Settlements & Billing

Configuration Guide: Flexible Ramp Forecast Movement Allocation

CC 7076

Version 5.2

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# Purpose of Document

The purpose of this document is to capture the business and functional requirements of a charge code in one document.

# Introduction

##  Background

The Flexible Ramping product (FRP) is designed to ensure that there is sufficient ramping capability available in the financially binding five-minute interval to meet the forecasted net load for interval t+5 and cover upwards and downwards forecast error uncertainty.

FRP will help the system to maintain and use dispatchable capacity, as well as provide the market more transparent and less volatile price signals when undergoing forecasted ramp-constrained conditions. It will be procured and dispatched to meet five minute to five minute net forecast (load forecast minus VER forecast) changes plus uncertainty and will be modeled as a ramping capability constraint.

The ISO will financially settle FRP in the fifteen-minute market and the five-minute market, with rescission of payments applied to resources with UIE (uninstructed imbalance energy) or OA (operational adjustment) amounts, positive or negative, which are imposed on reserved FRP capacity awards. Settlement and allocation of FRP costs will happen on a daily basis for forecasted movement portion and uncertainty award portion. At the end of the month, the uncertainty award allocation will be reversed and will be re-allocated based on the month’s net UIE or OA values.

As no economic bids are applied to FRP, FRU/FRD awards will be exempt from grid management charges (GMC). Additionally, dispatchable resources will have their FRP awards and forecasted movement assessments - ignoring rescission settlement - included as part of daily RTM bid cost recovery calculations.

## Description

For each Settlement Interval, this charge code, CC 7076 Flexible Ramp Movement Allocation will assess the Residual Forecasted Movement Settlement Amount calculated in CC 7070 Flexible Ramp Up Forecasted Movement Settlement to Scheduling Coordinator with meter EIM Demand or metered CAISO Demand in proportion to its share of the total metered EIM Demand and metered Demand.

# Charge Code Requirements

## Business Rules

| **Bus Req ID** | **Business Rule** |
| --- | --- |
| 1.0 | For each Settlement Interval, this charge code will allocate the Residual Forecast Movement Amount as well as costs from virtual awards forecasted movement to the BAA based upon the host control area ID.  |
| 1.1 | The following rules were implemented and calculated in the Flexible Ramping Product Pre-calculation under the sub-heading Forecasted Movement (FM) Allocations. |
| 2.0 | For the EIM\_area host control area ID, Settlements shall allocate the costs to the BAAs that pass the sufficiency test. |
| 3.0 | For the forecasted movement cost associated with the BAA that did not pass the sufficiency test, those costs will allocated to the meter demand of that BAA, however if metered demand is not available and there are BAA-specific costs, those will be allocated to the entity. |
| 3.0 | The Flex Ramp Forecast Movement Allocation Amount is calculated as the Product of the Scheduling Coordinators metered WEIM Demand or metered CAISO Demand and the Flex Ramp Forecast Movement Allocation Price  |
| 4.0 | The Flex Ramp Forecast Movement Allocation Price is calculated as the Product of the Residual Forecast Movement Amount divided by the total EIM Area metered Demand.  |
| 5.0 | For BAAs that fail the WEIM resource sufficiency evaluation (RSE), the Flex Ramp Forecast Movement Allocation Amount shall be allocated to the WEIM BAA that failed the EDAM Assistance Energy Transfer (AET) sub-pool and the EDAM RSE non-AET sub-pool based upon the pro-rata metered load of those pools or BAAs. |
| 6.0 | For adjustments to the Charge Code that cannot be accomplished by correction of upstream data inputs/recalculation or operator override Pass Through Bill Charge logic will be applied. |
| 7.0 | The allocation of residual forecasted movement settlements shall account for virtuals. For each 5-minute interval, for the CISO BAA, EDAM BAAs, and WEIM-only BAA, the summation of FMM resource-specific forecasted movement, FMM virtual forecasted movement, and RTD resource-specific forecasted movement shall be allocated to metered demand of the BAA or Passed Group as determined by the WEIM RSE flexible ramp assessment. |

## Predecessor Charge Codes

| **Charge Code/ Pre-calc Name** |
| --- |
|  |
| CC 7070 – Flexible Ramp Forecasted Movement Settlement |
| PC – Flexible Ramp Product |

## Successor Charge Codes

| **Charge Code/ Pre-calc Name** |
| --- |
| CC 4989 - Daily Rounding Adjustment Allocation |
|  |

##  Inputs – External Systems

| **Input Req ID** | **Variable Name** | **Description** |
| --- | --- | --- |
|  | PTBBAFRForecastedMovementAllocAdjustmentAmount BQ’Jmdhcif | PTB adjustment for forecasted movement allocation (in $) with BAA Attribute. |
|  |  |  |
|  |  |  |

## Inputs - Predecessor Charge Codes or Pre-calculations

|  |  |  |
| --- | --- | --- |
| **Input Req ID** | **Variable Name** | **Predecessor Charge Code/ Pre-calc Configuration** |
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|  | BA5mConstraintFRFMAllocatedAmount BQ’kmdhcif | PC – Flexible Ramp Product |
|  | BA5mBAASpecFRFMAllocatedAmount BQ’kmdhcif | PC – Flexible Ramp Product |

## CAISO Formula

### BA5mFlexRampForecastedMovementAllocationAmount BQ’mdhcif =

Sum (k) (BA5mConstraintFRFMAllocatedAmount BQ’kmdhcif + BA5mBAASpecFRFMAllocatedAmount BQ’kmdhcif)

## Outputs

| **Output ID** | **Name** | Description |
| --- | --- | --- |
|  | In addition to the outputs below, all inputs are required to be accessible for review by analysts and report on Settlement statements. |  |
|  |  |  |
|  | BA5mFlexRampForecastedMovementAllocationAmount BQ’mdhcif | Flex Ramp Forecast Movement Allocation Amount by BA, BAA, and Settlement Interval  |
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# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version update Type |
| --- | --- | --- | --- | --- |
| Flexible Ramp Forecast Movement Allocation (CC 7076) | 5.0 | 11/01/16 | 10/31/2022 | Configuration Impacted |
| Flexible Ramp Forecast Movement Allocation (CC 7076) | 5.1 | 11/1/2022 | 4/30/2026 | Configuration Impacted |
| Flexible Ramp Forecast Movement Allocation (CC 7076) | 5.2 | 5/1/2026 | Open | Configuration Impacted |