Settlements & Billing

Configuration Guide:   
(CC 7896)

Version 5.3

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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 Capacity Procurement Mechanism (CPM) is the backbone of the ISO backstop procurement authority. It ensures that the ISO will have sufficient capacity available to maintain reliable operation of the grid. The ISO shall have the authority to designate Eligible Capacity to provide CPM Capacity services under the CPM to address the following circumstances:

* + Insufficient Local Capacity Area Resources in an annual Resource Adequacy Plan
  + Insufficient Local Capacity Area Resources in a monthly Resource Adequacy Plan
  + Collective deficiency in Local Capacity Area Resources
  + Insufficient Resource Adequacy Resources in an LSE’s annual or monthly Resource Adequacy Plan
  + A CPM Significant Event
  + A reliability or operational need for an Exceptional Dispatch CPM
  + A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans

A resource is designated under CPM through a competitive solicitation process. Specifically the ISO would:

* Secure backstop capacity under the CPM through a competitive solicitation process in which market participants would submit capacity bids.
* Implement a market power mitigation procedure consisting of an offer cap and resource-specific market power mitigation measures.
* Pay a resource-specific offer price to the resource designated under the CPM competitive solicitation process

For the CPM Allocation, ISO Tariff Sections 43A.8.1 through 43A.8.7 establish the method for allocating the costs of CPM capacity payments for each category of CPM designation. The allocation method for each CPM category is as follows:

* For insufficient Local Capacity Area Resources in an annual RA Plan, the CPM costs are allocated pro rata to each Scheduling Coordinator for a deficient LSE based on the ratio of that LSE’s deficiency to the deficiency within the TAC area, based on the deficiency specific to and considered for an Annual RA Plan.
* For insufficient Local Capacity Area Resources in a monthly RA Plan, the CPM costs are allocated pro rata to each Scheduling Coordinator for a deficient LSE based on the ratio of that LSE’s deficiency to the deficiency within the TAC area, based on the deficiency specific to and considered for the Monthly RA Plan. Note that this is distinct and separate from any monthly breakdown coming from an Annual RA Plan.
* For a collective deficiency of Local Capacity Area Resources in an annual RA Plan, the CPM costs are allocated to all Scheduling Coordinators of LSEs serving load in the TAC area in which the deficient local capacity area was located. The allocation is based on Scheduling Coordinators’ proportionate share of Load in such TAC Area(s) as determined in accordance with Tariff Section 40.3.2, excluding Scheduling Coordinators for LSEs that procured additional capacity in accordance with Section 43A.2.1.2 on a proportionate basis, to the extent of their additional procurement.
* For insufficient RA resources to comply with an LSE’s annual and monthly demand and reserve margin requirements, the CPM cost allocation is made pro rata to each LSE based on the proportion of its deficiency to the aggregate deficiency. There will be separate annual and monthly cost allocation basis depending on the timing of reserve margin requirements.
* For a significant event, or Exceptional Dispatch CPM, the costs are allocated to all Scheduling Coordinators for LSEs that serve load in the TAC area where the need for the designation arose, based on each Scheduling Coordinator’s percentage of actual load in the TAC area to total load in that area.

## Description

CC 7896 (Monthly CPM Allocation) allocates the cost of the CPM capacity procured for each month. For the following CPM designation types:

(a) Insufficient Local capacity from a monthly RA Plan,

(b) Insufficient flexible capacity, or

(c) Insufficient system capacity in cumulative load serving entities’ annual or monthly resource plans,

each CPM designation cost is allocated pro-rata to SC for the LSE based on LSE deficiency within the TAC or entire system (if applicable) served by the CPM designation. On the other hand, for the following CPM designation types:

(d) Significant event, or

(f) Exceptional Dispatch

the total cost per designation type is allocated pro-rata to SCs based on Scheduling Coordinator’s Load within TAC area(s) served by each of the above CPM designation types.

Further, for CPM designation of Collective deficiency, the cost shall be allocated based on Scheduling Coordinators’ proportionate share of Load in such TAC Area(s) as determined in accordance with Tariff Section 40.3.2, excluding Scheduling Coordinators for LSEs that procured additional capacity in accordance with Section 43A.2.1.2 on a proportionate basis, to the extent of their additional procurement. Within each TAC Area, this is implemented in two steps: (a) identify the insufficient local capacity from an Annual RA Plan to cover annual individual deficiency, and then any remainder, (b) identify as the collective deficiency. The Annual RA plan deficiency is split into monthly deficiencies, but this breakdown into monthly should not be confused with monthly RA plan deficiency, which is distinct and separate from that coming from the Annual RA plan deficiency.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
| 1.0 | This charge code applies to:   1. Scheduling Coordinators for LSEs which have LSE deficiency, or 2. Scheduling Coordinators which have Load in TAC Area(s) in which a need for CPM arose   for each Trading Month. |
| 2.0 | Cost allocation depends on the CPM designation type. |
| 2.1 | For the following CPM designation types:   1. Insufficient Local capacity from a monthly or annual RA Plan, 2. Insufficient flexible capacity from a monthly or annual Flexible RA capacity plan, or   (c) Insufficient system capacity in cumulative load serving entities’ annual or monthly resource plans,  each CPM designation cost is allocated pro-rata to SC for the LSE based on LSE deficiency for the applicable month within the TAC area or entire system (if applicable) served by the CPM designation. |
| 2.2 | On the other hand, for the following CPM designation types:   1. Significant event, or 2. Exceptional Dispatch   the total cost per designation type is allocated pro-rata to SCs based on Scheduling Coordinator’s Load within TAC area(s) served by each of the above CPM designation types. |
| 2.2.1 | The Load used for pro-ration shall be the actual Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) served by the CPM designation as recorded in the CAISO Settlement system for the actual days during any Settlement month period over which the CPM designation has occurred. |
| 2.2.2 | Load quantities will exclude Load for which a Transmission Ownership Rights (TOR) contract has been applied to the Load schedule, up to the source-sink balanced portion of the contract. |
| 2.3 | For CPM designation of collective deficiency in local capacity area resources, the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs serving Load in the TAC Area(s) in which the deficient Local Capacity Area was located. The allocation will be based on the Scheduling Coordinators’ proportionate share of Load in such TAC Area(s) as determined in accordance with Section 40.3.2, excluding Scheduling Coordinators for LSEs that procured additional capacity in accordance with Section 43A.2.1.2 on a proportionate basis, to the extent of their additional procurement. |
| 2.3.1 | CPM designations due to Insufficient Local Capacity Area Resources in a monthly RA Plan, coming natively from Monthly RA Plan and not as a monthly breakdown of an Annual RA Plan shall have CPM Type o’ = LOCAL. |
| 2.3.2 | CPM designations, under the supply resource, due to Insufficient Local Capacity Area Resources in an annual RA Plan and those due to annual Collective Deficiency in Local Capacity Area Resources in an annual RA Plan shall both be referred to by using CPM Type o’ = ANCOL. |
| 2.3.2.1 | For allocation purposes, CPM designations due to annual Collective Deficiency in Local Capacity Area Resources shall have CPM Type o’ = COLDEF. |
| 2.3.2.2 | For allocation purposes, CPM designations due to Insufficient Local Capacity Area Resources in an annual Resource Adequacy Plan shall have CPM Type o’ = ANLOCAL. |
| 2.3.3 | For the entire Year 2018, unless changed earlier within year 2018, Annual CPM for year 2018 will all be designated under the supply resource as COLDEF, but will be cost allocated separately into ANLOCAL and COLDEF, due to the differing cost allocation basis for Annual individual deficiency coming from an Annual RA Plan versus Collective Deficiency cost allocation basis. The total MW designated for supply under COLDEF shall equal the total MW of ANLOCAL and COLDEF under cost allocation, and further the total supply cost under COLDEF shall equal the total cost allocation from combined ANLOCAL and COLDEF. |
| 2.3.4 | After Year 2018, Annual CPM will be designated under the supply resource as ANCOL to cover both annual local deficiency and annual collective deficiency. For allocation purposes, this supply designation will be split into either ANLOCAL or COLDEF, depending on the need. Cost allocation for ANLOCAL shall respect the cost allocation basis for annual individual deficiency coming from an annual RA Plan, and cost allocation for COLDEF shall respect the cost allocation basis for annual collective deficiency from an annual RA Plan. |
| 2.3.5 | CPM designations due to Insufficient RA Resources in an LSE’s monthly RA Plan shall have CPM Type o’ = CADEF. |
| 2.3.6 | CPM designations due to Insufficient RA Resources in an LSE’s annual RA Plan shall have CPM Type o’ = ANCADEF. |
| 3.0 | This Charge Code shall provide an output on a monthly basis. |
| 4.0 | Actual SCs are referenced by Business Associate ID, and CAISO shall settle with SCs as Business Associates (BA) through these IDs. |
| 5.0 | 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.  Where the ISO issues a 12-month CPM designation at the soft offer cap within a single RA compliance year, the ISO will adjust the compensation to ensure that the ISO does not exceed the annual cap of $75.68/kW-year in CC 7891. Then to allocate the compensation adjustment, in CC 7896 Pass Thru Bill will be used to adjust the allocation to LSEs and/or Scheduling Coordinator’s Load. This allocation adjustment will be the sum total of adjustments from each trade month, and be applied on the December Monthly Settlement Statement for the given year.  The allocation of costs for collective deficiency CPM designation shall be accomplished by Pass Through Bill in accordance with business rule 2.3. |

## Predecessor Charge Codes

| Charge Code/ Pre-Calc Name |
| --- |
| CC 7891 – Monthly CPM Settlement |
| Metered Demand Over TAC Area And CPM Pre-calculation |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Monthly Rounding Adjustment Allocation CC 4999 |

## Inputs - External Systems

| Input Req ID | Variable Name | Description |
| --- | --- | --- |
|  | BAMonthlyDeficientRAPlanQty Bo’UU’vm | The RA Capacity deficient in an SC’s monthly RA plan by TAC Area that shall be allocated a portion of the specified CPM designation. |
|  | BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationQty Bo’vUU’k’t’’m | The RA Capacity deficiency allocation in either the local or collective annual RA plan. |
|  | PTBBACPMAllocationAdjustmentAmount BJo’m | PTB adjustment variable for the currently configured Charge Code, amount per Business Associate B, PTB ID J, CPM Type o’ for Trading month m ($).  Where the ISO issues a 12-month CPM designation at the soft offer cap within a single RA compliance year, the ISO will adjust the compensation to ensure that the ISO does not exceed the annual cap of $75.68/kW-year in CC 7891. Then to allocate the compensation adjustment, in CC 7896 Pass Thru Bill will be used to adjust the allocation to LSEs and/or Scheduling Coordinator’s Load. This allocation adjustment will be the sum total of adjustments from each trade month, and be applied on the December Monthly Settlement Statement for the given year. |

## Inputs – Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration / Description |
| --- | --- | --- |
|  | BAMonthlyResourceCPMSettlementAmount Brto’UU’k’m | CC 7891 – CPM Monthly Settlement |
|  | BAMonthlyCPMMeteredDemandAllocationQuantity Bo’k’m | Metered Demand Over TAC Area And CPM Pre-calculation |
|  | BAMonthlyResourceCPMCapacityHourlyAveragedDesignatedQuantity Brto’UU’k’m | Metered Demand Over TAC Area And CPM Pre-calculation |
|  | BAMonthlyResourceCPMCapacityPaymentPrice Brto’k’m | Monthly CPM Capacity Price by resource.  Metered Demand Over TAC Area And CPM Pre-calculation. |

## CAISO Formula

Business Associate CPM Allocation Charge for CPM by BA and Trading Month

### BAMonthlyTotalCPMAllocationAmount Bm

BAMonthlyTotalCPMAllocationAmount Bm = BAMonthlyCPMTotalLSEDeficiencyAllocationAmount Bm + BAMonthlyCPMTotalTACAreaBasedAllocationAmount Bm +

BAMonthlyCPMTotalLocalAndCollDeficiencyAllocationAmount Bm

### **LSE Deficiency Based Allocation Amount**

This applies to CPM Type (o’) in (‘LOCAL’, ‘FRDEF’, ‘ANFRDEF’, ‘CADEF’, ‘ANCADEF’).

#### BAMonthlyCPMTotalLSEDeficiencyAllocationAmount

BAMonthlyCPMTotalLSEDeficiencyAllocationAmount Bm =

BAMonthlyCPMTypeLSEDeficiencyAllocationAmount Bo’m

#### BAMonthlyCPMTypeLSEDeficiencyAllocationAmount

BAMonthlyCPMTypeLSEDeficiencyAllocationAmount Bo’m =

(-1) \* BAMonthlyCPMTypeLSEDeficiencyAllocationFactor Bo’m \* CAISOMonthlyCPMTypeLSEDeficiencyAllocationAmount o’m

#### CAISOMonthlyCPMTypeLSEDeficiencyAllocationAmount

CAISOMonthlyCPMTypeLSEDeficiencyAllocationAmount o’m =

 BAMonthlyResourceCPMSettlementAllocationAmount Brto’UU’k’m

Where o’ in (‘LOCAL’, ‘FRDEF’, ‘ANFRDEF’, ‘CADEF’, ‘ANCADEF’)

#### BAMonthlyCPMTypeLSEDeficiencyAllocationFactor

BAMonthlyCPMTypeLSEDeficiencyAllocationFactor Bo’m =

If

Abs(CAISOMonthlyCPMTypeTotalLSEDeficiencyQuantity o’m ) > 0.001

Then

BAMonthlyCPMTypeLSEDeficiencyAllocationFactor Bo’m =

(BAMonthlyCPMTypeLSEDeficiencyQuantity Bo’m / CAISOMonthlyCPMTypeTotalLSEDeficiencyQuantity o’m )

Else

BAMonthlyCPMTypeLSEDeficiencyAllocationFactor Bo’m = 0

End If

#### CAISOMonthlyCPMTypeTotalLSEDeficiencyQuantity

CAISOMonthlyCPMTypeTotalLSEDeficiencyQuantity o’m =

 BAMonthlyCPMTypeLSEDeficiencyQuantity Bo’m

#### BAMonthlyCPMTypeLSEDeficiencyQuantity

BAMonthlyCPMTypeLSEDeficiencyQuantity Bo’m =

BAMonthlyDeficientRAPlanQty Bo’UU’vm

Where o’ in (‘LOCAL’, ‘FRDEF’, ‘ANFRDEF’, ‘CADEF’, ‘ANCADEF’)

### **CPM Designation TAC Area based Allocation Amount**

This applies to CPM Type (o’) in (‘SIGEVT’, ‘ED’). Allocation is per CPM Transaction ID (k’), for underlying TAC area (v) served by such designation.

#### BAMonthlyCPMTotalTACAreaBasedAllocationAmount

BAMonthlyCPMTotalTACAreaBasedAllocationAmount Bm =

BAMonthlyCPMDesignationTACAreaBasedAllocationAmount Bo’k’m

#### BAMonthlyCPMDesignationTACAreaBasedAllocationAmount

BAMonthlyCPMDesignationTACAreaBasedAllocationAmount Bo’k’m =

(-1) \* BAMonthlyCPMDesignationAllocationFactor Bo’k’m \* CAISOMonthlyCPMDesignationAllocationAmount o’k’m

#### CAISOMonthlyCPMDesignationAllocationAmount

CAISOMonthlyCPMDesignationAllocationAmount o’k’m =

 BAMonthlyResourceCPMSettlementAllocationAmount Brto’UU’k’m

Where o’ in (‘SIGEVT’, ‘ED’)

#### BAMonthlyCPMDesignationAllocationFactor

BAMonthlyCPMDesignationAllocationFactor Bo’k’m =

If Abs(CAISOMonthlyCPMDesignationTACAreaBasedAllocationQuantity o’k’m ) > 0.01

Then

BAMonthlyCPMDesignationAllocationFactor Bo’k’m =

(BAMonthlyCPMDesignationTACAreaBasedAllocationQuantity Bo’k’m / CAISOMonthlyCPMDesignationTACAreaBasedAllocationQuantity o’k’m )

Else

BAMonthlyCPMDesignationAllocationFactor Bo’k’m = 0

End If

#### CAISOMonthlyCPMDesignationTACAreaBasedAllocationQuantity

CAISOMonthlyCPMDesignationTACAreaBasedAllocationQuantity o’k’m =

BAMonthlyCPMDesignationTACAreaBasedAllocationQuantity Bo’k’m

#### BAMonthlyCPMDesignationTACAreaBasedAllocationQuantity

BAMonthlyCPMDesignationTACAreaBasedAllocationQuantity Bo’k’m =

(-1) \* BAMonthlyCPMMeteredDemandAllocationQuantity Bo’k’m

Where o’ in (‘SIGEVT’, ‘ED’)

### **Annual Local and Collective Deficiency Allocation Amount**

This applies to CPM Type (o’) in (‘ANLOCAL’, ‘COLDEF’).

#### BAMonthlyCPMTotalLocalAndCollDeficiencyAllocationAmount

BAMonthlyCPMTotalLocalAndCollDeficiencyAllocationAmount Bm =

BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationAmount Bo’vUU’k’t’’m

#### BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationAmount

BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationAmount Bo’vUU’k’t’’m =

BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationQty Bo’vUU’k’t’’m \*

BAMonthlyCPMAnnLocalOrCollDeficiencyPrice k’m

Where o’ in (‘ANLOCAL’, ‘COLDEF’)

#### BAMonthlyCPMAnnLocalOrCollDeficiencyPrice

BAMonthlyCPMAnnLocalOrCollDeficiencyPrice k’m =

BAMonthlyResourceCPMCapacityPaymentPrice Brto’k’m

The above is averaged over the attributes B, r, t, o’.

### **Resource Settlement per CPM Type**

#### BAMonthlyResourceCPMSettlementAllocationAmount

BAMonthlyResourceCPMSettlementAllocationAmount Brto’UU’k’m =

(BAMonthlyResourceCPMAllocationFactor Brto’UU’k’m \* BAMonthlyResourceTotalCPMSettlementAmount Brtm)

#### BAMonthlyResourceTotalCPMSettlementAmount

BAMonthlyResourceTotalCPMSettlementAmount Brtm =

 BAMonthlyResourceCPMSettlementAmount Brto’UU’k’m

#### BAMonthlyResourceCPMAllocationFactor

BAMonthlyResourceCPMAllocationFactor Brto’UU’k’m =

(BAMonthlyResourceCPMCapacityHourlyAveragedDesignatedQuantity Brto’UU’k’m / BAMonthlyResourceTotalCPMCapacityQuantity Brtm )

#### BAMonthlyResourceTotalCPMCapacityQuantity

BAMonthlyResourceTotalCPMCapacityQuantity Brtm =

 BAMonthlyResourceCPMCapacityHourlyAveragedDesignatedQuantity Brto’UU’k’m

## Outputs

| Output Req ID | Name | Description |
| --- | --- | --- |
|  | In addition to any outputs listed below, all inputs shall be included as outputs. | All inputs. |
|  | BAMonthlyTotalCPMAllocationAmount Bm | Monthly CPM allocation amount per Business Associate |
|  | BAMonthlyCPMTotalLSEDeficiencyAllocationAmount Bm | Monthly allocation amount per Business Associate from CPM types allocated based on LSE deficiency |
|  | BAMonthlyCPMTotalTACAreaBasedAllocationAmount Bm | Monthly allocation amount per Business Associate from CPM types allocated based on CPM designation that are TAC area based. |
|  | BAMonthlyCPMTypeLSEDeficiencyAllocationAmount Bo’m | Monthly allocation amount per Business Associate per CPM type allocated based on LSE deficiency |
|  | CAISOMonthlyCPMTypeLSEDeficiencyAllocationAmount o’m | System-wide total monthly allocation amount per CPM type allocated based on LSE deficiency |
|  | BAMonthlyCPMTypeLSEDeficiencyAllocationFactor Bo’m | LSE deficiency allocation factor per Business Associate |
|  | CAISOMonthlyCPMTypeTotalLSEDeficiencyQuantity o’m | System-wide CPM total LSE deficiency |
|  | BAMonthlyCPMTypeLSEDeficiencyQuantity Bo’m | CPM monthly LSE deficiency per Business Associate per CPM type |
|  | BAMonthlyCPMDesignationTACAreaBasedAllocationAmount Bo’k’m | Monthly allocation amount per Business Associate per CPM type, allocated based on CPM designation which are TAC area based |
|  | CAISOMonthlyCPMDesignationAllocationAmount o’k’m | System-wide monthly allocation amount per CPM type, for CPM designation that are TAC area based |
|  | BAMonthlyCPMDesignationAllocationFactor Bo’k’m | CPM designation allocation factor per Business Associate |
|  | CAISOMonthlyCPMDesignationTACAreaBasedAllocationQuantity o’k’m | System-wide CPM designation quantity for each CPM type that is TAC area based |
|  | BAMonthlyCPMDesignationTACAreaBasedAllocationQuantity Bo’k’m | CPM designation quantity per Business Associate for each CPM type that is TAC area based |
|  | BAMonthlyCPMAnnLocalOrCollDeficiencyPrice k’m | Monthly CPM Capacity price |
|  | BAMonthlyCPMAnnLocalOrCollDeficiencyAllocationAmount Bo’vUU’k’t’’m | Monthly allocation amount for either annual local or collective deficiency |
|  | BAMonthlyCPMTotalLocalAndCollDeficiencyAllocationAmount Bm | Total monthly settlement amount for annual local and collective deficiency CPM designations |
|  | BAMonthlyResourceCPMSettlementAllocationAmount Brto’UU’k’m | Monthly resource CPM settlement amount per CPM designation per Business Associate  This is simply a re-allocation of the actual CPM settlement amounts, showing costs per CPM designation for cost allocation purposes. |
|  | BAMonthlyResourceTotalCPMSettlementAmount Brtm | The sum of all CPM designation payments made to each resource for the given trade month. |
|  | BAMonthlyResourceCPMAllocationFactor Brto’UU’k’m | CPM monthly resource cost re-allocation factor  This factor re-allocates actual CPM settlement amounts for cost allocation purposes. |
|  | BAMonthlyResourceTotalCPMCapacityQuantity Brtm | Total CPM designation capacity quantity per resource |

# Charge Code Effective Date

| Charge Code/  Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 7896 – Monthly CPM Allocation | 5.0 | 11/1/16 | 10/31/16 | Documentation Edits and Configuration Impacted |
| CC 7896 – Monthly CPM Allocation | 5.0a | 11/1/16 | 12/31/17 | Documentation Edits |
| CC 7896 – Monthly CPM Allocation | 5.1 | 1/1/2018 | 12/31/17 | Documentation Edits and Configuration Impacted |
| CC 7896 – Monthly CPM Allocation | 5.1a | 1/1/2018 | 4/30/19 | Documentation Edits Only |
| CC 7896 – Monthly CPM Allocation | 5.2 | 5/1/19 | 12/31/19 | Documentation Edits and Configuration Impacted |
| CC 7896 – Monthly CPM Allocation | 5.3 | 1/1/20 | Open | Configuration Impacted |