Settlements & Billing

Configuration Guide: Monthly CPM Significant Event Settlement (CC 7872)

Version 5.10a
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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

The CC 7872 (Monthly CPM Significant Event Settlement) provides for the settlement of CPM Capacity that the ISO procures in response to all Significant Events CPM designations. When the ISO procures CPM capacity through one or more Significant Events CPM designations, this charge code applies the CPM price of $55/kW-year and outputs for each Scheduling Coordinator the total dollar amount of the payment owed to the Scheduling Coordinator for the CPM capacity that the SC sold to the ISO during the Trading Month. The CPM total dollar amount includes all Significant Events CPM designations for that SC, all LSEs that the SC represents, all resources designated to supply the CPM capacity, and all Trading Days of the Trading Month for which the capacity is supplied.

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 CPM Price is the annual effective fixed CPM Capacity price per kW-year in accordance with Section 43.7.</td>
</tr>
<tr>
<td>1.1</td>
<td>The CPM total dollar amount includes all Significant Events CPM designations for the SC, all LSEs that the SC represents, all resources designated to supply the CPM capacity, and all Trading Days of the Trading Month for which the capacity is supplied.</td>
</tr>
<tr>
<td>1.2</td>
<td>The configuration shall output the total settlement amount for the CPM capacity procured from the SC.</td>
</tr>
<tr>
<td>2.0</td>
<td>This Charge Code shall provide an output on a monthly basis.</td>
</tr>
<tr>
<td>2.1</td>
<td>This Charge Code shall be billed monthly.</td>
</tr>
<tr>
<td>3.0</td>
<td>CPM Monthly MW Payment is equal to CPM MW * Availability Factor Forced * Monthly Shaping Factor * effective fixed CPM Capacity price * Pro-rated Planned % * Daily Shaping Factor.</td>
</tr>
<tr>
<td>4.0</td>
<td>A settlement details file shall provide details for each monthly settlement amount.</td>
</tr>
<tr>
<td>5.0</td>
<td>The percentage by which the capacity payment will be prorated must be calculated by taking a ratio of 1) the sum of actual availability capacity, taking into account only planned outages, across all the hours the unit is designated to 2) the CPM Capacity MW * hours the unit is designated</td>
</tr>
<tr>
<td>6.0</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Predecessor Charge Codes

**Charge Code/ Pre-Calc Name**

Metered Demand Over TAC Area And CPM Pre-calculation

### Successor Charge Codes

**Charge Code/ Pre-calc Name**

Monthly CPM Significant Event Allocation CC7873
3.4 Inputs - External Systems

<table>
<thead>
<tr>
<th>Row #</th>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BAMonthlyResourceCPMDailyShapingFactor_BrtOUU’m</td>
<td>The actual number of days the resource was designated as CPM Capacity during the Billing Month and available to the CAISO to the total number of days in the Month. By Business Associate B, resource r, resource type t, 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>2</td>
<td>PTBBASignificantEventSettlementAdjustmentAmount_BJm</td>
<td>PTB adjustment variable for the currently configured Charge Code, amount per Business Associate B, PTB ID J, ($).</td>
</tr>
</tbody>
</table>

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</td>
<td>BAMonthlyResourceCPMPlannedAvailabilityPercentage_BrtOUU’m</td>
<td>Monthly CPM Availability Percentage by Business Associate B, resource r, resource type t, 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>2</td>
<td>BAMonthlyResourceCPMCapacityDesignatedQuantity_BrtOUU’m</td>
<td>Monthly CPM Capacity MW Designated by Business Associate B, resource r, resource type t, 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>
</tbody>
</table>
### Settlements & Billing

**Configuration Guide for:** CC 7872 Monthly CPM Significant Event Settlement

**Version:** 6.0a

**Date:** 9/6/2012

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<table>
<thead>
<tr>
<th>Row #</th>
<th>Variable Name</th>
<th>Predecessor Charge Code/ Pre-calc Configuration / Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>BAMonthlyResourceCPMCalculatedPrice Btm</td>
<td>Monthly CPM Capacity Price by Business Associate B, resource r, resource type t for Trading Month m.</td>
</tr>
<tr>
<td>4</td>
<td>BAMonthlyResourceCPMAvailabilityFOCalculatedFactor BrtOUU'm</td>
<td>The relevant CPM Availability Factor for Forced Outages as determined in accordance with Appendix F, Schedule 6, By Business Associate B, resource r, resource type t, 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>
</tbody>
</table>

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3.6 **CAISO Formula**

The Monthly settlement of CPM for each Business Associate is derived according to the formulation below:

3.6.1 \[ \text{BAMonthlyCPMSigEventCapacitySettlementAmount}_{BUU'm} = \sum_{O} \text{BAMonthlyTotalCPMSigEventCapacitySettlementAmount}_{BOUU'm} \]

3.6.2 \[ \text{BAMonthlyTotalCPMSigEventCapacitySettlementAmount}_{BOUU'm} = \sum_{r} \sum_{t} \text{BAMonthlyResourceCPMSigEventCapacitySettlementAmount}_{BrtOUU'm} \]

3.6.2.1 \[ \text{CAISOMonthlyCPMSigEventCapacitySettlementAmount}_{UUU'm} = \sum_{O} \]

3.6.2.2 \[ \text{CAISOMonthlyTotalCPMSigEventCapacitySettlementAmount}_{OUU'm} = \sum_{r} \text{CAISOMonthlyTotalCPMSigEventCapacitySettlementAmount}_{OUU'm} \]

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### 3.6.3 BAMonthlyResourceCPMSigEventCapacitySettlementAmount $\text{BrtOUU}'m$

\[
\text{BAMonthlyResourceCPMSigEventCapacity1SettlementAmount}_{\text{BrtOUU}}'m = \\
\text{BAMonthlyResourceCPMSigEventCapacity2SettlementAmount}_{\text{BrtOUU}}'m + \\
\text{BAMonthlyResourceCPMSigEventCapacity1SettlementAmount}_{\text{BrtOUU}}'m
\]

### 3.6.4 BAMonthlyResourceCPMSigEventCapacity1SettlementAmount $\text{BrtOUU}'m$

\[
(-1) \times \text{BAMonthlyResourceCPMCapacityDesignatedQuantity}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMAvailabilityFOCalculatedFactor}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMCalculatedPrice}_{\text{Brtm}} \times \\
\text{BAMonthlyResourceCPMDailyShapingFactor}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMPlannedAvailabilityPercentage}_{\text{BrtOUU}}'m
\]

Where
\[
O \in \{\text{SIGEVT1, SIGEVT2, SIGEVT3, SIGEVT4, SIGEVT5, SIGEVT6, SIGEVT7, SIGEVT8, SIGEVT9, SIGEVT10, SIGEVT11, SIGEVT12, SIGEVT13, SIGEVT14}\}
\]

### 3.6.5 BAMonthlyResourceCPMSigEventCapacity2SettlementAmount $\text{BrtOUU}'m$

\[
(-1) \times \text{BAMonthlyResourceCPMCapacityDesignatedQuantity}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMAvailabilityFOCalculatedFactor}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMCalculatedPrice}_{\text{Brtm}} \times \\
\text{BAMonthlyResourceCPMDailyShapingFactor}_{\text{BrtOUU}}'m \times \\
\text{BAMonthlyResourceCPMPlannedAvailabilityPercentage}_{\text{BrtOUU}}'m
\]

Where
\[
O \in \{\text{SIGEVT8, SIGEVT9, SIGEVT10, SIGEVT11, SIGEVT12, SIGEVT13, SIGEVT14, SIGEVT15}\}
\]

### 3.7 Outputs

<table>
<thead>
<tr>
<th>Output Req ID</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In addition to any outputs listed below, all inputs shall be included as outputs.</td>
<td>All inputs</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>2</td>
<td>BAMonthlyTotalCPMSigEventCapacitySettlementAmount BOUUm</td>
<td>Total CPM monthly payment 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>3</td>
<td>BAMonthlyResourceCPMSigEventCapacitySettlementAmount BrtOUUm</td>
<td>CPM monthly payment for Business Associate B, resource r, resource type t, 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, where Exceptional Dispatch Type O in {SIGEVT1, SIGEVT2, SIGEVT3, SIGEVT4, SIGEVT5, SIGEVT6, SIGEVT7}</td>
</tr>
<tr>
<td>4</td>
<td>BAMonthlyResourceCPMSigEventCapacity1SettlementAmount BrtOUUm</td>
<td>CPM monthly payment for Business Associate B, resource r, resource type t, 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, where Exceptional Dispatch Type O in {SIGEVT8, SIGEVT9, SIGEVT10, SIGEVT11, SIGEVT12, SIGEVT13, SIGEVT14, SIGEVT15}</td>
</tr>
<tr>
<td>5</td>
<td>BAMonthlyResourceCPMSigEventCapacity2SettlementAmount BrtOUUm</td>
<td>CPM monthly payment for Business Associate B, resource r, resource type t, 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, where Exceptional Dispatch Type O in {SIGEVT1, SIGEVT2, SIGEVT3, SIGEVT4, SIGEVT5, SIGEVT6, SIGEVT7}</td>
</tr>
<tr>
<td>6</td>
<td>CAISOMonthlyTotalCPMSigEventCapacitySettlementAmount BUUm</td>
<td>CAISO Total CPM monthly payment for 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>7</td>
<td>BAMonthlyCPMSigEventCapacitySettlementAmount BUUm</td>
<td>Monthly CPM payment for Business Associate B during Settlement Billing Period that extends from Bill Period Start Date U' to Bill Period End Date U for Trading Month m</td>
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</table>
4. Charge Code Effective Dates

<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>
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<tr>
<td>CC 7872 – Monthly Significant Event CPM Settlement</td>
<td>5.0</td>
<td>04/01/11</td>
<td>02/15/2012</td>
<td>Documentation Edits and Configuration Impacted Configuration Impacted</td>
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<td>Open 12/3</td>
<td>Documentation Edits Only Documentation Only</td>
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<td>01/01/13</td>
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