Settlements & Billing

Configuration Guide: Extended Day-Ahead Market (EDAM) Access Charge

**Pre-Calculation**

 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 SaMC Charge Code in one document.

# Introduction

## Background

The CAISO determines an EDAM Access Charge for each Balancing Authority Area in the EDAM area (EDAM BAA) based on the aggregate inputs of each transmission service provider (TSP) in that BAA. The CAISO will assess the EDAM Access Charges, allocate revenues collected, and true-up actual revenue recovery through calculation of the next year’s EDAM Access Charges. EDAM Entities will provide forecasts for their EDAM TSPs of the aggregate EDAM Recoverable Revenue from the three components: (1) Short-Term Firm and Non-Firm Point-to-Point Transmission and Wheeling Access Charge Revenues; (2) new Transmission Capacity; and (3) Recovery of Transmission Costs Associated With EDAM Wheeling Through Volumes Net of Imports/Exports.

To recover each EDAM TSP’s EDAM Recoverable Revenue, the CAISO will assess an EDAM Access Charge to Gross Load in each EDAM BAA. Each EDAM Access Charge will recover the projected EDAM Recoverable Revenue for the EDAM BAAs outside the BAA for that EDAM Access Charge, such that no EDAM BAA will be assessed its own projected EDAM Recoverable Revenue. The CAISO will assess EDAM Access Charges based on the EDAM BAAs’ Gross Loads.

## Description

 The EDAM Access Charge pre-calculation calculates the EDAM Access Charge Rate to be used in the EDAM Access Charge and EDAM Access Charge Payment Charge Codes.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
| 1.0 | This pre-calculation supports the daily EDAM Access Charge settlement charges and payments in charge codes 8322 and 8326, respectively. |
| 2.0 | **Distributing the EDAM BAA recoverable revenue:**For each EDAM BAA recoverable revenue, this pre-calculation distributes each BAA’s recoverable revenue to the other EDAM BAAs in proportion to its BAA’s gross load. |
| 2.1 | The recoverable revenue is the sum of the following three components and any true-ups: (1) Historical Revenue Recovery; (2) New Network Upgrades that Increase EDAM Transfer Capability; and (3) Revenues from Wheeling-Through Transfers Exceeding the Transmission Service Provider’s (TSP) Imports and Exports. |
| 2.2 | The first two components - Historical Revenue Recovery and New Network Upgrades that Increase EDAM Transfer Capability – are calculated and submitted by the EDAM Entity. |
| 3.0 | The third component - Revenues from Wheeling-Through Transfers Exceeding the Transmission Service Provider’s (TSP) Imports and Exports – is calculated in this pre-calculation.  |
| 3.1 | **Step 1: this pre-calculation will calculate the total monthly volume of MWh.** |
| 3.1.1 | This pre-calculation will calculate the total volume of wheeling-through transactions in excess of the total net transfers (imports and exports) of the applicable EDAM BAAs, as measured on a monthly basis. |
| 3.1.2 | EDAM Entities shall receive the monthly volume of wheeling-through transactions in excess of the total net transfers in settlement statement supporting information in the BAA Bill Determinant file. |
| 3.1.3 | The monthly volume of wheeling-through transactions is calculated for EDAM Entities, including the CISO. |
| 3.2 | **Step 2: this pre-calculation will calculate the total monthly revenue based on volume and the transmission rate.** |
| 3.2.1 | This pre-calculation shall then calculate revenue based on MWh calculated in the business rules above by the applicable EDAM TSP’s non-firm hourly point-to-point transmission rate. |
| 3.2.2 | For PTOs in the CISO BAA, the CAISO will use the applicable Wheeling Access Charge (WAC) Rate. |
| 3.2.3 | This calculation is for EDAM Entities, including the CAISO, on a monthly basis. |
| 3.2.4 | EDAM Entities shall receive supporting information concerning the calculation of the revenue in settlement statements in the BAA Bill Determinant file. |
| 3.3 | **Step 3 (completed by EDAM Entity):**The EDAM Entity shall calculate the annual revenues from Wheeling-Through Transfers exceeding the TSP’s Imports and Exports based on the monthly amount received from the CAISO in business rule 3.2. |
| 3.4 | EDAM Entities shall receive the monthly volume of wheeling-through transactions in excess of the total net transfers in settlement statement supporting information in the BAA Bill Determinant file. |
| 4.0 | The gross load of the BAA will be excluded when calculating the distribution of recoverable revenue. For example, BAA 1’s recoverable revenue will be distributed to total EDAM BAA gross load, excluding BAA 1’s gross load. |
| 5.0 | This pre-calculation shall calculate the total distributed cost for each BAA as the sum of the distributed costs from the other BAAs. |
| 6.0 | This pre-calculation shall calculate BAA-specific EDAM Access Charge Rates based on gross load. |
| 6.1 | The total EDAM Access Charge cost distribution is calculated is the distribution to each BAA divided by the BAA gross load. |
| 6.2 | The BAA EDAM Access Charge rate is calculated by the BAA distribution components. Each BAA EDAM Access Charge rate by distribution shall be calculated by dividing each BAA’s distributed recoverable costs from other EDAM BAAs by the BAA gross load. |
| 6.3 | Example:BAA 1’s total annual cost allocation = $1,000,000BAA 1’s annual gross load = 40,000,000 MWhEDAM Access Charge Rate = ($1,000,000 / 40,000,000 MWh) = $0.025/MWhBreakdown of cost allocation:BAA 1 🡪 BAA 2 = ($400,000 / 40,000,000 MWh) = $0.010/MWhBAA 1 🡪 BAA 3 = ($600,000 / 40,000,000 MWh) = $0.015/MWh |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| MSS Netting PC |
| High Voltage Access Charge and Transition Charge PC |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 8322 – EDAM Access Charge |
| CC 8326 – EDAM Access Charge Payment |

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
| 1 | BAEDAMEntityFlag BQ’md | Flag indicating whether the entity participates in the EDAM. A value of 1 indicates participation, a value of 0 does not. |
| 2 | BAAAnnualNonFirmHourlyPointToPointTransmissionRate Q’ | Each EDAM Entity will provide the Transmission Service Provider’s non-firm hourly point-to-point rate. |
| 3 | BAAEDAMDailyNetExportQuantity Q’Q’’md | The daily net export quantity for transfers between EDAM BAAs. |
| 4 | BAAEDAMDailyNetImportQuantity Q’Q’’md | The daily net import quantity for transfers between EDAM BAAs. |
| 5 | EDAMBAADailyHistoricRevenueRecoveryAmt Q’Q’’md | The daily historical transmission revenue recovery amount, submitted by the EDAM Entity. |
| 6 | EDAMBAADailyNetworkUpgradeRecoverableAmt Q’Q’’md | The daily network upgrade recoverable revenue amount, submitted by the EDAM Entity. |

## Inputs - Predecessor Charge Codes or Pre-calculations

|  |  |  |
| --- | --- | --- |
| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration |
| 1 | HVACMeteredLoadQuantity BrtQ’uvHn’PF'S'Nmdhcif | High Voltage Access Charge and Transition Charge PC |
| 2 | HighVoltageCAISOWideRate md | High Voltage Access Charge and Transition Charge PC |
| 3 | BAResSettlementIntervalDDR\_ASRegDemandAdjustmentQuantity BrtF'S'mdhcif | MSS Netting PC |

## CAISO Formula

###  The formulas to calculate the BAA-specific EDAM Access Charge Rates are below.

### DailyISOBAAEDAMAccessChargeRate Q’md = ISOBAATotalDistributedCostAmount Q’md / EDAMBAAAnnualMeteredLoadQuantity Q’md

 Where Q’ = ‘CISO’

### DailyPACEBAAEDAMAccessChargeRate Q’md = PACEBAATotalDistributedCostAmount Q’md / EDAMBAADailyMeteredLoadQuantity Q’md

 Where Q’ = ‘PACE’

### DailyPACWBAAEDAMAccessChargeRate Q’md = PACWBAATotalDistributedCostAmount Q’md / EDAMBAADailyMeteredLoadQuantity Q’md

 Where Q’ = ‘PACW’

### DailyPGEBAAEDAMAccessChargeRate Q’md = PGEBAATotalDistributedCostAmount Q’md / EDAMBAADailyMeteredLoadQuantity Q’md

 Where Q’ = ‘PGE’

### DailyBANCBAAEDAMAccessChargeRate Q’md = BANCBAATotalDistributedCostAmount Q’md / EDAMBAADailyMeteredLoadQuantity Q’md

 Where Q’ = ‘BANC’

### EDAMAreaTotalDailyProjectedDistributedCostAmount md= Sum over (Q’)

###  PACEBAATotalDistributedCostAmount Q’md + PACWBAATotalDistributedCostAmount Q’md + PGEBAATotalDistributedCostAmount Q’md + BANCBAATotalDistributedCostAmount Q’md + ISOBAATotalDistributedCostAmount Q’md

### PACEBAATotalDistributedCostAmount Q’md = Sum over (Q’’) EDAMAreaRecoverableRevenueDistributionAmount md - PACEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### PACWBAATotalDistributedCostAmount Q’md = Sum over (Q’’) EDAMAreaRecoverableRevenueDistributionAmount md - PACWBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### PGEBAATotalDistributedCostAmount Q’md = Sum over (Q’’) EDAMAreaRecoverableRevenueDistributionAmount md- PGEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### BANCBAATotalDistributedCostAmount Q’md = Sum over (Q’’) EDAMAreaRecoverableRevenueDistributionAmount md - BANCBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### ISOBAATotalDistributedCostAmount Q’md = Sum over (Q’’) EDAMAreaRecoverableRevenueDistributionAmount md - ISOBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### EDAMAreaRecoverableRevenueDistributionAmount ­md = Sum over (Q’, Q’’) ISOBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md + PACEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md + PACWBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md +

 PGEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md + BANCBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

### ISOBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

 ISOBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md = EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md \* (EDAMBAADailyMeteredLoadQuantity Q’md / (EDAMAreaDailyMeteredLoadQuantity md - EDAMBAADailyMeteredLoadQuantity Q’md))

WHERE Q’ = ‘CISO’

 AND Q’’ <> ‘CISO’

### PACEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

 PACEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md = EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md \* (EDAMBAADailyMeteredLoadQuantity Q’md / (EDAMAreaDailyMeteredLoadQuantity md - EDAMBAADailyMeteredLoadQuantity Q’md)

WHERE Q’ = ‘PACE’

 AND Q’’ <> ‘PACE’

### PACWBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

 PACWBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md = EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md \* (EDAMBAADailyMeteredLoadQuantity Q’md / (EDAMAreaDailyMeteredLoadQuantity md - EDAMBAADailyMeteredLoadQuantity Q’md)

WHERE Q’ = ‘PACW’

 AND Q’’ <> ‘PACW’

### PGEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

 PGEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md = EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md \* (EDAMBAADailyMeteredLoadQuantity Q’md / (EDAMAreaDailyMeteredLoadQuantity md - EDAMBAADailyMeteredLoadQuantity Q’md)

WHERE Q’ = ‘PGE’

 AND Q’’ <> ‘PGE’

### BANCBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md

 BANCBAASpecificRecoverableRevenueDistributionAmount Q’Q’’md = EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md \* (EDAMBAADailyMeteredLoadQuantity Q’md / (EDAMAreaDailyMeteredLoadQuantity md - EDAMBAADailyMeteredLoadQuantity Q’md)

WHERE Q’ = ‘BANC’

 AND Q’’ <> ‘BANC’

### EDAMBAASpecificRecoverableRevenueAmount Q’Q’’md = EDAMBAADailyHistoricRevenueRecoveryAmt Q’Q’’md + EDAMBAADailyNetworkUpgradeRecoverableAmt Q’Q’’md + EDAMBAADailyWheelThroughTransferRevenueAmount Q’Q’’md

### The following formulas calculate the Wheel-Through Revenue Transfer Amount.

###  EDAMBAAAnnualWheelThroughTransferRevenueAmount Q’Q’’ = Sum over (m) EDAMBAAMonthlyWheelThroughTransferRevenueAmount Q’Q’’m

### EDAMBAAMonthlyWheelThroughTransferRevenueAmount Q’Q’’m

#### IF

 Q’ = ‘CISO’

 THEN

 EDAMBAAMonthlyWheelThroughTransferRevenueAmount Q’Q’’m = BAAMonthlyWheelThroughExceedingNetTransferQuantity Q’Q’’m \* HighVoltageCAISOWideMonthlyRate m

 ELSE

####  EDAMBAAMonthlyWheelThroughTransferRevenueAmount Q’Q’’m = BAAMonthlyWheelThroughExceedingNetTransferQuantity Q’Q’’m \* (BAAAnnualNonFirmHourlyPointToPointTransmissionRate Q’/12)

### HighVoltageCAISOWideMonthlyRate m= Sum over (d) HighVoltageCAISOWideRate md

### BAAMonthlyWheelThroughExceedingNetTransferQuantity Q’Q’’m = Max((BAAMonthlyWheelThroughTransactionQuantity Q’Q’’m – BAAEDAMTotalDailyTransfers Q’Q’’md) , 0)

 Both inputs above will be business drivers to calculate this for EDAM BAAs.

### BAAEDAMTotalDailyTransfers Q’md  = Sum over (B, Q’’) BAEDAMEntityFlag BQ’md \* BAAEDAMDailyNetTransferQuantity Q’Q’’md

### BAAEDAMDailyNetTransferQuantity Q’Q’’md = BAAEDAMDailyExportQuantity Q’Q’’md - BAAEDAMDailyImportQuantity Q’Q’’md

### The following formulas calculate EDAM BAA gross load values.

 EDAMAreaDailyMeteredLoadQuantity md = Sum over (Q’) EDAMBAADailyMeteredLoadQuantity Q’md)

### EDAMBAADailyMeteredLoadQuantity Q’md = Sum over (B, r, t, u, v, H, n’, P, F’, S’, N, c, I, f) BAEDAMEntityFlag BQ’md \* (HVACMeteredLoadQuantity BrtQ’uvHn’PF'S'Nmdhcif + BAResSettlementIntervalDDR\_ASRegDemandAdjustmentQuantity BrtF'S'mdhcif)

## Outputs

| Output Req ID | Name | Description |
| --- | --- | --- |
|  | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
| 1 | DailyISOBAAEDAMAccessChargeRate Q’md | The daily EDAM Access Charge Rate for the CISO BAA. **($/MWh)** |
| 2 | AnnualISOBAAEDAMAccessChargeRate Q’ | The annual EDAM Access Charge Rate for the CISO BAA. **($/MWh)** |
| 3 | DailyPACEBAAEDAMAccessChargeRate Q’md | The daily EDAM Access Charge Rate for the PACE BAA. **($/MWh)** |
| 4 | AnnualPACEBAAEDAMAccessChargeRate Q’ | The annual EDAM Access Charge Rate for the PACE BAA. **($/MWh)** |
| 5 | DailyPACWBAAEDAMAccessChargeRate Q’md | The daily EDAM Access Charge Rate for the PACW BAA. **($/MWh)** |
| 6 | AnnualPACWBAAEDAMAccessChargeRate Q’ | The annual EDAM Access Charge Rate for the PACW BAA. **($/MWh)** |
| 7 | DailyPGEBAAEDAMAccessChargeRate Q’md | The daily EDAM Access Charge Rate for the PGE BAA. **($/MWh)** |
| 8 | AnnualPGEBAAEDAMAccessChargeRate Q’ | The annual EDAM Access Charge Rate for the PGE BAA. **($/MWh)** |
| 9 | DailyBANCBAAEDAMAccessChargeRate Q’md | The annual EDAM Access Charge Rate for the BANC BAA. **($/MWh)** |
| 10 | AnnualBANCBAAEDAMAccessChargeRate Q’ | The annual EDAM Access Charge Rate for the BANC BAA. **($/MWh)** |
| 11 | PACEBAATotalDistributedCostAmount Q’ | The total annual distributed cost for the PACE BAA, calculated as the sum of the distributed costs form other BAAs. **($)** |
| 12 | PACWBAATotalDistributedCostAmount Q’ | The total annual distributed cost for the PACW BAA, calculated as the sum of the distributed costs form other BAAs. **($)** |
| 13 | PGEBAATotalDistributedCostAmount Q’ | The total annual distributed cost for the PGE BAA, calculated as the sum of the distributed costs form other BAAs. **($)** |
| 14 | BANCBAATotalDistributedCostAmount Q’ | The total annual distributed cost for the BANC BAA, calculated as the sum of the distributed costs form other BAAs. **($)** |
| 15 | ISOBAATotalDistributedCostAmount Q’ | The total annual distributed cost for the CISO BAA, calculated as the sum of the distributed costs form other BAAs. **($)** |
| 16 | EDAMAreaRecoverableRevenueDistributionAmount | The total annual EDAM Area recoverable revenue distribution amount. **($)** |
| 17 | ISOBAASpecificRecoverableRevenueDistributionAmount Q’Q’’  | The annual revenue recovered by the CISO BAA, allocated by its share of gross load of the gross load in the EDAM Area. ($) |
| 18 | PACEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’  | The annual revenue recovered by the PACE BAA, allocated by its share of gross load of the gross load in the EDAM Area. ($) |
| 19 | PACWBAASpecificRecoverableRevenueDistributionAmount Q’Q’’ | The annual revenue recovered by the PACW BAA, allocated by its share of gross load of the gross load in the EDAM Area. ($) |
| 20 | PGEBAASpecificRecoverableRevenueDistributionAmount Q’Q’’  | The annual revenue recovered by the PGE BAA, allocated by its share of gross load of the gross load in the EDAM Area. ($) |
| 21 | BANCBAASpecificRecoverableRevenueDistributionAmount Q’Q’’  | The annual revenue recovered by the BANC BAA, allocated by its share of gross load of the gross load in the EDAM Area. ($) |
| 22 | EDAMBAASpecificRecoverableRevenueAmount Q’Q’’ | The sum of the components composing of the revenue recovery annual amount. **($)** |
| 23 | EDAMBAAAnnualWheelThroughTransferRevenueAmount Q’Q’’ | The EDAM BAA-specific annual wheel through transfer revenue amount. |
| 24 | EDAMBAAMonthlyWheelThroughTransferRevenueAmount Q’Q’’m | The EDAM BAA-specific monthly wheel through transfer revenue amount. |
| 25 | HighVoltageCAISOWideMonthlyRate m | The monthly TAC rate for the CISO BAA. **($/MWh)** |
| 26 | BAAMonthlyWheelThroughExceedingNetTransferQuantity Q’Q’’m | The quantity of wheel throughs within a BAA that exceed the net transfer quantity. (MW) |
| 27 | BAAEDAMTotalDailyTransfers Q’m   | The total amount of daily transfers across the EDAM area. (MW) |
| 28 | BAAEDAMDailyNetTransferQuantity Q’Q’’md | The daily transfers across EDAM BAAs, calculated as BAA exports minus imports. (MW) |
| 29 | EDAMAreaAnnualMeteredLoadQuantity | The total annual metered load quantity across the EDAM area. (MW) |
| 30 | EDAMBAAAnnualMeteredLoadQuantity Q’ | The EDAM BAA-specific annual metered load quantity. |

# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| EDAM Access Charge | 5.0 | 5/1/26 | Open | Configuration Impacted |