Day Ahead Market Energy Bid quantity (in MWh) for bid segment, as submitted by Business Associate. |
| 7 | BAHourlyResRTMEnergySelfScheduleBidQty BrtuQ’bAA’pF’S’amdh | The input represents the Hourly Real Time Market Energy Self Schedule Bid Quantity by Business Associate.The bid segment number for Self Schedule Qty will be set to “0” |
| 8 | BAHourlyResRTMEnergyBidQty BrtuQ’bAA’pF’S’mdh | The input represents the Real Time Market Energy Bid quantity (in MWh) for bid segment, as submitted by Business Associate |
| 9 | BAHourlyResRCUBidQty BrtQ’bmdh | The hourly bid quantity for RCU MW Quantity for each resource for each trading day. |
| 10 | BAHourlyResRCDBidQty BrtQ’bmdh | The hourly bid quantity for RCD MW Quantity for each resource for each trading day. |
| 11 | BAHourlyResIRUBidQty BrtQ’bF’S’mdh | The input represents the hourly bid quantity for IRU MW Quantity, as submitted by Business Associate. |
| 12 | BAHourlyResIRDBidQty BrtQ’bF’S’mdh | The input represents the hourly bid quantity for IRD MW Quantity, as submitted by Business Associate. |
| 11 | BAHourlyResDAMSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Day Ahead Energy Spin Self Provision Bid Quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 12 | BAHourlyResDAMSpinBidQty BrtQ’bmdh | The input represents the Day Ahead Market Spin Capacity Bid quantity (MW) as submitted by Business Associate. |
| 13 | BAHourlyResRTMSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Real Time Market Spin Self Provision Bid Quantity as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 14 | BAHourlyResRTMSpinBidQty BrtQ’bmdh | The input represents the Hourly Real Time Market Spin Capacity Bid quantity (in MW) as submitted by Business Associate. |
| 15 | BAHourlyResDAMNonSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Day Ahead Energy Non-Spin Self Provision Bid Quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 16 | BAHourlyResDAMNonSpinBidQty BrtQ’bmdh | The input represents the Day Ahead Market Non-Spin Capacity Bid quantity (MW) as submitted by Business Associate. |
| 17 | BAHourlyResRTMNonSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Real Time Market Non-Spin Self Provision Bid Quantity as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 18 | BAHourlyResRTMNonSpinBidQty BrtQ’bmdh | The input represents the Hourly Real Time Market Non-Spin Capacity Bid quantity (in MW) as submitted by Business Associate. |
| 19 | BAHourlyResDAMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Day Ahead Regulation Up Capacity Self Provision Bid quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 20 | BAHourlyResDAMRegUpBidQty BrtQ’bF’S’mdh | The input represents the Day Ahead Market Regulation Up Capacity Bid quantity (MW) as submitted by Business Associate. |
| 21 | BAHourlyResRTMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Real Time Market Regulation Up Capacity Self Provision Bid Quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 22 | BAHourlyResRTMRegUpBidQty BrtQ’bF’S’mdh | The input represents the Hourly Real Time Market Regulation Up Capacity Bid quantity (in MW) as submitted by Business Associate. |
| 23 | BAHourlyResDAMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Day Ahead Energy Regulation Down Capacity Self Provision Bid Quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 24 | BAHourlyResDAMRegDownBidQty BrtQ’bF’S’mdh | The input represents the Day Ahead Market Regulation Down Capacity Bid quantity (MW) as submitted by Business Associate. |
| 25 | BAHourlyResRTMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Real Time Market Regulation Down Self Provision Capacity Bid Quantity (MW) as submitted by Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 26 | BAHourlyResRTMRegDownBidQty BrtQ’bF’S’mdh | The input represents the Hourly Real Time Market Regulation Down Capacity Bid quantity (in MW) as submitted by Business Associate. |
| 27 | BAHourlyResourceDARegUpMileageBidPrice BrtQ’mdh | Day-ahead Regulation Up Mileage Bid Price (in $/MWh) in association with Business Associate ID.  |
| 28 | BAHourlyResourceDARegDownMileageBidPrice BrtQ’mdh | Day-ahead Regulation Down Mileage Bid Price (in $/MWh) in association with Business Associate ID.  |
| 29 | BAHourlyResourceRTRegUpMileageBidPrice BrtQ’mdh | Real time Regulation Up Mileage Bid Price (in $/MWh) in association with Business Associate ID.  |
| 30 | BAHourlyResourceRTRegDownMileageBidPrice BrtQ’mdh | Real Time Regulation Down Mileage Bid Price (in $/MWh) in association with Business Associate ID.  |
| 31 | GMCRSRCBidSegmentExclusionFlag Br | Flag indicating Resource Specific contractual Bid Segment Transaction exception from Charge Code, where exception is represented by “1”. |
| 32 | BAHourlyResNPMDAMEnergySelfScheduleBidQty BrtuQ’bAA’F’S’pamdh | The input represents the Hourly Day Ahead Market Self Schedule Bid Quantity by NPM Business Associate.The bid segment number for Self Schedule Qty will be set to “0” |
| 33 | BAHourlyResNPMDAMEnergyBidQty BrtuQ’bAA’pF’S’mdh | The input represents the Day Ahead Market Energy Bid quantity (in MWh) for bid segment, as submitted by NPM Business Associate. |
| 34 | BAHourlyResNPMDAMSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Day Ahead Energy Spin Self Provision Bid Quantity (MW) as submitted by NPM Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 35 | BAHourlyResNPMDAMNonSpinSelfProvisionBidQty BrtQ’bmdh | The input represents the Hourly Day Ahead Energy Non-Spin Self Provision Bid Quantity (MW) as submitted by NPM Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 36 | BAHourlyResNPMDAMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Day Ahead Regulation Up Capacity Self Provision Bid quantity (MW) as submitted by NPM Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 37 | BAHourlyResNPMDAMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh | The input represents the Hourly Day Ahead Energy Regulation Down Capacity Self Provision Bid Quantity (MW) as submitted by NPM Business Associate.The bid segment number for Self Provision Qty will be set to “0” |
| 38 | BAHourlyResNPMDAMSpinBidQty BrtQ’bmdh | The input represents the Nodal Pricing Model Day Ahead Market Spin Capacity Bid quantity (MW) as submitted by Business Associate. |
| 39 | BAHourlyResNPMDAMNonSpinBidQty BrtQ’bmdh | The input represents the Nodal Pricing Model Day Ahead Market Non-Spin Capacity Bid quantity (MW) as submitted by Business Associate. |
| 40 | BAHourlyResNPMDAMRegUpBidQty BrtQ’bF’S’mdh | The input represents the Nodal Pricing Model Day Ahead Market Regulation Up Capacity Bid quantity (MW) as submitted by Business Associate. |
| 41 | BAHourlyResNPMDAMRegDownBidQty BrtQ’bF’S’mdh | The input represents the Nodal Pricing Model Day Ahead Market Regulation Down Capacity Bid quantity (MW) as submitted by Business Associate. |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration / Description |
| --- | --- | --- |
| 1 | None |  |

## CAISO Formula

The daily settlement System Operations Grid Management Charge by each Business Associate is derived according to the formulation below.

### BADailyBidSegmentFeeAmount BQ’md = BADailyBidSegmentFeeCount BQ’md \* CAISOGMCBidSegmentFee md

### IF

### GMCBidSegmentExclusionFlag B = 1

### THEN

### BADailyBidSegmentFeeCount BQ’md = 0

### ELSE

### BADailyBidSegmentFeeCount BQ’md = (BAHourlyTotalEnergyBidCount BQ’mdh + BAHourlyAncillaryServicesBidCount BQ’mdh + BAHourlyRegMileageBidCount BQ’mdh + BAHourlyVirtualBidCount BQ’mdh + BAHourlyReliabilityCapacityBidCount BQ’mdh + BAHourlyImbalanceReserveBidCount BQ’mdh)

### BAHourlyTotalEnergyBidCount BQ’mdh =  (BAHourlyResTotalDAMEnergyBidCount BrtuQ’AA’pmdh + BAHourlyTotalResDAMEnergySelfScheduleBidCount BrtuQ’AA’pmdh + BAHourlyResTotalRTMEnergyBidCount BrtuQ’AA’pmdh + BAHourlyTotalResRTMEnergySelfScheduleBidCount BrtuQ’AA’pmdh)

### IF

BAHourlyTotalResDAMEnergySelfScheduleBidCount BrtuQ’AA’pmdh = 0

THEN

BAHourlyResTotalDAMEnergyBidCount BrtuQ’AA’pmdh = BAHourlyTotalResDAEngyBidCount BrtuQ’AA’pmdh

ELSE

BAHourlyResTotalDAMEnergyBidCount BrtuQ’bAA’pmdh = Max(BAHourlyTotalResDAEngyBidCount BrtuQ’AA’pmdh – 1,0)

### BAHourlyTotalResDAMEnergySelfScheduleBidCount BrtuQ’AA’pmdh = BAHourlyResDAMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh

### BAHourlyTotalResDAEngyBidCount BrtuQ’AA’pmdh = BAHourlyResDAMEnergyBidCount BrtuQ’bAA’pmdh

### IF

### (BAHourlyResDAMEnergyBidQty BrtuQ’bAA’pF’S’mdh + BAHourlyResNPMDAMEnergyBidQty BrtuQ’bAA’pF’S’mdh )= 0

### THEN

### BAHourlyResDAMEnergyBidCount BrtuQ’bAA’pmdh = 0

### ELSE

### BAHourlyResDAMEnergyBidCount BrtuQ’bAA’pmdh = 1

### IF

### GMCRSRCBidSegmentExclusionFlag Br = 1

THEN

### BAHourlyResDAMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh = 0

 ELSE

### IF

### (BAHourlyResDAMEnergySelfScheduleBidQty BrtuQ’bAA’pF’S’amdh  + BAHourlyResNPMDAMEnergySelfScheduleBidQty BrtuQ’bAA’F’S’pamdh ) = 0

### THEN

### BAHourlyResDAMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh = 0

### ELSE

### BAHourlyResDAMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh = 1

### IF

BAHourlyTotalResRTMEnergySelfScheduleBidCount BrtuQ’AA’pmdh = 0

THEN

BAHourlyResTotalRTMEnergyBidCount BrtuQ’AA’pmdh = BAHourlyTotalResRTMEngyBidCount BrtuQ’AA’pmdh

ELSE

BAHourlyResTotalRTMEnergyBidCount BrtuQ’AA’pmdh = Max(BAHourlyTotalResRTMEngyBidCount BrtuQ’AA’pmdh – 1,0)

### BAHourlyTotalResRTMEngyBidCount BrtuQ’AA’pmdh = sum over (b) BAHourlyResRTMEnergyBidCount BrtuQ’bAA’pmdh

### IF

### GMCRSRCBidSegmentExclusionFlag Br = 1

THEN

### BAHourlyResRTMEnergyBidCount BrtuQ’bAA’pmdh = 0

### IF

### BAHourlyResRTMEnergyBidQty BrtuQ’bAA’p F’S’mdh = 0

### THEN

### BAHourlyResRTMEnergyBidCount BrtuQ’bAA’pmdh = 0

### ELSE

### BAHourlyResRTMEnergyBidCount BrtuQ’bAA’pmdh = 1

### BAHourlyTotalResRTMEnergySelfScheduleBidCount BrtuQ’AA’pmdh = sum over (b, a) BAHourlyResRTMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh

### IF

### BAHourlyResRTMEnergySelfScheduleBidQty BrtuQ’bAA’pF’S’amdh = 0

### THEN

### BAHourlyResRTMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh = 0

### ELSE

### BAHourlyResRTMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh = 1

### BAHourlyAncillaryServicesBidCount BQ’mdh =  (BAHourlyResDAMSpinSelfProvisionCount BrtQ’bmd + BAHourlyResDAMSpinBidCount BrtQ’bmdh + BAHourlyResRTMSpinSelfProvisionCount BrtQ’bmdh + BAHourlyResRTMSpinBidCount BrtQ’bmdh + BAHourlyResDAMNonSpinSelfProvisionCount BrtQ’bmd + BAHourlyResDAMNonSpinBidCount BrtQ’bmdh + BAHourlyResRTMNonSpinSelfProvisionCount BrtQ’bmdh + BAHourlyResRTMNonSpinBidCount BrtQ’bmdh + BAHourlyResDAMRegUpSelfProvisionCount BrtQ’bmd + BAHourlyResDAMRegUpBidCount BrtQ’bmdh + BAHourlyResRTMRegUpSelfProvisionCount BrtQ’bmdh + BAHourlyResRTMRegUpBidCount BrtQ’bmdh + BAHourlyResDAMRegDownSelfProvisionCount BrtQ’bmd + BAHourlyResDAMRegDownBidCount BrtQ’bmdh + BAHourlyResRTMRegDownSelfProvisionCount BrtQ’bmdh + BAHourlyResRTMRegDownBidCount BrtQ’bmdh

### BAHourlyReliabilityCapacityBidCount BQ’mdh = sum over (r, t, b) BAHourlyResDAMRCUBidCount BrtQ’bmdh + BAHourlyResDAMRCDBidCount BrtQ’bmdh

### IF

###  BAHourlyResRCUBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResDAMRCUBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRCUBidCount BrtQ’bmdh = 1

### IF

###  BAHourlyResRCDBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResDAMRCDBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRCDBidCount BrtQ’bmdh = 1

### BAHourlyImbalanceReserveBidCount BQ’mdh = sum over (r, t) BAHourlyTotalResDAMIRUBidCount BrtQ’mdh + BAHourlyTotalResDAMIRDBidCount BrtQ’mdh

### BAHourlyTotalResDAMIRUBidCount BrtQ’mdh = sum over (b) BAHourlyResDAMIRUBidCount BrtQ’bmdh

### BAHourlyTotalResDAMIRDBidCount BrtQ’mdh = sum over (b) BAHourlyResDAMIRDBidCount BrtQ’bmdh

### IF

### GMCRSRCBidSegmentExclusionFlag Br = 1

THEN

### BAHourlyResDAMIRUBidCount BrtQ’bmdh = 0

### IF

###  BAHourlyResIRUBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResDAMIRUBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMIRUBidCount BrtQ’bmdh = 1

### IF

### GMCRSRCBidSegmentExclusionFlag Br = 1

THEN

### BAHourlyResDAMIRDBidCount BrtQ’bmdh = 0

### IF

###  BAHourlyResIRDBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResDAMIRDBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMIRDBidCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMSpinSelfProvisionBidQty BrtQ’bmdh + BAHourlyResNPMDAMSpinSelfProvisionBidQty BrtQ’bmdh )= 0

### THEN

### BAHourlyResDAMSpinSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMSpinSelfProvisionCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMSpinBidQty BrtQ’bmdh + BAHourlyResNPMDAMSpinBidQty BrtQ’bmdh)= 0

### THEN

### BAHourlyResDAMSpinBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMSpinBidCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMSpinSelfProvisionBidQty BrtQ’bmdh = 0

### THEN

### BAHourlyResRTMSpinSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMSpinSelfProvisionCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMSpinBidQty BrtQ’bmdh = 0

### THEN

### BAHourlyResRTMSpinBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMSpinBidCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMNonSpinSelfProvisionBidQty BrtQ’bmdh + BAHourlyResNPMDAMNonSpinSelfProvisionBidQty BrtQ’bmdh ) =0

### THEN

### BAHourlyResDAMNonSpinSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMNonSpinSelfProvisionCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMNonSpinBidQty BrtQ’bmdh + BAHourlyResNPMDAMNonSpinBidQty BrtQ’bmdh ) = 0

### THEN

### BAHourlyResDAMNonSpinBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMNonSpinBidCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMNonSpinSelfProvisionBidQty BrtQ’bmdh = 0

### THEN

### BAHourlyResRTMNonSpinSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMNonSpinSelfProvisionCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMNonSpinBidQty BrtQ’bmdh = 0

### THEN

### BAHourlyResRTMNonSpinBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMNonSpinBidCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh + BAHourlyResNPMDAMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh )= 0

### THEN

### BAHourlyResDAMRegUpSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRegUpSelfProvisionCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMRegUpBidQty BrtQ’bF’S’mdh +BAHourlyResNPMDAMRegUpBidQty BrtQ’bF’S’mdh)

### = 0

### THEN

### BAHourlyResDAMRegUpBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRegUpBidCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMRegUpSelfProvisionBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResRTMRegUpSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMRegUpSelfProvisionCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMRegUpBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResRTMRegUpBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMRegUpBidCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh + BAHourlyResNPMDAMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh )= 0

### THEN

### BAHourlyResDAMRegDownSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRegDownSelfProvisionCount BrtQ’bmdh = 1

### IF

### (BAHourlyResDAMRegDownBidQty BrtQ’bF’S’mdh +

BAHourlyResNPMDAMRegDownBidQty BrtQ’bF’S’mdh )= 0

### THEN

### BAHourlyResDAMRegDownBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResDAMRegDownBidCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMRegDownSelfProvisionBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResRTMRegDownSelfProvisionCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMRegDownSelfProvisionCount BrtQ’bmdh = 1

### IF

### BAHourlyResRTMRegDownBidQty BrtQ’bF’S’mdh = 0

### THEN

### BAHourlyResRTMRegDownBidCount BrtQ’bmdh = 0

### ELSE

### BAHourlyResRTMRegDownBidCount BrtQ’bmdh = 1

### BAHourlyVirtualBidCount BQ’mdh = BAHourlyDAVirtualBidSegSizeQuantityCount BQ’bAA’Qpamdh

### IF

### BAHourlyDAVirtualBidSegSizeQty BQ’bAA’Qpamdh= 0

### THEN

### BAHourlyDAVirtualBidSegSizeQuantityCount BQ’bAA’Qpamdh = 0

### ELSE

### BAHourlyDAVirtualBidSegSizeQuantityCount BQ’bAA’Qpamdh = 1

### BAHourlyRegMileageBidCount BQ’mdh = BAHourlyResourceRegMileageBidCount BrtQ’mdh

### BAHourlyResourceRegMileageBidCount BrtQ’mdh = (BAHourlyResourceDARegUpMileageBidPriceCount BrtQ’mdh + BAHourlyResourceDARegDownMileageBidPriceCount BrtQ’mdh + BAHourlyResourceRTRegUpMileageBidPriceCount BrtQ’mdh + BAHourlyResourceRTRegDownMileageBidPriceCount BrtQ’mdh )

### IF

### BAHourlyResourceDARegUpMileageBidPrice BrtQ’mdh >= 0

### THEN

### BAHourlyResourceDARegUpMileageBidPriceCount BrtQ’mdh = 1

### ELSE

### BAHourlyResourceDARegUpMileageBidPriceCount BrtQ’mdh = 0

### IF

### BAHourlyResourceDARegDownMileageBidPrice BrtQ’mdh >= 0

### THEN

### BAHourlyResourceDARegDownMileageBidPriceCount BrtQ’mdh = 1

### ELSE

### BAHourlyResourceDARegDownMileageBidPriceCount BrtQ’mdh = 0

### IF

### BAHourlyResourceRTRegUpMileageBidPrice BrtQ’mdh >= 0

### THEN

### BAHourlyResourceRTRegUpMileageBidPriceCount BrtQ’mdh = 1

### ELSE

### BAHourlyResourceRTRegUpMileageBidPriceCount BrtQ’mdh = 0

### IF

### BAHourlyResourceRTRegDownMileageBidPrice BrtQ’mdh >= 0

### THEN

### BAHourlyResourceRTRegDownMileageBidPriceCount BrtQ’mdh = 1

### ELSE

### BAHourlyResourceRTRegDownMileageBidPriceCount BrtQ’mdh = 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 | BAHourlyDAVirtualBidSegSizeQuantityCount BQ’bAA’Qpamdh | Hourly Virtual Bid Segment Count by Business Associate. |
| 3 | BAHourlyVirtualBidCount BQ’mdh | The Total hourly Virtual Bid Count for Business Associate. |
| 4 | BAHourlyResRTMRegDownBidCount BrtQ’bmdh | Hourly Real Time Market Regulation Down Bid Count of Business Associate. |
| 5 | BAHourlyResDAMRCUBidCount BrtQ’bmdh | Hourly Real Time Market RCU Bid Count of Business Associate. |
| 6 | BAHourlyResDAMRCDBidCount BrtQ’bmdh | Hourly Real Time Market RCD Bid Count of Business Associate. |
| 7 | BAHourlyTotalResDAMIRUBidCount BrtQ’mdh | Hourly Real Time Market total IRU Bid Count of Business Associate. |
| 8 | BAHourlyTotalResDAMIRDBidCount BrtQ’mdh | Hourly Real Time Market total IRD Bid Count of Business Associate. |
| 9 | BAHourlyResDAMIRUBidCount BrtQ’bmdh | Hourly Real Time Market IRU Bid Count of Business Associate, with complete attribute set. |
| 10 | BAHourlyResDAMIRDBidCount BrtQ’bmdh | Hourly Real Time Market IRD Bid Count of Business Associate, with complete attribute set. |
| 11 | BAHourlyResRTMRegDownSelfProvisionCount BrtQ’bmdh | Hourly Real Time Market Regulation Down Self Provision Count of Business Associate. |
| 12 | BAHourlyResDAMRegDownBidCount BrtQ’bmdh | Hourly Day Ahead Market Regulation Down Bid Count of Business Associate. |
| 13 | BAHourlyResDAMRegDownSelfProvisionCount BrtQ’bmdh | Hourly Day Ahead Market Regulation Down Self Provision Count of Business Associate. |
| 14 | BAHourlyResRTMRegUpBidCount BrtQ’bmdh | Hourly Real Time Market Regulation Up Bid Count of Business Associate. |
| 15 | BAHourlyResRTMRegUpSelfProvisionCount BrtQ’bmdh | Hourly Real Time Market Regulation Up Self Provision Count of Business Associate. |
| 16 | BAHourlyResDAMRegUpBidCount BrtQ’bmdh | Hourly Day Ahead Market Regulation Up Bid Count of Business Associate. |
| 17 | BAHourlyResDAMRegUpSelfProvisionCount BrtQ’bmdh | Hourly Day Ahead Market Regulation Up Self Provision Count of Business Associate. |
| 18 | BAHourlyResRTMNonSpinBidCount BrtQ’bmdh | Hourly Real Time Market Non-Spin Bid Count of Business Associate. |
| 19 | BAHourlyResRTMNonSpinSelfProvisionCount BrtQ’bmdh | Hourly Real Time Market Non-Spin Self Provision Count of Business Associate. |
| 20 | BAHourlyResDAMNonSpinBidCount BrtQ’bmdh | Hourly Day Ahead Market Non-Spin Bid Count of Business Associate. |
| 21 | BAHourlyResDAMNonSpinSelfProvisionCount BrtQ’bmdh | Hourly Day Ahead Market Non-Spin Self Provision Count of Business Associate. |
| 22 | BAHourlyResRTMSpinBidCount BrtQ’bmdh | Hourly Real Time Market Spin Bid Count of Business Associate. |
| 23 | BAHourlyResRTMSpinSelfProvisionCount BrtQ’bmdh | Hourly Real Time Market Spin Self Provision Count of Business Associate. |
| 24 | BAHourlyResDAMSpinBidCount BrtQ’bmdh | Hourly Day Ahead Market Spin Bid Count of Business Associate. |
| 25 | BAHourlyResDAMSpinSelfProvisionCount BrtQ’bmdh | Hourly Day Ahead Market Spin Self Provision Count of Business Associate. |
| 26 | BAHourlyAncillaryServicesBidCount BQ’mdh | Total Hourly Ancillary Services Bid Count by Business Associate. |
| 27 | BAHourlyReliabilityCapacityBidCount BQ’mdh | Total Hourly Reliability Capacity Bid Count by Business Associate. |
| 28 | BAHourlyImbalanceReserveBidCount BQ’mdh | Total hourly Imbalance Reserve Bid Count by Business Associate. |
| 28 | BAHourlyResRTMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh | The Hourly Real Time Market Energy Self Schedule Count by Business Associate. |
| 29 | BAHourlyTotalResRTMEnergySelfScheduleBidCount BrtuQ’AA’pmdh | The Total Hourly Real Time Market Energy Self Schedule Count by Business Associate. |
| 30 | BAHourlyResRTMEnergyBidCount BrtuQ’bAA’pmdh | The Hourly Real Time Market Energy Bid Count by Business Associate. |
| 31 | BAHourlyResDAMEnergySelfScheduleBidCount BrtuQ’bAA’pamdh | The Hourly Day Ahead Market Energy Self Schedule Count by Business Associate. |
| 32 | BAHourlyTotalResDAMEnergySelfScheduleBidCount BrtuQ’AA’pmdh | The Total Hourly Day Ahead Market Energy Self Schedule Count by Business Associate. |
| 33 | BAHourlyResDAMEnergyBidCount BrtuQ’bAA’pmdh | The Hourly Day Ahead Market Energy Bid Count by Business Associate. |
| 34 | BAHourlyTotalEnergyBidCount BQ’mdh | The Total Energy Bid Count by Business Associate. |
| 35 | BADailyBidSegmentFeeCount BQ’md | The Total Daily Bid Segment Count by Business Associate B of Trading Month m, Trading Day d. |
| 36 | BADailyBidSegmentFeeAmount BQ’md | The Daily Bid Segment Fee Amount by Business Associate |
| 37 | BAHourlyTotalResDAEngyBidCount BrtuQ’AA’pmdh | The hourly Total Resource Day Ahead Market Energy Bid Count for Business Associate. |
| 38 | BAHourlyTotalResRTMEngyBidCount BrtuQ’AA’pmdh | The hourly Total Resource Real Time Market Energy Bid Count for Business Associate. |
| 39 | BAHourlyResTotalDAMEnergyBidCount BrtuQ’bAA’pmdh | The Total Hourly Resource Day Ahead Market Energy Bid Segment Count for Business Associate. |
| 40 | BAHourlyResTotalRTMEnergyBidCount BrtuQ’bAA’pmdh | The Total Hourly Resource Real Time Market Energy Bid Segment Count for Business Associate. |
| 41 | BAHourlyResourceDARegUpMileageBidPriceCount BrtQ’mdh | The Hourly Day Ahead Market Regulation Up Mileage Bid Price Count by Business Associate. |
| 42 | BAHourlyResourceDARegDownMileageBidPriceCount BrtQ’mdh  | The Hourly Day Ahead Market Regulation Down Mileage Bid Price Count by Business Associate. |
| 43 | BAHourlyResourceRTRegUpMileageBidPriceCount BrtQ’mdh | The Hourly Real Time Market Regulation Up Mileage Bid Price Count by Business Associate. |
| 44 | BAHourlyResourceRTRegDownMileageBidPriceCount BrtQ’mdh | The Hourly Real Time Market Regulation Down Mileage Bid Price Count by Business Associate. |
| 45 | BAHourlyResourceRegMileageBidCount BrtQ’mdh | The Total Hourly Regulation Mileage Bid Count by Business Associate. |
| 46 | BAHourlyRegMileageBidCount BQ’mdh | The Total Hourly Regulation Mileage Bid Count by Business Associate. |

##

# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 4515 GMC Bid Transaction Fee | 5.0 | 01/01/12 |  12/31/11 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.1 | 01/01/12 |  5/31/13 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.2 | 06/01/13 | 4/30/14 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.2a | 5/1/14 | 9/30/14 | Documentation Only |
| CC 4515 GMC Bid Transaction Fee | 5.3 | 10/1/14 | 4/30/15 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.4 | 5/1/15 |  10/31/16 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.5 | 11/1/16 | 10/31/16 | Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.5a | 11/1/16 | 12/31/20 | Documentation Edits Only |
| CC 4515 GMC Bid Transaction Fee | 5.6 | 1/1/21 | 12/31/20 | Documentation & Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.6.1 | 1/1/21 | 2/15/22 | Documentation & Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.7 | 2/16/22 | 12/31/25 | Documentation & Configuration Impacted |
| CC 4515 GMC Bid Transaction Fee | 5.8 | 1/1/26 | Open | Documentation & Configuration Impacted |