Settlements & Billing

Configuration Guide: Day Ahead Residual Unit Commitment (RUC) Availability Settlement

**CC 6800**

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 3

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 5

3.7 Outputs 6

4. Charge Code Effective Dates 6

# 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

During the Day Ahead Market, if the scheduled Demand is less than the CAISO Forecast of CAISO Demand, Residual Unit Commitment (RUC) Availability is procured to ensure that enough committed capacity is available and on line to meet the forecasted Demand as well as any forecasted shortfalls of minimum Generation requirements.

RUC Availability Bids (above the minimum Load) may only be submitted if an Energy Bid has also been submitted in the IFM. If a resource is under Resource Adequacy (RA) obligation for a specific amount of capacity, the RA capacity must participate in RUC with a RUC Bid Price of $0/MW. If a RUC Bid is not submitted for the RA capacity, then CAISO will insert a $0/MW proxy bid per hour for the full amount of RA capacity. Non-zero RUC Availability Bids may be submitted for the portion of a resource’s capacity that is not RA capacity. Capacity not pre-dispatched as RMR may also submit non-zero RUC Bids.

RUC Availability payments are the product of Awarded RUC capacity and the RUC Price specified for each PNode. Together, RUC Availability payments under CC 6800, s under CC 6824, and RUC Bid Cost Recovery Uplifts under CC 6620 are allocated in two tiers. First, CC 6806 DA RUC Tier 1 Allocation is based upon Net Negative CAISO Demand Deviation. Next, any remaining costs are allocated pro rata to metered CAISO Demand under CC 6807 DA RUC Tier 2 Allocation.

## Description

This Charge Code settles with resources for awarded RUC capacity on an hourly basis at the RUC Price. For RA resources the RUC award MW quantity does not include the RA capacity that is not eligible for RUC payments.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
| 1.0 | This Charge Code must be computed daily on an hourly basis. |
| 2.0 | RUC awarded quantity is the incremental quantity above Minimum Load. |
| 3.0 | If a resource is not entitled to a RUC capacity payment, the RUC award MW quantity will be zero, but the Price may not be zero. |
| 4.0 | For RA resources the RUC award MW quantity does not include the RA capacity that is not eligible for RUC payments. |
| 5.0 | For RMR resources the RUC award MW quantity does not include the RMR capacity that is not eligible for RUC payments. |
| 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 (PTB) logic will be applied. |
| 7.0 | RUC Availability settlement shall always be a Payment and not a charge. |

## Predecessor Charge Codes

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

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| CC 6806 – Day Ahead Residual Unit Commitment RUC Tier 1 Allocation |
| Pre-calc – RUC Net Amount |

## Inputs – External Systems

|  |  |  |
| --- | --- | --- |
| Row # | Variable Name | Description |
| 1 | RUCAwardedQty BrtuT’I’M’VL’W’R’F’S’h | The awarded RUC MW quantity above minimum load that is eligible for RUC payment by Business Associate B, Resource ID r, Resource Type t, UDC Index u, Entity Type T’, Gross/Net Flag I’, MSS Subgroup M’, RUC Participation Flag V, Load Following Flag L’, MSS Emission Pay Flag W’, Penalty Resource R’, Entity Component Type F’, Entity Component Subtype S’, and Trading Hour h. |
| 2 | BAHourlyResourceRUCPrice BrtuT’I’M’VL’W’R’F’S’mdh | The RUC Price for Resource ID r, and Trading Hour h. |
| 3 | PTBChargeAdjustment RUCAvailabilitySettlementAmount**BJh** | PTB Charge Adjustment for RUC Availability Settlement Amount by Business Associate B, PTB ID J, and Trading Hour h. |

## Inputs - Predecessor Charge Codes or Pre-calculations

|  |  |  |
| --- | --- | --- |
| Row # | Variable Name | Predecessor Charge Code/  Pre-calc Configuration |
|  | None |  |

## CAISO Formula

### The RUC settlement amount per Trading Hour h and Business Associate B and Resource r with awarded RUC capacity:

### RUCAvailabilitySettlementAmount BrtuT’I’M’F’S’h= SUM(V,L’,W’,R’)

(-1) \* Max(0, RUCAwardedQty BrtuT’I’M’VL’W’R’F’S’h \*

BAHourlyResourceRUCPrice BrtuT’I’M’VL’W’R’F’S’mdh)

RUCAvailabilitySettlementQuantity BrtuT’I’M’F’S’h= sum(V,L’,W’,R’)

RUCAwardedQty BrtuT’I’M’VL’W’R’F’S’h

RUCAvailabilitySettlementPrice rtuT’I’M’F’S’h= Average(B,V,L’,W’,R’)

BAHourlyResourceRUCPrice BrtuT’I’M’VL’W’R’F’S’mdh

WHERE RUCAwardedQty BrtuT’I’M’VL’W’R’F’S’h exists.

Note: Averaging is done to drop the extra attributes. The above charge type will not be published in xml but the equivalent Current Price which further contains the additional BA\_ID attribute shall be published in its place. In addition, such Current Price is already provided in the Business Associate’s statement file.

## Outputs

| Row # | Name | Description |
| --- | --- | --- |
|  | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
| 1 | RUCAvailabilitySettlementAmount BrtuT’I’M’F’S’h | RUC Availability payment amount. |
| 2 | RUCAvailabilitySettlementQuantity BrtuT’I’M’F’S’h | RUC Availability Settlement quantity for Trading Hour h. |
| 3 | RUCAvailabilitySettlementPrice rtuT’I’M’F’S’h | RUC Availability Settlement price for Business Associate B, Resource ID r  Note: This charge type will not be published in the BA Bill Determinant xml but the equivalent Current Price for this charge code which further contains the additional BA\_ID attribute shall be published in its place.  In addition, such Current Price is already currently provided in the Business Associate’s statement file. |

# Charge Code Effective Dates

| Charge Code/  Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| Day Ahead Residual Unit Commitment (RUC) Availability Settlement | 5.0 | 04/01/09 | 9/30/14 | Documentation Edits Only |
| Day Ahead Residual Unit Commitment (RUC) Availability Settlement | 5.1 | 10/01/14 | 10/31/17 | Configuration Impacted |
| Day Ahead Residual Unit Commitment (RUC) Availability Settlement | 5.2 | 11/01/17 | ~~Open4~~/30/26 | Configuration Impacted |