Settlements & Billing

Configuration Guide: IFM Bid Cost Recovery Tier 2 Allocation

**CC 6637**

 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 SaMC Charge Code in one document.

# Introduction

## Background

Bid Cost Recovery (BCR) is the process by which the CAISO ensures SCs are able to recover Start-Up Costs (SUC), Minimum Load Costs (MLC), MSG ResourceTransition Costs (TC) and Energy Bid Costs. In order to recover SUC and MLC, a Generating Unit, Pumped-Storage Unit, or resource-specific System Resource must be committed by the CAISO. Likewise, the CAISO must commit a Multi-Stage Generating Resource in order for it to receive TC compensation. Bid Cost Recovery for Energy and Ancillary Services (A/S) Bids applies to Bid Cost Recovery Eligible Resources in general (for example, Generating Units, Pumped-Storage Units, Proxy Demand Resources and resource-specific System Resources) scheduled or dispatched by CAISO, independent of whether they are CAISO-committed or instead are self-committed.

For purposes of determining BCR eligibility, CAISO uses a concept called Commitment Period. A Commitment Period consists of the consecutive time periods within a Trading Day when a resource is on-line, synchronized to the grid, and available for dispatch. A Commitment Period is comprised of two distinct sub-types – Self-Commitment Period and CAISO Commitment Period. The portion of a Commitment Period where a resource submits Energy Self-Schedule or A/S self-provision is called a Self-Commitment Period. A Self-Commitment Period may include time periods when a resource is not operating pursuant of an Energy Self-schedule or A/S self-provision, but must be on due to Ramping constraints or a Minimum Run Time or Minimum Down Time requirement. Resources are not eligible for BCR of SUC, MLC or TC during Self-Commitment Periods, but are eligible for BCR of awarded Energy and A/S. The portion of a Commitment Period that is not a Self-Commitment Period is called a CAISO Commitment Period. Resources are eligible to receive BCR for SUC, MLC, TC, awarded Energy and A/S during a CAISO Commitment Period.

SUC, MLC and TC for each market and resource are determined in Pre-calculation Start-Up and Minimum Load Cost. The commitment costs together with the energy and AS bid costs are then used as inputs to calculate a resource’s net difference between costs and revenues in separate Pre-calculations by market --- IFM Net Amount, RUC Net Amount, and RTM Net Amount. If the difference between the total costs and the market revenues is positive in the relevant market, then the net amount represents a Shortfall. If the difference is negative in the relevant market, the net amount represents a Surplus. For each resource or, in the case of a MSS entity that has elected net settlement, all MSS resources collectively, the IFM, RUC, and RTM Shortfalls and Surpluses are then netted over all hours of a Trading Day, with the IFM Shortfalls and Surpluses netted separately from the RUC and RTM Shortfalls and Surpluses. Thus, RUC or RTM surpluses over the entire Trading Day are used to offset a RTM or RUC shortfall, respectively, incurred over the entire Trading Day. For either IFM or the combined RUC and RTM netting, if the net amount over the Trading Day is positive (a Shortfall), then the resource or net-settled MSS entity receives a BCR Uplift Payment equal to the net Trading Day amount under CC 6620 – RUC and RTM Bid Cost Recovery Settlement (for a combined RUC and RTM shortfall), or CC 66200 – RUC and RTM Bid Cost Recovery EIM Settlement, or CC 6630 IFM Bid Cost Recovery Settlement (for an IFM shortfall).

While there is one IFM Bid Cost Recovery payment per resource per day, the methodology for allocation of IFM Bid Cost Uplift per Trading Hour occurs in two tiers. IFM Costs are first allocated in CC 6636 IFM Bid Cost Recovery Tier 1 Allocation based upon IFM Load Uplift Obligation, and any remaining costs are allocated pro rata to Measured Demand under CC 6637 IFM Bid Cost Recovery Tier 2 Allocation.

## Description

The CC 6637 configuration will perform the calculations necessary to implement the business rules identified in the Business Rules section below.

This charge code executes the IFM Bid Cost Recovery Tier 2 Allocation.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
| 1.0 | The CAISO Total IFM BCR allocation amount is done in two tiers. |
| 1.1 | The remaining CAISO IFM BCR allocation amount after the Tier 1 allocation is allocated in the Tier 2, if any.  |
| 1.2 | Tier 2 is allocated to every Business Associate proportional to its Measured Demand for each Trading Hour. |
| 1.3 | The Measured Demand is the sum of the metered CAISO Demand and the Real-Time Interchange export schedules. |
| 1.3.1 | If a MSS has elected Net Settlement or Load Following, the CC 6637 allocation shall be based on its Net MSS Measured Demand. Otherwise (in the case of a gross-settled MSS), it shall be the same as for other Business Associates that are allocated based on Measured Demand. |
| 1.3.2 | The Measured Demand quantity excludes Energy provided by Business Associates and resources that comprise the Exceptions #6 exception set as it is defined in the Measured Demand Over Control Area Configuration Guide. |
| 1.4 | PTB Adjustment logic, of any kind, does not apply to this Charge Code. However, any PTB adjustments made to predecessor charge codes must be included in the Tier 2 allocation to ensure neutrality is maintained. |
| 2.0 | Advisory settlement from NPM resources: IFM BCR Tier 2 allocation advisory settlement will be computed in this charge code. The NPM IFM BCR costs within each BAA is allocated pro-rata based on NPM resource DA Load Schedules within each BAA. |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 6636 – IFM Bid Cost Recovery Tier 1 Allocation |
| Pre-calc – Measured Demand Over Control Area |
| CC 6011 – Day Ahead Energy, Congestion, Loss Settlement |

## Successor Charge Codes

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

## Inputs – External Systems

|  |  |  |
| --- | --- | --- |
| Row # | Variable Name | Description |
| 1 | BAEDAMEntityFlag **BQ’md** | Flag indicating an EIM entity that specifically participates in EDAM. |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration |
| --- | --- | --- |
|  | IFMBCRTier1Charge **BQ’mdh** | CC6636 – IFM Bid Cost Recovery Tier 1 Allocation |
|  |  |  |
|  | BAAHrlyTotalIFMUpliftAmount **Q’mdh**  | CC6636 – IFM Bid Cost Recovery Tier 1 Allocation |
|  |  |  |
|  | BAATotalIFMLoadUpliftObligation **Q’mdh** | CC6636 – IFM Bid Cost Recovery Tier 1 Allocation  |
|  | TotalIFMCapacity **Q’md**h | CC6636 – IFM Bid Cost Recovery Tier 1 Allocation |
|  | BAHourlyMeasuredDemandMinusRightsControlAreaQty\_LFEx6 **Bmdh** | Pre-calc – Measured Demand Over Control Area. Hourly Measured Demand represented as negative value less applicable TOR quantities and Exemption #6 (as defined in MD Over Control Area Pre-calc) in which the Measured Demand quantity for Load Following MSS entities is the MSS Aggregation Net Measured Demand  |
|  | CAISOTotalHourlyMeasuredDemandMinusRightsControlAreaQty\_LFEx6 **mdh** | Pre-calc – Measured Demand Over Control Area. Total Hourly Measured Demand represented as negative value less applicable TOR quantities and Exemption #6 (as defined in MD Over Control Area Pre-calc) in which the Measured Demand quantity for Load Following MSS entities is the MSS Aggregation Net Measured Demand  |
|  |  |  |
|  | BANPMHourlyBAAIFMBCRTier2AllocationAmount BQ’mdh | Pre-calc – NPM |
|  | BAtoBAAMeasuredDemandMapFlag BQ’md | Pre-calc – MSS Netting |
|  | EDAMBAATotalIFMUpliftAllocationAmount**Q’mdhcif** | Pre-calc – Bid Cost Recovery Sequential Netting |
|  |  |  |

##

## CAISO Formula

IFMBCRTier2Charge **BQ’mdh** =

BAHourlyCISOIFMBCRTier2Charge **BQ’mdh** + BANPMHourlyBAAIFMBCRTier2AllocationAmount BQ’mdh + BAHourlyEDAMEntityIFMUpliftAllocationAmount**BQ’mdh**

BAHourlyCISOIFMBCRTier2Charge **BQ’mdh** =

{(-1) \* BAHourlyMeasuredDemandMinusRightsControlAreaQty\_LFEx6 **Bmdh** \*

IFMBCRTier2UpliftRate **Q’mdh** \* BAtoBAAMeasuredDemandMapFlag BQ’md }

Where Q’ = “CISO”

BAHourlyEDAMEntityIFMUpliftAllocationAmount**BQ’mdh**  =

Sum (c,i,f) {(-1) \* BAEDAMEntityFlag **BQ’md** \* EDAMBAATotalIFMUpliftAllocationAmount**Q’mdhcif** }

### IFMBCRTier2UpliftRate Q’**mdh** =

IFMBCRTier2AllocationAmount Q’**mdh** /

((-1) \* CAISOTotalHourlyMeasuredDemandMinusRightsControlAreaQty\_LFEx6 **mdh** )

### IFMBCRTier2AllocationAmount **Q’mdh** *=*

### {If TotalIFMCapacity **Q’md**h > BAATotalIFMLoadUpliftObligation **Q’md**h

### Then

BAAHrlyTotalIFMUpliftAmount **Q’mdh** – BAAHourlyIFMBCRTier1Charge **Q’mdh**

Else

0

 End If}

### BAAHourlyIFMBCRTier1Charge **Q’mdh** *=*

Sum (B) { IFMBCRTier1Charge **BQ’mdh** }

## Outputs

| Row # | Name | Description |
| --- | --- | --- |
|  | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
|  | IFMBCRTier2Charge **BQ’mdh** | The Tier 2 IFM Bid Cost Recovery Charge |
|  | BAHourlyCISOIFMBCRTier2Charge **BQ’mdh** | The Tier 2 IFM BCR Charge for BAs with nonzero measured demand in the CISO BAA. |
|  | BAHourlyEDAMEntityIFMUpliftAllocationAmount**BQ’mdh** | The IFM BCR Uplift Charge for the EDAM BAA Entity. |
|  | IFMBCRTier2UpliftRate **Q’mdh** | The Tier 2 IFM BCR allocation rate for Trading Hour h. |
|  | IFMBCRTier2AllocationAmount **Q’mdh** | The Tier 2 amount allocated in Trading Hour h. |
|  | BAAHourlyIFMBCRTier1Charge **Q’mdh** | BAA level total of IFM BCR Tier 1 charges |

#

# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.0 | 04/01/09 | 07/31/10 | Documentation Edits Only |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.0a | 08/01/10 | 11/14/10 | Documentation Edits Only |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.0b | 11/15/10 | 01/31/11 | Documentation Edits Only |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.1 | 02/01/11 | 4/30/14 | Documentation Edits Only |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.1a | 05/01/14 | 12/31/20 | Documentation Edits Only |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.2 | 01/01/21 | 04/30/24 | Configuration Impacted |
| CC 6637 – IFM Bid Cost Recovery Tier 2 Allocation | 5.3 | 05/01/24 | Open | Configuration Impacted |