Settlements & Billing

Configuration Guide: IFM Bid Cost Recovery Settlement

**CC 6630**

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

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 Resource Transition 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 6630 IFM Bid Cost Recovery Settlement (for an IFM shortfall).

## Description

This Charge Code calculates the Bid Cost Recovery Settlement for various Bid Cost Recovery Eligible Resources that are settled on a Resource basis as well as those Bid Cost Recovery Eligible Resources of MSS entities that have selected to settle Energy on a net-settlement basis. Eligible IFM SUC, MLC, TC, Bid Costs and IFM market revenues are netted across Trading Hours, and Settlement Intervals in a Trading Day for a single IFM Uplift Payment by resource or MSS entity.

For an MSS entity that has elected gross settlement, the IFM BCR uplift payment is calculated by resource. For an MSS entity that has elected net settlement, the BCR uplift payment is calculated at the MSS level.

The net amount of SUC, MLC, TC, Bid Costs, and market revenue for each resource or MSS net entity, CAISO market, and Settlement Interval is calculated by predecessor Pre-calculation IFM Net Amount and then used as inputs for the current charge code. If the summation of the net amounts for a Trading Day is positive, the Scheduling Coordinator will receive a BCR payment. The BCR payment is subsequently used as input for Pre-calculation BCR Sequential Netting.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | This Charge Code calculates the Bid Cost Recovery Settlement for various Bid Cost Recovery Eligible Resources that are settled on a Resource basis as well as those Bid Cost Recovery Eligible Resources of MSS entities that have selected to settle Energy on a net-settlement basis. Eligible SUC, MLC, TC, Bid Costs and market revenues for IFM are netted across all Trading Hours and Settlement Intervals in a Trading Day for a single Uplift Payment by resource or MSS entity. |
|  | For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. |
|  | MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. |
|  | MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources. |
|  | Scheduling Coordinators shall receive an IFM Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses over a Trading Day is positive. |
|  | This Charge Code must be computed daily on a dailybasis. |
|  | The application of the Day-Ahead Metered Energy Adjustment Factor shall never increase a Bid Cost Recovery Eligible Resource’s Unrecovered Bid Cost Uplift Payments. |
|  | In the event that the CAISO discovers that there has been an increase in the Unrecovered Bid Cost Uplift Payment due to the application of the Day-Ahead Metered Energy Adjustment Factor, the CAISO will adjust the payment to recover the overpayment in a subsequent billing cycle, as permissible. |
|  | The application of the Real-Time Performance Metric shall never increase a BCR Eligible Resource’s Unrecovered Bid Cost Uplift payments. |
|  | Advisory settlement from NPM resources: IFM BCR settlement for NPM resources will be computed in this charge code. |

## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Pre-calc – IFM Net Amount |
| Pre-calc – NPM |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Pre-calc – Bid Cost Recovery Sequential Netting |

## Inputs - External Systems

|  |  |  |
| --- | --- | --- |
| Row # | Variable Name | Description |
|  |  |  |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/  Pre-calc Configuration |
| --- | --- | --- |
|  | IFMNetAmount BrQ’uT’I’M’F’mdhcif | Pre-calc – IFM Net Amount. The net difference of IFM Bid Costs and IFM Market Revenue for each Bid Cost Recovery Eligible Resource. |
|  | IFMMSSNetBCRAmount BQ’T’I’M’mdhcif | Pre-calc – IFM Net Amount. The net difference of IFM Energy Bid Costs, IFM AS Costs, IFM Market Revenue, and IFM AS Revenue for MSS Net entities |
|  | BAResTradingDayNPMIFMBCRUpliftAmount BrQ’uT’I’M’F’md | Pre-calc – NPM. The net difference of IFM Bid Costs and IFM Market Revenue for each Bid Cost Recovery Eligible Resource for NPM resources. |

## CAISO Formula

The daily uplift settlement of Bid Cost Recovery for each resource is as follows:

### TradingDayTotalIFMBCRUpliftAmount BrQ’uT’I’M’F’md =

### TradingDayIFMBCRUpliftAmount BrQ’uT’I’M’F’md

### + TradingDayIFMBCRMSSNetUpliftAmount BQ’T’I’M’md

+ BAResTradingDayNPMIFMBCRUpliftAmount BrQ’uT’I’M’F’md

TradingDayIFMBCRUpliftAmount BrQ’uT’I’M’F’md =

(-1) \* Max (0, DayIFMNetAmount BrQ’uT’I’M’F’md)

DayIFMNetAmount BrQ’uT’I’M’F’md =

Sum (h,c,i,f) {IFMNetAmount BrQ’uT’I’M’F’mdhcif }

Note: The above charge type is for Entity Type T’ <> MSS or ( Entity Type T’ = MSS and Energy Settlement Type I’ = Gross) as previously filtered by underlying input.

TradingDayIFMBCRMSSNetUpliftAmount BQ’T’I’M’md =

(-1) \* Max ( 0 , DayIFMMSSNetBCRAmount BQ’T’I’M’md )

DayIFMMSSNetBCRAmount BQ’T’I’M’md =

Sum (h,c,i,f) {IFMMSSNetBCRAmount BQ’T’I’M’mdhcif}

Note: The above charge type is for Entity Type T’ = MSS and Energy Settlement Type I’ = NET as previously filtered by underlying input.

## Outputs

| Row # | Name | Description |
| --- | --- | --- |
|  | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
| 1 | TradingDayTotalIFMBCRUpliftAmount BrQ’uT’I’M’F’md | Total IFM BCR Uplift Payment for MSS and Non-MSS entities. |
| |  |  |  | | --- | --- | --- | | 5 | DayIFMMSSNetBCRAmount **BT’I’M’d** | Daily total of IFMMSSNetBCRAmount **BT’I’M’hi** |   2 | TradingDayIFMBCRUpliftAmount BrQ’uT’I’M’F’md | IFM BCR Uplift Payment for non-MSS resources and resources associated with an MSS entity that has elected Gross settlement. |
| 3 | DayIFMNetAmount BrQ’uT’I’M’F’md | Daily total of IFMNetAmount |
| 4 | TradingDayIFMBCRMSSNetUpliftAmount BQ’T’I’M’md | IFM BCR Uplift Payment for MSS entity that has elected Net settlement. |
| 5 | DayIFMMSSNetBCRAmount BQ’T’I’M’md | Daily total of IFMMSSNetBCRAmount |

# Charge Code Effective Dates

| Charge Code/  Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 6630 – IFM Bid Cost Recovery Settlement | 5.0 | 5/01/14 | 4/30/14 | Configuration Impacted |
| CC 6630 – IFM Bid Cost Recovery Settlement | 5.1 | 5/01/14 | 12/31/20 | Configuration Impacted |
| CC 6630 – IFM Bid Cost Recovery Settlement | 5.2 | 1/01/21 | 4/30/26 | Configuration Impacted |
| CC 6630 – IFM Bid Cost Recovery Settlement | 5.3 | 5/01/26 | Open | Configuration Impacted |