**Settlements and Billing**

Configuration Guide: Monthly Resource Adequacy Availability Incentive Mechanism Settlement
CC 8830

 Version 5.4

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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

The Resource Adequacy Availability Incentive Mechanism (RAAIM) was part of the Reliability Services Initiative, a suite of policies to address rules and process surrounding RA resources.

RAAIM enhances grid reliability and market efficiency by providing an incentive for RA resources that meet their bidding obligation and provide energy bids to the market. The new incentive mechanism replaces the previously existing Standard Capacity Product and utilizes a resource’s economic and self schedule bids to evaluate Resource Adequacy and Capacity Procurement Capacity availability. Similar to SCP, RAAIM establishes a monthly standard that RA resources are expected to perform. RA resources that fail to meet the threshold are subject to a penalty, while resources that exceed the threshold may receive a payment.

Under SCP, a large number of resources were exempted due to the limitation of evaluating availability based on forced outages. A resource’s availability was used in the evaluation of RA and CPM Capacity, but calculated separately under SCP and CPM settlement. In reality, RA and CPM capacity share the same must offer rules and adhere to inter-related rules. Additionally, the Flexible Resource Adequacy Criteria and Must Offer Obligation (FRAC-MOO) initiative created economic bidding requirements that were impossible to measure using an outage availability value. A new incentive mechanism was thus necessary in order to expand, integrate, and evaluate more resources on the grid. and accommodate the new bidding obligations introduced with FRAC-MOO.

## Description

The Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC8830) is the charge to any RA Resource that failed to meet the monthly Availability Standard minus the tolerance band of 2%. The Non-availability charges will be applied on a monthly basis to RA resources that fail to achieve the Availability Standard minus 2% during that month.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
| 1.0 | Resource Adequacy Availability Incentive Mechanism Monthly Charge or payment shall be assessed to resources with CPM RA, and non-CPM (RAAIM) RA capacity whose Monthly Availability Percentage falls below or above the Availability Incentive Standard Percentage’s respective threshold. |
| 2.0 | The Availability Incentive Standard Percentage is 96.5%. |
| 3.0 | There is a tolerance band of 2% below the availability incentive standard percentage used to calculate the Availability Incentive Charge performance threshold.  |
| 4.0 | The Resource Adequacy Availability Incentive Price is 60% of the CSP soft offer cap ($3.79 kw/month). The CSP soft offer cap is subject to stakeholder review and potential revision through a FERC filing process at least every four years. |
| 5.0 | The Resource Adequacy Availability Incentive Price for CPM capacity is the maximum of the RAAIM price and the resource-specific CPM capacity price. |
| 6.0 | The monthly average generic RA capacity MW shall be the total sum of the daily generic RA capacity MW that is prorated to the total number days of generic obligation within the trade month. |
| 6.1 | The monthly average flexible RA capacity MW shall be the total sum of the daily flexible RA capacity MW that is prorated to the total number days of category’s flexible obligation within the trade month. |
| 6.2 | The monthly average generic CPM capacity MW shall be the total sum of the daily generic CPM capacity MW that is prorated to the total number of days of generic obligation within the trade month.  |
| 6.3 | The monthly average flexbile CPM capacity MW shall be the total sum of the daily flexbile CPM capacity MW that is prorated to the total number of days of category’s flexible obligation within the trade month. |
| 8.0 | Resource Adequacy Availability Incentive Mechanism Monthly Charge settlement for CPM and non-CPM(RAAIM) capacity shall be the product of the respective availability incentive charge price and the product of Monthly Average capacity MW and RAAIM performance charge percentage:  |
| 8.1 | Generic CPM Capacity:Generic CPM RAAIM Monthly Charge = CSP price \* (Monthly Average Generic CPM capacity MW \* Generic RAAIM performance charge percentage)  |
| 8.2 | Flexible CPM Capacity:Flexible CPM RAAIM Monthly Charge = CSP price \* (Monthly Average Flexible CPM capacity MW \* Flexible RAAIM performance charge percentage) |
| 8.3 | Generic (Non-CPM) RA Capacity:Generic RAAIM Monthly Charge = RAAIM charge price \* (Monthly Average Generic RA capacity MW \* Generic RAAIM performance charge percentage) |
| 8.3 | Generic (Non-CPM) RA Capacity:1. For a non-RMR resource:

Generic RAAIM Monthly Charge = RAAIM charge price \* (Monthly Average Generic RA capacity MW \* Generic RAAIM performance charge percentage) 1. For an RMR resource subject to new Tariff and RAAIM assessment:

Generic RAAIM Monthly Charge = RMR monthly contract price \* (Monthly Average Generic RA capacity MW \* Generic RAAIM performance charge percentage) |
| 8.4 | Flexible (Non-CPM) RA Capacity:1. For a non-RMR resource:

Flexible RAAIM Monthly Charge = RAAIM charge price \* (Monthly Average Flexible RA capacity MW \* Flexible RAAIM performance charge percentage)1. For an RMR resource subject to new Tariff and RAAIM assessment:

Flexible RAAIM Monthly Charge = RMR monthly contract price \* (Monthly Average Flexible RA capacity MW \* Flexible RAAIM performance charge percentage) |
| 8.5 | RAAIM performance charge percentage is equal to the resources Monthly Availability Percentage below the RAAIM monthly availability charge threshold. |
| 9.0 | In order to facilitate implementing the advisory period under Section 40.9.1, a RAAIM advisory flag will be incorporated into the reporting hierarchy of CC 8830 and CC 8831 such that Settlement amounts will calculate but never be billed or invoiced |

## Predecessor Charge Codes

| Charge Code/ Pre-Calc Name |
| --- |
| Resource Adequacy Availability Incentive Mechanism Pre-calculation |

## Successor Charge Codes

| Charge Code/ Pre-calc Name |
| --- |
| Monthly Resource Adequacy Availability Incentive Mechanism Allocation (CC 8831) |

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
|  | RAAIMAvailabilityStandard m | Monthly Availability Standard. |
|  | LowerToleranceBand | Tolerance Band of 2.0% |
|  | UpperToleranceBand | Tolerance Band of 2.0% |
|  | PTBChargeAdjustmentGenericRAAIM BrJm | Generic RAAIM non availability PTB charge adjustment for a specified resource |
|  | PTBChargeAdjustmentFlexibleRAAIM BrJm | Flexible RAAIM non availability PTB charge adjustment for a specified resource |
|  | ResourceFlexibleRAAIMExclusionFlag rm | Flag to manually exclude a resource’s Flexible capacity from RAAIM penalties and incentives |
|  | ResourceGenericRAAIMExclusionFlag rm | Flag to manually exclude a resource’s Generic capacity from RAAIM penalties and incentives |
|  | RMRResFlag rm | Identifies a resource is an RMR subject to new Tariff and RAAIM assessment. |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration / Description |
| --- | --- | --- |
|  | MonthlyResourceRAAIMCPMPrice Brtm | Resource Adequacy Availability Incentive Mechanism Pre-calculationThe “price” value of the Non-Availability Charge for generic CPM |
|  | MonthlyResourceRAAIMFlexibleCPMPrice Brtm | Resource Adequacy Availability Incentive Mechanism Pre-calculationThe “price” value of the Non-Availability Charge for flexible CPM |
|  | DailyAssessmentGenericCPMObligationQuantity BrtF’S’md | An RA resource’s daily generic CPM bid obligation for each RAAIM assessment day where a bidding obligation existed. |
|  | DailyAssessmentGenericRAObligationQuantity BrtF’S’md | An RA resource’s daily generic RA bid obligation for each RAAIM assessment day where a bidding obligation existed. |
|  | MonthlyAssessDaysGenericObligationCount m | Count of assessment days for generic RA/CPM within month m |
|  | DailyAssessmentFlexibleCPMObligationQuantity BrtF’S’j’md | An RA resource’s daily flexible CPM bid obligation for each RAAIM assessment day where a bidding obligation existed. |
|  | DailyAssessmentFlexibleObligationQuantity BrtF’S’j’md | An RA resource’s daily flexible RA bid obligation for each RAAIM assessment day where a bidding obligation existed. |
|  | MonthlyAssessDaysFlexibleObligationCount j’m | Count of assessment days within month m for flexible category j’ |
|  | DailyAssessmentGenericAvailabilityQuantity BrtF’S’md | An RA resource’s daily generic RA/CPM availability for each RAAIM assessment day where a bidding obligation existed. |
|  | DailyAssessmentGenericObligationQuantity BrtF’S’md | An RA resource’s daily generic RA/CPM bid obligation for each RAAIM assessment day where a bidding obligation existed. |
|  | DailyAssessmentFlexibleAvailabilityQuantity BrtF’S’j’md | An RA resource’s daily flexible RA/CPM availability for each RAAIM assessment day where a bidding obligation existed. |
|  | DailyAssessmentFlexibleRAObligationQuantity BrtF’S’j’md | A resource’s daily flexible RA obligation used for RAAIM assessment |
|  | RAAIMNonAvailabiltyChargePrice m | The "price" value of the Non-Availability Charge is 60% of the CSP soft offer cap. |
|  | RMRMonthlyContractPrice rm | Resource Adequacy Availability Incentive Mechanism Pre-calculation |

## CAISO Charge Code Formula

The formulas herein are effective on an advisory basis starting on 5/1/2018 and on a production basis starting on 7/1/2018.

The formula for the Settlements Amount in any given month is as follow:

### RAAIM Non-Availability Settlement Amount

#### MonthlyResourceTotalRAAIMNonAvailSettlementAmount

MonthlyResourceTotalRAAIMNonAvailSettlementAmount BrtF’S’m =

MonthlyResourceTotalGenericRAAIMNonAvailabilitySettlementAmount BrtF’S’m + MonthlyResourceTotalFlexibleRAAIMNonAvailabilitySettlementAmount BrtF’S’m

#### CAISOMonthlyGenericRAAIMNonAvailabilitySettlementAmount

CAISOMonthlyGenericRAAIMNonAvailabilitySettlementAmount m =

 MonthlyResourceTotalGenericRAAIMNonAvailabilitySettlementAmount BrtF’S’m

#### MonthlyResourceTotalGenericRAAIMNonAvailabilitySettlementAmount

MonthlyResourceTotalGenericRAAIMNonAvailabilitySettlementAmount BrtF’S’m =

MonthlyResourceGenericCPMNonAvailabilitySettlementAmount BrtF’S’m + MonthlyResourceGenericRANonAvailabilitySettlementAmount BrtF’S’m+ MonthlyPTBChargeAdjustmentGenericRAAIMAmount Brm

**Note:**

The equation above will directly accept any monthly PTB adjustments due to the requirement to separately provide both Generic and Flexible PTB functionality which the charge codes hierarchy structure cannot provide

####  MonthlyPTBChargeAdjustmentGenericRAAIMAmount

MonthlyPTBChargeAdjustmentGenericRAAIMAmount Brm =

**** PTBChargeAdjustmentGenericRAAIM BrJm

#### MonthlyResourceGenericCPMNonAvailabilitySettlementAmount

MonthlyResourceGenericCPMNonAvailabilitySettlementAmount BrtF’S’m = MonthlyResourceGenericCPMNonAvailabilityQuantity BrtF’S’m \* MAX(RAAIMNonAvailabiltyChargePrice m, MonthlyResourceRAAIMCPMPrice Brtm)

#### MonthlyResourceGenericRANonAvailabilitySettlementAmount

MonthlyResourceGenericRANonAvailabilitySettlementAmount BrtF’S’m =

If RMRResFlag rm <> 1 Then

MonthlyResourceGenericRANonAvailabilityQuantity BrtF’S’m \* RAAIMNonAvailabiltyChargePrice m

Else

MonthlyResourceGenericRANonAvailabilityQuantity BrtF’S’m \* RMRMonthlyContractPrice rm

End If

#### CAISOMonthlyFlexibleRAAIMNonAvailabilitySettlementAmount

CAISOMonthlyFlexibleRAAIMNonAvailabilitySettlementAmount m =

(MonthlyResourceTotalFlexibleRAAIMNonAvailabilitySettlementAmount BrtF’S’m)

#### MonthlyResourceTotalFlexibleRAAIMNonAvailabilitySettlementAmount

MonthlyResourceTotalFlexibleRAAIMNonAvailabilitySettlementAmount BrtF’S’m = MonthlyResourceFlexibleCPMAndRANonAvailabilitySettlementAmount BrtF’S’m + MonthlyPTBChargeAdjustmentFlexibleRAAIMAmount Brm

**Note:**

The equation above will directly accept any monthly PTB adjustments due to the requirement to separately provide both Generic and Flexible PTB functionality which the charge codes hierarchy structure cannot provide

#### MonthlyPTBChargeAdjustmentFlexibleRAAIMAmount Brm =

 PTBChargeAdjustmentFlexibleRAAIM BJrm

#### MonthlyResourceFlexibleCPMNonAvailSettlementAmount

MonthlyResourceFlexibleCPMNonAvailSettlementAmount BrtF’S’j’m = MonthlyResourceFlexibleCPMNonAvailQuantity BrtF’S’j’m \* MAX(RAAIMNonAvailabiltyChargePrice m, MonthlyResourceRAAIMFlexibleCPMPrice Brtm)

#### MonthlyResourceFlexibleRANonAvailabilitySettlementAmount

MonthlyResourceFlexibleRANonAvailabilitySettlementAmount BrtF’S’j’m =

If RMRResFlag rm <> 1 Then

MonthlyResourceFlexibleRANonAvailabilityQuantity BrtF’S’j’m \* RAAIMNonAvailabiltyChargePrice m

Else

MonthlyResourceFlexibleRANonAvailabilityQuantity BrtF’S’j’m \* RMRMonthlyContractPrice rm

End If

3.8.1.12 MonthlyResourceFlexibleCPMAndRANonAvailabilitySettlementAmount BrtF’S’m =

(MonthlyResourceFlexibleCPMNonAvailSettlementAmount BrtF’S’j’m + MonthlyResourceFlexibleRANonAvailabilitySettlementAmount BrtF’S’j’m )

### RAAIM Non-Availability Quantity

#### MonthlyResourceGenericCPMNonAvailabilityQuantity

IF

ResourceGenericRAAIMExclusionFlag rm = 1

THEN

MonthlyResourceGenericCPMNonAvailabilityQuantity BrtF’S’m = 0

ELSE

MonthlyResourceGenericCPMNonAvailabilityQuantity BrtF’S’m =

MonthlyGenericCPMObligationQuantity BrtF’S’m \* MonthlyGenericPenaltyPercentage BrtF’S’m

#### MonthlyResourceGenericRANonAvailabilityQuantity

IF

ResourceGenericRAAIMExclusionFlag rm = 1

THEN

MonthlyResourceGenericRANonAvailabilityQuantity BrtF’S’m = 0

ELSE

MonthlyResourceGenericRANonAvailabilityQuantity BrtF’S’m =

MonthlyGenericRAObligationQuantity BrtF’S’m \* MonthlyGenericPenaltyPercentage BrtF’S’m

#### MonthlyResourceFlexibleCPMNonAvailQuantity

IF

ResourceFlexibleRAAIMExclusionFlag rm = 1

THEN

MonthlyResourceFlexibleCPMNonAvailQuantity BrtF’S’j’m = 0

ELSE

MonthlyResourceFlexibleCPMNonAvailQuantity BrtF’S’j’m =

MonthlyFlexibleCPMObligationQuantity BrtF’S’j’m \* MonthlyFlexiblePenaltyPercentage BrtF’S’j’m

#### MonthlyResourceFlexibleRANonAvailabilityQuantity

IF

ResourceFlexibleRAAIMExclusionFlag rm = 1

THEN

MonthlyResourceFlexibleRANonAvailabilityQuantity BrtF’S’j’m = 0

ELSE

MonthlyResourceFlexibleRANonAvailabilityQuantity BrtF’S’j’m =

MonthlyFlexibleRAObligationQuantity BrtF’S’j’m \* MonthlyFlexiblePenaltyPercentage BrtF’S’j’m

### RAAIM Obligation Quantity

#### MonthlyGenericCPMObligationQuantity

MonthlyGenericCPMObligationQuantity BrtF’S’m =

****(DailyAssessmentGenericCPMObligationQuantity BrtF’S’md / INTDUPLICATE(MonthlyAssessDaysGenericObligationCount m ))

#### MonthlyGenericRAObligationQuantity

MonthlyGenericRAObligationQuantity BrtF’S’m =

****(DailyAssessmentGenericRAObligationQuantity BrtF’S’md / INTDUPLICATE(MonthlyAssessDaysGenericObligationCount m ))

#### MonthlyFlexibleCPMObligationQuantity

MonthlyFlexibleCPMObligationQuantity BrtF’S’j’m =

( DailyAssessmentFlexibleCPMObligationQuantity BrtF’S’j’md / INTDUPLICATE(MonthlyAssessDaysFlexibleObligationCount j’m )


#### MonthlyFlexibleRAObligationQuantity

MonthlyFlexibleRAObligationQuantity BrtF’S’j’m =

( DailyAssessmentFlexibleRAObligationQuantity BrtF’S’j’md / INTDUPLICATE(MonthlyAssessDaysFlexibleObligationCount j’m ))


### RAAIM Non-Availability Performance

#### MonthlyGenericPenaltyPercentage

MonthlyGenericPenaltyPercentage BrtF’S’m = MAX(0, (RAAIMAvailabilityStandard m – LowerToleranceBand) – MonthlyAssessmentGenericPerformance BrtF’S’m)

#### MonthlyAssessmentGenericPerformance

MonthlyAssessmentGenericPerformance BrtF’S’m = (MonthlyAssessmentGenericAvailabilityQuantity BrtF’S’m/ MonthlyAssessmentGenericObligationQuantity BrtF’S’m )

#### MonthlyAssessmentGenericAvailabilityQuantity

MonthlyAssessmentGenericAvailabilityQuantityBrtF’S’m=

 DailyAssessmentGenericAvailabilityQuantity BrtF’S’md

#### MonthlyAssessmentGenericObligationQuantity

MonthlyAssessmentGenericObligationQuantity BrtF’S’m=

 DailyAssessmentGenericObligationQuantityBrtF’S’md

#### MonthlyFlexiblePenaltyPercentage

MonthlyFlexiblePenaltyPercentage BrtF’S’j’m = MAX(0, (RAAIMAvailabilityStandard m – LowerToleranceBand) – MonthlyAssessmentFlexiblePerformance BrtF’S’j’m)

#### MonthlyAssessmentFlexiblePerformance

MonthlyAssessmentFlexiblePerformance BrtF’S’j’m = (MonthlyAssessmentFlexibleAvailabilityQuantity BrtF’S’j’m / MonthlyAssessmentFlexibleObligationQuantity BrtF’S’j’m)

#### MonthlyAssessmentFlexibleAvailabilityQuantity

MonthlyAssessmentFlexibleAvailabilityQuantityBrtF’S’j’m =

**** DailyAssessmentFlexibleAvailabilityQuantityBrtF’S’j’md

#### MonthlyAssessmentFlexibleObligationQuantity

MonthlyAssessmentFlexibleObligationQuantity BrtF’S’j’m =

 **** DailyAssessmentFlexibleObligationQuantity BrtF’S’j’md

## Output Requirements

| Output Req ID | Name | Description |
| --- | --- | --- |
| 1 | In addition to any outputs listed below, all inputs shall be included as outputs. |  |
| 2 | MonthlyResourceTotalRAAIMNonAvailSettlementAmount BrtF'S'm | The total monthly Non Availability settlement charge amount applied to RA, flexible RA, generic CPM, and flexible CPM capacity of a resource that performs below the Availability Standard threshold. |
| 3 | CAISOMonthlyGenericRAAIMNonAvailabilitySettlementAmount m | The sum of Non Availability settlement amounts for all resources with generic RA/CPM capacity that receive RAAIM penalty charges for the month. |
| 4 | MonthlyResourceTotalGenericRAAIMNonAvailabilitySettlementAmount BrtF’S’m | The total monthly Non Availability settlement charge amount applied to generic RA/CPM capacity of a resource that performs below the Availability Standard threshold. |
| 5 | MonthlyPTBChargeAdjustmentGenericRAAIMAmount Brm | This output solely exists to sum over attributes which would otherwise conflict with the business driver in a subsequent equation |
| 6 | MonthlyResourceGenericCPMNonAvailabilitySettlementAmount BrtF’S’m | The monthly Non Availability settlement charge amount applied to generic CPM capacity of a resource that performs below the Availability Standard threshold. |
| 7 | MonthlyResourceGenericRANonAvailabilitySettlementAmount BrtF’S’m | The monthly Non Availability settlement charge amount applied to generic RA capacity of a resources that performs below the Availability Standard threshold. |
| 8 | CAISOMonthlyFlexibleRAAIMNonAvailabilitySettlementAmount m | The sum of Non Availability settlement amounts for all resources with flexible RA/CPM capacity that receive RAAIM penalty charges for the month. |
| 9 | MonthlyResourceTotalFlexibleRAAIMNonAvailabilitySettlementAmount BrtF’S’m | The total monthly Non Availability settlement charge amount applied to flexible RA/CPM capacity of a resource that performs below the Availability Standard threshold. |
| 10 | MonthlyPTBChargeAdjustmentFlexibleRAAIMAmount Brm | This output solely exists to sum over attributes which would otherwise conflict with the business driver in a subsequent equation |
| 11 | MonthlyResourceFlexibleCPMNonAvailSettlementAmount BrtF’S’j’m  | The monthly Non Availability settlement charge amount applied to flexible CPM capacity of a specified flexible RA category for a resource that performs below the Availability Standard threshold. |
| 12 | MonthlyResourceFlexibleRANonAvailabilitySettlementAmount BrtF’S’j’m | The monthly Non Availability settlement charge amount applied to flexible RA capacity of a specified flexible RA category for a resource that performs below the Availability Standard threshold. |
| 13 | MonthlyResourceGenericCPMNonAvailabilityQuantity BrtF’S’m | The monthly generic CPM capacity subject to the Non Availability charge price. It is the portion of the monthly CPM capacity that is below the Availability Standard threshold. |
| 14 | MonthlyResourceGenericRANonAvailabilityQuantity BrtF’S’m | The monthly generic RA capacity subject to the Non Availability charge price. It is the portion of the monthly RA capacity that is below the Availability Standard threshold. |
| 15 | MonthlyResourceFlexibleCPMNonAvailQuantity BrtF’S’j’m  | For a specified flexible RA category, the monthly flexible CPM capacity subject to the Non Availability charge price. It is the portion of the monthly CPM capacity that is below the Availability Standard threshold. |
| 16 | MonthlyResourceFlexibleRANonAvailabilityQuantity BrtF’S’j’m | For a specified flexible RA category, the monthly flexible RA capacity subject to the Non Availability charge price. It is the portion of the monthly RA capacity that is below the Availability Standard threshold. |
| 17 | MonthlyGenericCPMObligationQuantity BrtF’S’m | Represents the average daily generic CPM obligation for the month for RAAIM assessment |
| 18 | MonthlyGenericRAObligationQuantity BrtF’S’m | Represents the average daily generic RA obligation for the month for RAAIM assessment |
| 19 | MonthlyFlexibleCPMObligationQuantity BrtF’S’j’m | Represents the average daily flexible RA category CPM obligation for the month for RAAIM assessment |
| 20 | MonthlyFlexibleRAObligationQuantity BrtF’S’j’m | For a flexible RA category, represents the average daily flexible RA obligation for the month for RAAIM assessment |
| 21 | MonthlyGenericPenaltyPercentage BrtF’S’m | For resources with generic RA/CPM capacity that perform below the Availability Standard for, this value represents the difference between the resource’s performance and the threshold. |
| 22 | MonthlyAssessmentGenericPerformance BrtF’S’m | Represents a resource’s generic RA/CPM availability, as a percentage of all assessment days the resource had an obligation to bid. |
| 23 | MonthlyAssessmentGenericAvailabilityQuantity BrtF’S’m | An RA resource’s monthly generic RA/CPM availability for each RAAIM assessment day where a bidding obligation existed.This formula exists solely because in the monthly equation that consumes this charge type it is required that the numerator and denominator terms in the calculations be monthly CTs prior to dividing with them |
| 24 | MonthlyAssessmentGenericObligationQuantity BrtF’S’m | An RA resource’s monthly generic RA/CPM bid obligation for each RAAIM assessment day where a bidding obligation existed.This formula exists solely because in the monthly equation that consumes this charge type it is required that the numerator and denominator terms in the calculations be monthly CTs prior to dividing with them |
| 25 | MonthlyFlexiblePenaltyPercentage BrtF’S’j’m | For resources with flexible RA/CPM capacity that perform below the Availability Standard for, this value represents the difference between the resource’s performance and the threshold for the specified flexible RA category. |
| 26 | MonthlyAssessmentFlexiblePerformance BrtF’S’j’m | Represents, for the specified flexible RA category, a resource’s flexible RA/CPM availability as a percentage of its obligations over all assessment days the resource had an obligation to bid. |
| 27 | MonthlyAssessmentFlexibleAvailabilityQuantity BrtF’S’j’m | An RA resource’s monthly flexible RA/CPM availability for each RAAIM assessment day where a bidding obligation existed.This formula exists solely because in the monthly equation that consumes this charge type it is required that the numerator and denominator terms in the calculations be monthly CTs prior to dividing with them  |
| 28 | MonthlyAssessmentFlexibleObligationQuantity BrtF’S’j’m | An RA resource’s monthly flexible RA/CPM bid obligation for each RAAIM assessment day where a bidding obligation existed.This formula exists solely because in the monthly equation that consumes this charge type it is required that the numerator and denominator terms in the calculations be monthly CTs prior to dividing with them |
| 29 | MonthlyResourceFlexibleCPMAndRANonAvailabilitySettlementAmount BrtF’S’m | The monthly Non Availability settlement charge amount applied to flexible CPM and RA capacity of a specified flexible RA category for a resource that performs below the Availability Standard threshold. |

# Charge Code Effective Dates

| Charge Code/Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.0 | 11/1/16 | 10/31/16 | Configuration Impacted |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.0a | 11/1/16 | 10/31/16 | Documentation Update |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.1 | 11/1/16 | 04/30/18 | Configuration Impacted |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.2 | 05/1/18 | 4/30/18 | Configuration Impacted |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.3 | 05/1/18 | 4/30/18 | Configuration Impacted |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.3.1 | 05/1/18 | 12/31/19 | Configuration Impacted |
| Monthly Resource Adequacy Availability Incentive Mechanism Settlement (CC 8830) | 5.4 | 1/1/20 | Open | Configuration Impacted |