Settlements & Billing

Configuration Guide: GMC System Operations Charge

CC 4561

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

The Grid Management Charge Codes (GMC) comprises daily and monthly charges which are assessed to participating Scheduling Coordinators (SC) for the purpose of recovering all of the ISO’s direct and indirect operating costs. The costs are comprised of CAISO Operating Costs, CAISO Other Costs and Revenues, CAISO Financial Costs, CAISO Operating Reserve adjustment, and CAISO Cash-Funded Capital and Project Costs.

During the “2012 GMC” stakeholder initiative, the ISO conducted a cost of service study and developed three service categories a fixed Transmission Ownership Rights (TOR) charge and four transactional and administrative charges The service charges are (1) a Market Services Charge; (2) a System Operations Charge; and (3) a CRR Services Charge. The transactional and administrative fees are (1) a Bid Segment Fee; (2) a CRR Transaction Fee; (3) an Inter-Scheduling Coordinator Trade Transaction Fee; and (4) a Scheduling Coordinator Identification (ID) Charge. This Configuration Guide addresses the System Operations Charge Code.

## Description

The System Operation Charge is designed to recover costs the ISO incurs for running the grid in real time. As such, this charge code will be applied to each scheduling coordinators gross absolute value of actual real-time Settlement Interval energy flow (MWh). However, ISO has agreed to incorporate a Grandfathering Provision for Scheduling Coordinators with verified long-term contracts, for specific resources, which limit the Scheduling Coordinators to pass on increases in the GMC. The ISO grandfathering provision exempts the Scheduling Coordinators’ resources from the System Operations Charge for verified long-term contracts that meet the ISO tariff criteria. These qualifying resources will be exempt from the charge until the first opportunity to renegotiate the contract or until the contract expires.

# Charge Code Requirements

## Business Rules

| Bus Req ID | Business Rule |
| --- | --- |
|  | The System Operations Charge shall apply to the Settlement Interval absolute value of the following flow of energy by resource:  Non Dynamic System Resource Deemed Delivered Energy, Dynamic System Resource Deemed Delivered Energy, Metered Generation Quantities, Metered Default LAP Load Quantities, Metered Custom LAP Load Quantities, Metered Pumping Energy |
|  | The rate for the System Operations Charge will be calculated by dividing the  annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid, net of amounts excluded pursuant to Part E of the Schedule F. |
|  | Each component rate of the Grid Management Charge will be adjusted automatically on a quarterly basis, up or down, so that rates reflect the annual revenue requirement as posted on the CAISO Website. (Fact) |
|  | This Charge Code shall provide an output on a daily basis. |
|  | This Charge Code shall be billed in accordance to CAISO Payments Calendar. |
|  | A settlement details file shall provide details for each daily settlement amount. |
| 4.0 | For adjustments to the Charge Code that cannot be accomplished by correction of upstream data inputs, recalculation or operator override, Pass Through Bill Charge adjustment shall be applied. |
| 5.0 | Scheduling Coordinators that have verified long-term contracts which limit the Scheduling Coordinators to pass on increased Grid Management Costs shall be exempted for System Operations Charge until the first opportunity to renegotiate the contract or until the contract expires. |
| 6.0 | This Charge Code will not apply to participating and non-participating resources within the EIM Balancing Authority Area |

## Predecessor Charge Codes

| Charge Code/ Pre-Calc Name |
| --- |
| Real Time Energy Pre-Calculation |
| CC 4560 – GMC Market Services |

## Successor Charge Codes

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

## Inputs - External Systems

| Row # | Variable Name | Description |
| --- | --- | --- |
| 1 | CAISOGMCSystemOperationsChargeRate m | FERC-approved System Operations GMC rate. The input data is available from the SaMC standing data based on applicable start and end dates. |
| 2 | BAResourceGrandfatheringProvisionQty Brtmd | Grandfathering Provision Quantity by Business Associate B, Resource r, Resource type t of Trading Month m and Trading Day d. |
| 3 | PTBChargeAdjustmentGMCSystemOperationsSettlementAmount BJmd | PTB adjustment variable for this Charge Code, with amount per SC (in $). The input applies to Business Associate B, Trading Month m and Trading Day d. |
| 4 | GMCSystemOperationsExclusionFlag B | Flag indicating TOR exception from Charge Code, where exception is represented by “1”. |

## Inputs - Predecessor Charge Codes or Pre-calculations

| Row # | Variable Name | Predecessor Charge Code/ Pre-calc Configuration / Description |
| --- | --- | --- |
| 1 | SettlementIntervalMeteredEnergy BrtQ’uT’I’M’F’S’mdhcif | Settlement Interval metered energy for Resource r . (MWh) |
| 2 | BAResSettlementIntervalTORFinalBalancedQuantity Brtmdhcif | Settlement Interval TOR Final Balanced Quantity for Business Associate B, Resource r. (MWh) |

## CAISO Formula

The daily settlement System Operations Grid Management Charge by each Business Associate is derived according to the formulation below.

### BADaySystemOperationsAmount Bmd = BADaySystemOperationsQuantity Bmd \* CAISOGMCSystemOperationsChargeRate md

### IF

GMCSystemOperationsExclusionFlag B = 1

### THEN

### BADaySystemOperationsQuantity Bmd = 0

### ELSE

### BADaySystemOperationsQuantity Bmd = (BADailyResSystemOperDeliveredEnergyLessGFQuantity Brtmd )

### BADailyResSystemOperDeliveredEnergyLessGFQuantity Brtmd = max (0, (BADailyResSystemOperationsDeliveredEnergyQuantity Brtmd - BAResourceGrandfatheringProvisionQty Brtmd))

### BADailyResSystemOperationsDeliveredEnergyQuantity Brtmd = BAHourlyResSystemOperationsDeliveredEnergyQuantity Brtmdh

### BAHourlyResSystemOperationsDeliveredEnergyQuantity Brtmdh = BASettlementIntervalResSystemOperationsDeliveredEnergyQuantity BrtQ’uT’I’M’F’S’mdhcif

### BASettlementIntervalResSystemOperationsDeliveredEnergyQuantity BrtQ’uT’I’M’F’S’mdhcif = ABS (SettlementIntervalMeteredEnergy BrtQ’uT’I’M’F’S’mdhcif - BAResSettlementIntervalTORFinalBalancedQuantity Brtmdhcif )

### Where Balancing Authority Area (Q’) =’CISO’

## Outputs

| Output Req ID | Name | Description |
| --- | --- | --- |
| 1 | In addition to any outputs listed below, all inputs shall be included as outputs. | All inputs |
| 2 | BASettlementIntervalResSystemOperationsDeliveredEnergyQuantity BrtQ’uT’I’M’F’S’mdhcif | Settlement Interval System Operations Delivered Energy for Business Associate B, Resource r.. (MWh) |
| 3 | BAHourlyResSystemOperationsDeliveredEnergyQuantity Brtmdh | Hourly System Operations Delivered Energy for Business Associate B, Resource r, Resource Type t of Trading Month m, Trading Day d, and Trading Hour h. (MWh) |
| 4 | BADailyResSystemOperationsDeliveredEnergyQuantity Brtmd | Daily System Operations Delivered Energy for Business Associate B, Resource r, Resource Type t of Trading Month m and Trading Day d. (MWh) |
| 5 | BADailyResSystemOperDeliveredEnergyLessGFQuantity Brtmd | Daily System Operations Delivered Energy less Grandfather Provision Energy for Business Associate B, Resource r, Resource Type t of Trading Month m and Trading Day d. (MWh) |
| 6 | BADaySystemOperationsQuantity Bmd | Daily System Operations Delivered Energy Quantity for Business Associate B of Trading Month m, and Trading Day d i. (MWh) |
| 7 | BADaySystemOperationsAmount Bmd | Daily System Operations Delivered Energy Amount for Business Associate B of Trading Month m, and Trading Day d (MWh) |

# Charge Code Effective Date

| Charge Code/  Pre-calc Name | Document Version | Effective Start Date | Effective End Date | Version Update Type |
| --- | --- | --- | --- | --- |
| CC 4561 GMC System Operations Charge | 5.0 | 01/01/12 | 12/31/11 | Configuration Impacted |
| CC 4561 GMC System Operations Charge | 5.0a | 01/01/12 | 4/30/14 | Documentation Only |
| CC 4561 GMC System Operations Charge | 5.1 | 5/1/14 | 9/30/2014 | Configuration Impacted |
| CC 4561 GMC System Operations Charge | 5.2 | 10/01/2014 | 12/31/2025 | Configuration and Documentation Edits |