Settlements & Billing

Configuration Guide: Monthly Flexible Ramp Up Uncertainty Award Allocation

CC 7078

 Version 5.2

Table of Contents

1. Purpose of Document 3

2. Introduction 3

2.1 Background 3

2.2 Description 3

3. Charge Code Requirements 3

3.1 Business Rules 4

3.2 Predecessor Charge Codes 4

3.3 Successor Charge Codes 4

3.4 Inputs - External Systems 4

3.5 Inputs - Predecessor Charge Codes or Pre-calculations 5

3.6 CAISO Formula 6

3.7 Outputs 6

4. Charge Code Effective Dates 7

# 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

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 Balancing Authority Area (BAA) and Trading Day this charge code configuration shall allocate the charges associated with the total Flexible Ramp Up Uncertainty capacity award settlement amounts that are paid in association with charge code CC 7071 (Daily Flexible Ramp Up Uncertainty Capacity Settlement) to the BAA. The allocation shall be performed in accord with the business rules and attendant allocation criteria stipulated in Business Rules section 3.1 below. The allocation shall be on a monthly basis and result in the resettlement of the daily charges already calculated with charge code CC 7077 (Daily Flexible Ramp Up Uncertainty Award Allocation), with separate monthly allocation amounts determined for the Peak Flexible Ramp Hours and Off-Peak Flexible Ramp Hours of the Trading Month.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | FRU and FRD uncertainty movement payments and charges shall apply daily with monthly resettlement of the FRU and FRD uncertainty movement charges. |
|  | Please refer to CC 7088 for the applicable rules. The FRU and FRD allocations are almost exactly the same with a few exemptions on: 1. Uncertainty movement (UM) input where FRU captures positive uncertainty movement by resource category while FRD captures negative uncertainty movement.
2. Allocation basis for resources to be categorized as load, intertie, or supply are using negative values for FRU, while positive values for demand.

The implementation uses the common calculations, where Tariff also shown commonality, and differentiates the FRU and FRD Uncertainty Award cost allocations and Uncertainty Movement charges by the direction of Flex Ramp. |
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## Predecessor Charge Codes

| Charge Code/ Pre-calc Name |
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|  |
| CC 7088 Monthly Flexible Ramp Up Uncertainty Award Allocation |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 4999 Monthly Rounding Adjustment Allocation |

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  | PTBBAAMonthFRUUncertaintyAllocationAmount BJm | PTB charge adjustment for FRU Uncertainty Allocation (in $) |
|  |  |  |

## Inputs - Predecessor Charge Codes or Pre-calculations

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| --- | --- | --- |
| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration |
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|  | BAMonthlyCompleteFRUncertaintyAllocationAmount BQ’km | CC 7088 Monthly Flexible Ramp Down Uncertainty Award Allocation |

## CAISO Formula

The CAISO formula for Monthly Flexible Ramp Up Uncertainty charge allocation by BA ID (B) is as follows:

BAMonthlyCompleteFRUUncertaintyAllocationAmount BQ’m =

Sum (k) {BAMonthlyCompleteFRUncertaintyAllocationAmount BQ’km }

Where Indicated Direction (k) = ‘UP’

## Outputs

| Row #  | Name | Description |
| --- | --- | --- |
| -- | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
|  | BAMonthlyCompleteFRUUncertaintyAllocationAmount BQ’m | FRU Uncertainty Allocation Amount (in $) assessed monthly to a BA of the BAA as the difference of the monthly FRU Allocation Amount for the designated |
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# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 7078 Monthly Flexible Ramp Up Uncertainty Award Allocation | 5.0 | 11/1/2016 | 10/31/2022 | Initial Implementation |
| CC 7078 Monthly Flexible Ramp Up Uncertainty Award Allocation | 5.1 | 11/1/2022 | 4/30/2026 | Configuration Impacted |
| CC 7078 Monthly Flexible Ramp Up Uncertainty Award Allocation | 5.2 | 5/1/2026 | Open | Configuration Impacted |