Settlements & Billing

Configuration Guide: Monthly CPM Capacity At Risk Of Retirement Allocation (CC 7883)

Version 5.0a1
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1. Purpose of Document
   The purpose of this document is to capture the requirements and design specification for a Charge Code in one document.

2. Introduction

2.1 Background
The Interim Capacity Procurement Mechanism (ICPM) has provided an orderly, pre-approved means for the ISO to procure backstop capacity where and when needed to meet Reliability Criteria or otherwise maintain reliable grid operations. The ICPM expires at midnight on March 31, 2011.

The ICPM is replaced by the Capacity Procurement Mechanism (CPM) effective April 1, 2011. The CPM will continue to address instances when Resource Adequacy (RA) Resources are not sufficient to meet all of the operational needs of the ISO and enable it to meet reliability criteria. This may occur as a result of Load Serving Entities (LSEs) failing to comply with RA requirements, LSEs procuring sufficient resources to meet their RA requirements established by Local Regulatory Authorities but not meeting all of the ISO's specific reliability needs, or unforeseen or changed circumstances affecting system conditions or grid operations. In particular, this backstop mechanism is needed to address significant operational requirements facing the ISO in the near future as a result of the integration of large amounts of variable energy resources.

The CPM retains key features of the ICPM, with several changes and additional enhancements, as follows:

- A new CPM procurement category for resources at risk of retirement that the ISO has determined will be needed for reliability during the following year;
- The addition of two criteria the ISO can consider in selecting capacity for a CPM designation or Exceptional Dispatch from eligible resources that will allow ISO operators to exercise a preference for non-use-limited over use-limited resources and to consider each resource's operating characteristics;
- Adjustment of CPM compensation when a CPM resource becomes unavailable during the CPM procurement period due to a maintenance outage;
- An Exceptional Dispatch CPM designation may be issued for an Exceptional Dispatch CPM System Reliability Need or an Exceptional Dispatch CPM Non-System Reliability Need. An Exceptional Dispatch CPM System Reliability Need has a term of 30 days and is defined as the existence of a reliability issue where resolution does not require a resource to be in a specific geographic area with the ISO balancing authority area, which may include, but is not limited to, a forced outage of a major transmission line or a forced outage at a large generating unit. An Exceptional Dispatch CPM Non-System Reliability Need has a term of 60 days and is defined as the existence of a reliability issue where resolution depends on a resource in a specific geographic area within the CAISO Balancing Authority Area, which may include, but is not limited to, a local reliability area, zone, or region. If the CAISO determines that the circumstances that led to the Exceptional Dispatch CPM are likely to extend beyond the initial 30-day or 60-day
period, the CAISO will issue an Exceptional Dispatch CPM or other CPM designation for an additional period the same length as the initial term.

- On February 16, 2012, the fixed CPM Capacity price of $67.50/kW-year became effective and will remain in effect for two years. On February 16, 2014, the fixed CPM Capacity price will increase by five percent and the effective price will be $70.88/kW-year, which will remain in effect for two years until February 16, 2016.

For the CPM Allocation, ISO Tariff Sections 43.8.1 through 43.8.7 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 or 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.
- 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.
- 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.
- For a significant event, Exceptional Dispatch, or resource at risk of retirement 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.

2.2 Description

CC 7883 (Monthly CPM Capacity at risk of retirement Allocation) provides for the allocation of the cost of the CPM procured 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.

The TAC Area Metered demand aggregation will use the Instruction Types displayed in the table below, and this will be the basis of the CPM allocation:

<table>
<thead>
<tr>
<th>CPM Instruction Codes</th>
<th>TAC Area</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(<em>O</em>)</td>
<td>(<em>v</em>)</td>
<td></td>
</tr>
<tr>
<td>ROR1</td>
<td>TAC_NORTH</td>
<td>For a Resource at Risk of Retirement CPM designation arising from a need to ensure system reliability within a given TAC area(s) that can not be addressed by the RTM optimization and system</td>
</tr>
<tr>
<td>ROR2</td>
<td>TAC_ECNTR</td>
<td></td>
</tr>
</tbody>
</table>
3. Charge Code Requirements

3.1 Business Rules

<table>
<thead>
<tr>
<th>Bus Req ID</th>
<th>Business Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>The allocated CPM cost shall apply to all Scheduling Coordinators for LSEs that serve Load in the TAC Area(s) in which the need arose for the Risk of Retirement CPM designation.</td>
</tr>
</tbody>
</table>
## Bus Req ID | Business Rule
---|---
1.12.0 | The allocation shall be based on the percentage of actual Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Load in the TAC Area(s) as recorded in the ISO Settlement system for the actual days during any Settlement month period over which the designation has occurred.

1.2 | Load quantities will exclude Load for which a Transmission Obligation Rights (TOR) contract has been applied to the Load schedule, up to the source-sink balanced portion of the contract.

23.0 | This Charge Code shall provide an output on a monthly basis.

4.0 | Load quantities will exclude Load for which a Transmission Obligation Rights (TOR) contract has been applied to the Load schedule, up to the source-sink balanced portion of the contract.

35.0 | Actual SCs are referenced by Business Associate ID, and CAISO shall settle with SCs as Business Associates (BA) through these IDs.

46.0 | 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.

### 3.2 Predecessor Charge Codes

<table>
<thead>
<tr>
<th>Charge Code/ Pre-Calc Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metered Demand Over TAC Area And CPM Pre-calculation</td>
</tr>
<tr>
<td>Monthly CPM Capacity at risk of retirement Settlement CC7882</td>
</tr>
</tbody>
</table>

### 3.3 Successor Charge Codes

<table>
<thead>
<tr>
<th>Charge Code/ Pre-calc Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Rounding Adjustment Allocation CC 4999</td>
</tr>
</tbody>
</table>

### 3.4 Inputs - External Systems
### 3.5 Inputs – Predecessor Charge Codes or Pre-calculations

<table>
<thead>
<tr>
<th>Row #</th>
<th>Variable Name</th>
<th>Predecessor Charge Code / Pre-calc Configuration / Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>BAMonthlyCPMMeteredTACSouthAreaDemandMinusBalancedTORAllocFactor BOUU'm</td>
<td>Monthly TAC_SOUTH ECNTR Area combination CPM capacity allocation factor for Business Associate B and Exceptional Dispatch Type O during Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m.</td>
</tr>
<tr>
<td>21.0</td>
<td>CAISOMonthlyTotalCPMRiskOfRetCapacitySettlementAmount BOUU'm</td>
<td>CAISO Total CPM monthly payment by Exceptional Dispatch Type O during Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m.</td>
</tr>
<tr>
<td>32.0</td>
<td>BAMonthlyCPMMeteredTACNorthAreaDemandMinusBalancedTORAllocFactor BOUU'm</td>
<td>Pre-Calculation Metered Demand Over TAC Area And CPM</td>
</tr>
<tr>
<td></td>
<td>BAMonthlyCPMMeteredTACAreaDemand MinusBalancedTORQuantity BOUU'v</td>
<td>Monthly TAC_NORTH Area combination CPM capacity allocation factor Area Metered Load and Demand from Demand Resources (e.g., Load and NGR) Quantity minus balanced TOR for Business Associate B by TAC Area v and Exceptional Dispatch Type O during the Settlement Billing Period that extends from</td>
</tr>
</tbody>
</table>

PTBBARiskOfRetirementAllocationAdjustmentAmount BJm

PTB adjustment variable for the currently configured Charge Code, amount per Business Associate B, PTB ID J, ($).
### 3.6 CAISO Formula

**Business Associate ROR CPM Allocation Charge by Trading Month**

#### 3.6.1 \( \text{BAMonthlyCPMRiskOfRetCapacityAllocationAmount}_{BUU'm} = \sum_{O} \)

\[
\begin{align*}
\text{BAMonthlyCPMROR1CapacityAllocationAmount}_{BOU'U U m} + \\
\text{BAMonthlyCPMROR2CapacityAllocationAmount}_{BOU'U U m} + \\
\text{BAMonthlyCPMROR3CapacityAllocationAmount}_{BOU'U U m} \\
\text{BAMonthlyCPMRORPeriodAllocationAmount}_{BOU'U U m} - (1)^O \\
\text{BAMonthlyCPMMeteredTACSouthAreaDemandMinusBalancedTORAllocFactor}_{BOU'U U m}
\end{align*}
\]

#### 3.6.2 \( \text{BAMonthlyCPMRORPeriodAllocationAmount}_{BOU'U U m} = \)

\[
\begin{align*}
\text{3.6.2} \quad (1) \times \text{BAMonthlyCPMRORPeriodAllocFactor}_{BOU'U U m}^O \\
\text{CAISOMonthlyTotalCPMRiskOfRetCapacitySettlementAmount}_{OUU'U m}
\end{align*}
\]

#### 3.6.3 \( \text{BAMonthlyCPMROR2CapacityAllocationAmount}_{BOU'U U m} = (1)\times \\
\text{BAMonthlyCPMMeteredTACCentralAreaDemandMinusBalancedTORAllocFactor}_{BOU'U U m} - \text{CAISOMonthlyTotalCPMRiskOfRetCapacitySettlementAmount}_{OUU'U m}
\]

#### 3.6.3 \( \text{BOU'U U m} = \)

\[
\sum_{r} \frac{1}{(\text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity}_{BOU'U U m})^r} \\
\text{CAISOMonthlyCPMRORPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity}_{OUU'U m)}
\]

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CAISO\text{MonthlyCPMRORPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity} = \begin{cases} \text{Where } O = \text{ROR2} \\
\sum_B \sum_{\gamma} \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity} \end{cases} \nonumber

3.6.4 \quad \text{BAMonthlyCPMROR1CapacityAllocationAmount}_{\text{BOUU}_m} = (-1)^{O} \nonumber
\text{BAMonthlyCPMMeteredTACNorthAreaDemandMinusBalancedTORAllocFactor}_{\text{BOUU}_m} \nonumber
\text{CAISOMonthlyTotalCPMRiskOfRetCapacitySettlementAmount}_{\text{BOUU}_m} \nonumber

3.6.4 \quad \text{Where } \begin{cases} O = \text{BOUU}_m \\
\sum_B \sum_{\gamma} \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity} \end{cases} \nonumber

3.6.5 \quad \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity} \nonumber
\text{BOUU}_m = \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity1} \nonumber
\text{BOUU}_m = \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity2} \nonumber
\text{BOUU}_m \nonumber

3.6.6 \quad \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity1} \nonumber
\text{BOUU}_m = \text{BAMonthlyCPMMeteredTACAreaDemandMinusBalancedTORQuantity}_{\text{BOUU}_m} \nonumber

\text{Where } \text{ROR1} \nonumber
O \text{ in } (\text{ROR1}, \text{ROR2}, \text{ROR3}, \text{ROR4}, \text{ROR5}, \text{ROR6}, \text{ROR7}) \nonumber

3.6.7 \quad \text{BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity2} \nonumber
\text{BOUU}_m = \text{BAMonthlyCPMMeteredTACAreaDemandMinusBalancedTORQuantity}_{\text{BOUU}_m} \nonumber

\text{Where } \begin{cases} O \text{ in } (\text{ROR8}, \text{ROR9}, \text{ROR10}, \text{ROR11}, \text{ROR12}, \text{ROR13}, \text{ROR14}, \text{ROR15}) \end{cases} \nonumber
### 3.7 Outputs

<table>
<thead>
<tr>
<th>Output Req ID</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>In addition to any outputs listed below, all inputs shall be included as outputs.</td>
<td>All inputs.</td>
</tr>
<tr>
<td>2.0</td>
<td>BAMonthlyCPMRiskOfRetCapacityAllocationAmount_BUU'm</td>
<td>Total monthly allocated charge (in $) for Business Associate B during the Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m.</td>
</tr>
<tr>
<td>3.0</td>
<td>BAMonthlyCPMRORPeriodAllocationAmount_BUU’m</td>
<td>Total monthly allocated charge (in $) for Business Associate B due to ROR CPM capacity of Exceptional Dispatch Type O during the Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m.</td>
</tr>
<tr>
<td>4.0</td>
<td>BAMonthlyCPMRORPeriodAllocationFactor_BUU’m</td>
<td>Total monthly allocation factor (as a ratio between 0 and 1) for Business Associate B, used to allocate charges to B resulting from procured ROR CPM capacity of Exceptional Dispatch Type O during the Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m.</td>
</tr>
<tr>
<td>5.0</td>
<td>CAISOMonthlyCPMRORPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity_BUU’m</td>
<td>Total CAISO Metered Demand quantity (in MWh) over various TAC Areas that serves as the basis for allocation of charges to Business Associates based on their share of the calculated value. The charges result from procured ROR CPM capacity of Exceptional Dispatch Type O during the Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m, where the charges are related to TAC area(s) by Exceptional Dispatch Type O.</td>
</tr>
<tr>
<td>6.0</td>
<td>BAMonthlyCPMRORPeriodTACAreaMeteredDemandMinusBalancedTORQuantity_BUU‘m</td>
<td>Metered Demand quantity (in MWh) in TAC Area v for Business Associate B. The quantity (relative to the total Metered Demand quantity of output CAISOMonthlyCPMRORPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity_BUU’m) is used to allocate...</td>
</tr>
<tr>
<td>Output Req ID</td>
<td>Name</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>7</td>
<td>BAMonthlyCPMrorPeriodTACAreaMeteredDemandMinusBalancedTORQuantity1</td>
<td>Metered Demand quantity (in MWh) in TAC Area ( v ) for Business Associate ( B ). The quantity (relative to the total Metered Demand quantity of output ( \text{CAISOMonthlyCPMrorPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity1} )) is used to allocate charges to Business Associate ( B ) due to ROR CPM capacity of Exceptional Dispatch Type ( O ) at the CAISO procures for the CPM Settlement Billing Period that extends from Bill Period Start Date ( U' ) to Bill Period End Date ( U ) for Trading Month ( m ), where one or more values of TAC Area ( v ) is associated with Exceptional Dispatch Type ( O ).</td>
</tr>
<tr>
<td>8</td>
<td>BAMonthlyCPMrorPeriodTACAreaMeteredDemandMinusBalancedTORQuantity2</td>
<td>Metered Demand quantity (in MWh) in TAC Area ( v ) for Business Associate ( B ). The quantity (relative to the total Metered Demand quantity of output ( \text{CAISOMonthlyCPMrorPeriodChargeAllocationMeteredDemandMinusBalancedTORQuantity2} )) is used to allocate charges to Business Associate ( B ) due to ROR CPM capacity of Exceptional Dispatch Type ( O ) at the CAISO procures for the CPM Settlement Billing Period that extends from Bill Period Start Date ( U' ) to Bill Period End Date ( U ) for Trading Month ( m ), where one or more values of TAC Area ( v ) is associated with Exceptional Dispatch Type ( O ), and where ( O ) is defined for the ROR Exceptional Dispatch Type values ROR1, ROR2, ROR3, ROR4, ROR5, ROR6, and ROR7.</td>
</tr>
</tbody>
</table>
### Output Req ID

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROR8, ROR9, ROR10, ROR11, ROR12, ROR13, ROR14 and ROR15</td>
<td>TAC North monthly allocated charge (in $) for Business Associate B by Exceptional Dispatch Type O during Settlement Billing Period that extends from Bill Period Start Date U’ to Bill Period End Date U for Trading Month m</td>
</tr>
<tr>
<td>TAC East Central monthly allocated charge (in $) for Business Associate B by Exceptional Dispatch Type O during Settlement Billing Period that extends from Bill Period Start Date U’ to Bill Period End Date U for Trading Month m</td>
<td></td>
</tr>
<tr>
<td>TAC South monthly allocated charge (in $) for Business Associate B by Exceptional Dispatch Type O during Settlement Billing Period that extends from Bill Period Start Date U’ to Bill Period End Date U for Trading Month m</td>
<td></td>
</tr>
</tbody>
</table>

### 4. Charge Code Effective Date

<table>
<thead>
<tr>
<th>Charge Code/Pre-calc Name</th>
<th>Document Version</th>
<th>Effective Start Date</th>
<th>Effective End Date</th>
<th>Version Update Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC 7883 – Monthly CPM Capacity at risk of retirement Allocation</td>
<td>5.0</td>
<td>04/01/11</td>
<td>02/15/2012</td>
<td>Documentation Edits and Configuration Impacted</td>
</tr>
<tr>
<td>CC 7883 – Monthly CPM Capacity at risk of retirement Allocation</td>
<td>5.0a</td>
<td>02/16/12</td>
<td>12/31/12 Op</td>
<td>Documentation Edits Only</td>
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<tr>
<td>CC 7883 – Monthly CPM Capacity at risk of retirement Allocation</td>
<td>5.1</td>
<td>01/01/13</td>
<td>Open</td>
<td>Documentation Edits and Configuration Impacted</td>
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