

**11 CAISO SETTLEMENTS AND BILLING.**

**11.1 Settlement Principles.**

The CAISO shall calculate, account for and settle payments and charges with Business Associates in accordance with the following principles:

- (a) The CAISO shall be responsible for calculating Settlement balances for any penalty or dispute in accordance with the CAISO Tariff, and any transmission Access Charge to UDCs or MSSs and Participating TOs;
- (b) The CAISO shall create and maintain computer back-up systems, including off-site storage of all necessary computer hardware, software, records and data at an alternative location that, in the event of a Settlement system breakdown at the primary location of the day-to-day operations of the CAISO, could serve as an alternative location for day-to-day Settlement operations within a reasonable period of time;
- (c) The CAISO shall retain all Settlement data records for a period which, at least, allows for the re-run of data as required by this CAISO Tariff and any adjustment rules of the Local Regulatory Authority governing the Scheduling Coordinators and their End-Use Customers and FERC;

- (d) The CAISO shall calculate, account for and settle all charges and payments based on the Settlement Quality Meter Data it has received, or, if Settlement Quality Meter Data is not available, based on the best available information or estimate it has received in accordance with the provisions in Section 10 and the applicable Business Practice Manuals; and
- (e) Day-Ahead Schedules, RUC Awards and AS Awards shall be settled at the relevant LMP, RUC Price, and ASMPs, respectively. HASP Intertie Schedules shall be settled at the relevant HASP Intertie LMP at the relevant Scheduling Point. All Dispatch Instructions shall be deemed delivered and settled at relevant Real-Time Market prices. Deviations from Dispatch Instructions shall be settled as Uninstructed Deviations.

**11.1.1 [NOT USED]**

**11.1.2** The CAISO shall settle the following charges in accordance with this CAISO Tariff: (1) Grid Management Charge; (2) Bid Cost Recovery; (3) IFM charges and payments, including Energy and Ancillary Services; (4) RUC charges and payments; (5) Real-Time Market charges and payments, including Energy and Ancillary Services; (6) HASP charges and payments, including Energy and Ancillary Services; (7) High Voltage Access Charges and TAC Transition Charges; (8) Wheeling Access Charges; (9) Voltage Support and Black Start charges; (10) Excess Cost Payments; (11) default interest charges; (12) CRR Charges and Payments, (13) Inter-SC Trades charges and payments; (14) neutrality adjustments; (15) FERC Annual Charges; (16) distribution of excess Marginal Losses; (17) miscellaneous charges and payments; and (18) Participating Intermittent Resource Fees.

**11.1.3 Financial Transaction Conventions and Currency.**

The following conventions have been adopted in defining sums of money to be remitted to or received by the CAISO:

- (a) Where the CAISO is to receive a sum of money in accordance with this CAISO Tariff, this is defined as a "charge."
- (b) Where the CAISO is required to pay a sum of money in accordance with this CAISO Tariff, this is defined as a "payment."
- (c) All financial transactions are denominated in United States dollars and cents.
- (d) All payments by the CAISO to Business Associates shall be made by Fed-Wire.  
All payments to the CAISO by Business Associates shall be made by Fed-Wire

**11.1.4 Calculations of Settlements.**

The CAISO shall calculate, account for and settle, based on the Settlement Quality Meter Data it has received, or, if Settlement Quality Meter Data is not available, based on the best available information or estimate it has received, the following charges in accordance with this CAISO Tariff.

**11.2 Settlement of Day-Ahead Market Transactions.**

All transactions in the IFM and RUC as specified in the Day-Ahead Schedule, AS Awards and RUC Awards, respectively, are financially binding and will be settled based on the Day-Ahead LMP, ASMP or RUC Price for the relevant Location for the specific resource identified in the Bid. The CAISO will settle the costs of Demand, capacity, Energy and Ancillary Services as separate Settlement charges and payments for each Settlement Period of the Day-Ahead Schedule, Day-Ahead AS Award or RUC Award, as appropriate.

**11.2.1 IFM Settlements.**

**11.2.1.1 IFM Payments For Supply of Energy.**

For each Settlement Period for which the CAISO clears Energy transactions in the IFM, the CAISO shall pay the relevant Scheduling Coordinator for the MWh quantity of Supply of Energy from all Generating Units, Participating Loads, and System Resources in an amount equal to the IFM LMP at the applicable PNode multiplied by the MWh quantity specified in the Day-Ahead Schedule for Supply (which consists of the Day-Ahead Scheduled Energy).

**11.2.1.2 IFM Charges for Demand at LAPS.**

For each Settlement Period that the CAISO clears Energy transactions in the IFM, except as specified in Section 30.5.3.2 and except for Participating Loads, which shall be subject to the charges specified in 11.2.1.3, the CAISO shall charge Scheduling Coordinators for the MWh quantity of Demand scheduled at an individual LAP in the Day-Ahead Schedule, in an amount equal to the IFM LMP for the applicable LAP multiplied by the MWh quantity scheduled in the Day-Ahead Schedule at the relevant LAP.

**11.2.1.3 IFM Charges for Demand by Participating Loads, Including Aggregated Participating Load.**

For each Settlement Period that the CAISO clears Energy transactions in the IFM for Demand by Participating Loads, the CAISO shall charge the Scheduling Coordinators an amount equal to the MWh quantity of Demand scheduled in the Day-Ahead Schedule for the relevant Participating Load at the PNode (or Custom LAP, in the case of Aggregated Participating Load), multiplied by the IFM LMP at that PNode (or Custom LAP, in the case of Aggregated Participating Load).

**11.2.1.4 IFM Charges for Energy Exports at Scheduling Points.**

For each Settlement Period that the CAISO clears Energy transactions in the IFM, the CAISO shall charge Scheduling Coordinators for the Energy export MWh quantity at individual Scheduling Points scheduled in the Day-Ahead Schedule, an amount equal to the IFM LMP for the applicable Scheduling Point multiplied by the MWh quantity at the individual Scheduling Point scheduled in the Day-Ahead Schedule.

**11.2.1.5 IFM Congestion Credit for ETCs, TORs, and Converted Rights.**

For all **Points of Receipt and Points of Delivery** pairs associated with a valid and balanced ETC Self-Schedule, TOR Self-Schedule or Converted Rights Self-Schedule, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCC associated with such Self-Schedules. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Congestion Credit, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCC at each **eligible Point of Receipt and Point of Delivery** associated with the valid and balanced **portions of that Scheduling Coordinator's** ETC, TOR, and Converted Rights Self-Schedules.

**11.2.1.6 Allocation of IFM Marginal Losses Surplus Credit.**

On each Settlement Statement, the CAISO shall apply the IFM Marginal Losses Surplus Credit to each Scheduling Coordinator for the period of each **Settlement Statement**. For each Settlement Period, the IFM Marginal Losses Surplus Credit shall be the product of the IFM Marginal Losses Surplus rate (\$/MWh) and the MWh of Measured Demand for the relevant Scheduling Coordinator. The IFM Marginal Losses Surplus rate shall be equal to the total IFM Marginal Losses Surplus (\$) divided by the sum of the total MWh of Measured Demand in the CAISO **Balancing Authority** Area for the relevant Settlement Period **net of any Measured Demand associated with a TOR Self-Schedule subject to the IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.2.1.7.**

**11.2.1.7 IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules.**

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedules submitted pursuant to an existing agreement between the TOR holder and the CAISO as specified in Section 17.3.3, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable losses charges as specified in the existing agreement between the the TOR holder and the CAISO applicable to the relevant TOR. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCL at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules.

**11.2.2 Calculation of Hourly RUC Compensation.**

For each Settlement Period and resource, Scheduling Coordinators shall receive RUC Compensation, which is the sum of the RUC Availability Payment as determined pursuant to Section 11.2.2.1 and the RUC Bid Cost Recovery amount as determined in Section 11.8.3.

**11.2.2.1 Settlement of RUC Availability Payment.**

Scheduling Coordinators shall receive RUC Availability Payments for all eligible capacity awarded in the RUC process. Resource Adequacy Capacity and capacity from RMR Units dispatched under its RMR Contract in the DAM are not eligible for RUC Availability Payments. The RUC Availability Payment shall be calculated for each resource based on the product of the RUC Price and the RUC Availability Quantity for the relevant Settlement Period. The RUC Availability Payment amounts are allocated through the RUC Compensation Costs allocation in Section 11.8.6.5.

**11.2.2.2 Rescission of RUC Availability Payment.**

Rescission of all or a portion of the RUC Availability Payment for a resource as defined in Section 31.5.7 shall be settled in accordance with this Section 11.2.2.2.

**11.2.2.2.1 Undispatchable RUC Capacity.**

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the RUC Availability Payment, if applicable for any non-Resource Adequacy Capacity, for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, System Unit or System Resource for the Settlement Interval shall be rescinded.

If a Partial Resource Adequacy Resource is providing RUC Capacity from both the non-Resource Adequacy Capacity and the Resource Adequacy Capacity the payment rescission will occur for the non-Resource Adequacy Capacity prior to eliminating any capacity for the Resource Adequacy Capacity of the Partial Resource Adequacy Resource.

**11.2.2.2.2 Undelivered RUC Capacity.**

For each Settlement Interval in which the total metered output for a Generating Unit, Participating Load, System Unit or System Resource is less than Real-Time Expected Energy by more than the Tolerance Band and less than the RUC Schedule, the RUC Award for that Settlement Interval will be rescinded.

**11.2.2.2.3 Allocation of Rescinded RUC Availability Payments Due to Non-Performance.**

RUC Availability Payments rescinded due to non-performance shall be allocated to Scheduling Coordinators in the proportion of their Net Negative Uninstructed Deviations to the total Net Negative CAISO Demand Deviation.

**11.2.3 IFM Energy Charges and Payments for Metered Subsystems.**

**11.2.3.1 Gross Energy Settlement for Metered Subsystems.**

For Scheduling Coordinators that submit Bids for MSS Operators that have selected gross Energy Settlement, CAISO shall settle Energy, the MSS Demand and MSS Supply, in the Day-Ahead Schedules pursuant to Section 11.2.3.1.1 and 11.2.3.1.2.

**11.2.3.1.1 IFM Charges for MSS Demand under Gross Energy Settlement.**

The CAISO shall charge Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Demand internal to the MSS in its Day-Ahead Schedule at the price at the Default LAP where the MSS LAP is located.

**11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlement.**

The CAISO shall pay Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable Resource-Specific Settlement Interval LMP at that PNode.

**11.2.3.2 Net Energy Settlement for Metered Subsystems.**

For Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement, the CAISO shall settle the net MSS Demand and MSS Supply in the Day-Ahead Schedules pursuant to Section 11.2.3.2.1 and 11.2.3.2.2.



**11.2.3.2.1 IFM Charges for MSS Demand under Net Energy Settlement.**

The CAISO shall charge Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement an amount equal to the product of the net MSS Demand in the Day-Ahead Schedule and the IFM MSS Price. The net MSS Demand is the quantity of MSS Demand that exceeds MSS Generation for the applicable MSS.

**11.2.3.2.2 IFM Payments for MSS Supply Under Net Energy Settlement.**

The CAISO shall pay Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement an amount equal to the product of the net MSS Supply in the Day-Ahead Schedule and the weighted average price of all IFM LMPs for all applicable PNodes within the relevant MSS. The net MSS Supply is the quantity of MSS Generation that exceeds the MSS Demand for the applicable MSS. The weights used to compute the weighted average LMPs shall be equal to MSS Generation scheduled in the Day-Ahead Schedule.

**11.2.4 CRR Settlements.**

CRR Holders shall be paid or charged for Congestion costs depending on the type of CRRs held by the CRR Holder, the direction of Congestion as measured through the IFM, and the LMP as calculated in the IFM. CRRs shall be funded through the revenues associated with the IFM Congestion Charge, CRR Charges, and the CRR Balancing Account. The CRR Payments and CRR Charges shall be settled first on a daily basis for each Settlement Period of the DAM. The CAISO shall pro-rate CRR Payments and CRR Charges for each Settlement Period, if there is an insufficiency of funds during that Settlement Period from the IFM Congestion Charge pursuant to Section 11.2.4.1. A monthly true up will then be conducted, on both CRR Payments and CRR Charges in the clearing of the CRR Balancing Account pursuant to Section 11.2.4.4.1 and 11.2.4.4.2.

**11.2.4.1 Calculation of the IFM Congestion Charge.**

For each Settlement Period of the IFM, the CAISO shall calculate the IFM Congestion Charge as the IFM MCC for **all scheduled** Demand minus the IFM MCC for **all scheduled** Supply where the IFM MCC for **all scheduled** Demand is the sum of the products of the IFM MCC and the MWh of Demand scheduled in the Day-Ahead Schedule at all the applicable PNodes, Scheduling Points and Aggregated Pricing Nodes for the Settlement Period **and** the IFM MCC for **all scheduled** Supply is the sum of the products of the IFM MCC and the MWh of Supply scheduled in the Day-Ahead Schedule at all the applicable PNodes and Scheduling Points for the Settlement Period.

**11.2.4.1.2 Calculation of IFM Congestion Fund.**

For each Settlement Period of the IFM, the CAISO shall determine the IFM Congestion Fund, which shall consist of the funds available to pay CRR Holders in any Settlement Period as follows:

- (a) The CAISO shall add to the IFM Congestion Fund the IFM Congestion Charge computed as described in Section 11.2.4.1, minus any IFM Congestion Credits as specified in Section 11.2.1.5;
- (b) The CAISO shall add to the IFM Congestion Fund any **CRR Charges** calculated pursuant to Sections 11.2.4.2.2 and 11.2.4.2.3; **and**
- (c) **The CAISO shall add to the IFM Congestion Fund any IFM Congestion Charges associated with Day-Ahead Ancillary Services Awards as provided in Section 11.10.1.1.1.**

**11.2.4.2 Settlement Calculation for the Different CRR Types.**

For the purposes of determining the CRR Payments and CRR Charges based on the various CRR Types, the CAISO shall calculate the Settlement of CRRs as described in this Section 11.2.4.2. When CRR Source or CRR Sink is a LAP, the Load Distribution Factors used in the IFM will be used to calculate the LAP Price at which CRR Payments or CRR Charges will be settled. When CRR Source or CRR Sink is a Trading Hub the weighting factors used in the IFM and the CRR Allocation and CRR Auction processes will also be used to settle CRR Payments and CRR Charges.

**11.2.4.2.1 Point-to-Point CRR Options.**

For each CRR Holder, the CAISO shall calculate a CRR Payment for each Point-to-Point CRR Option held by the CRR Holder equal to the product of: 1) the MCC at the CRR Sink minus the MCC at the CRR Source; and 2) the MW quantity of the CRR; if that amount is positive. If the resulting amount is negative, the CAISO shall not assess a charge for the relevant CRR Holder for the negative amount. The full CRR Payment calculated pursuant to this process shall be subject to pro-ration as described in 11.2.4.4.

**11.2.4.2.2 Point-to-Point CRR Obligations.**

For each CRR Holder, the CAISO shall calculate a CRR Payment for each CRR Obligation for a Point-to-Point CRR held by the CRR Holder, equal to the product of: 1) the MCC at the CRR Sink minus the MCC at the CRR Source; and 2) the MW quantity of the CRR; if that amount is positive. If the resulting amount is negative, the CAISO shall calculate a CRR Charge for the relevant CRR Holder equal to that negative amount. The full CRR Payment or CRR Charges calculated pursuant to this process shall be subject to pro-ration as described in 11.2.4.4.

**11.2.4.2.3 Multi-Point CRR.**

For each CRR Holder, the CAISO shall calculate a CRR Payment for each Multi-Point CRR held by the CRR Holder, equal to the sum of the MCCs at each CRR Sink weighted by their associated MWh quantities as specified by the CRR, minus (2) the sum of the MCCs at each CRR Source weighted by their associated MWh quantities as specified by the CRR. If the calculated amount is positive, the CAISO shall calculate a CRR Payment for the Multi-Point CRR. If the result of this calculated amount is negative, the CAISO will calculate a CRR Charge for the Multi-Point CRR. The full CRR Payment calculated pursuant to this process shall be subject to pro-ration as described in 11.2.4.4.

**11.2.4.3 Payments and Charges for Monthly and Annual Auctions.**

The CAISO shall charge CRR Holders for the Market Clearing Price for CRRs obtained through the clearing of the CRR Auction as described in Section 36.13.6. To the extent the CRR Holder purchases a CRR through a CRR Auction that has a negative value, the CAISO shall pay the CRR Holder for taking the applicable CRR. The CAISO shall net all revenue received and payments made through this process and shall add the net remaining seasonal and monthly CRR Auction revenue amounts (either negative or positive amounts) to the CRR Balancing Account for the appropriate month. CRR Auction revenues for each season are allocated uniformly across the three monthly accounts comprising each season.

**11.2.4.4 Hourly CRR Settlement.**

For each Settlement Period, the IFM Congestion Funds calculated in Section 11.2.4.1.2 will be used to pay CRR Holders that are owed CRR Payments. If the IFM Congestion Fund is sufficient to make the required CRR Payments for the Settlement Period, all CRR Holders shall be paid and charged fully according to their entitlements. If the IFM Congestion Fund is insufficient to make the required CRR Payments, then CRR Payments and CRR Charges shall be pro-rated by a ratio equal to the total hourly amount of IFM Congestion Funds divided by the net of CRR Payments for that Settlement Period. Any

surplus revenue for the Settlement Period after making all hourly CRR Payments will go to the CRR Balancing Account for use in the end-of-month clearing of the CRR Balancing Account processes pursuant to Section 11.2.4.4.1. Any CRR Payment shortfalls (or amounts not fully paid) and CRR Charge shortfalls (or amounts not fully charged) for the Settlement Period, will be tracked for further Settlement during the end-of-month clearing process as described in Section 11.2.4.4.1. The hourly Settlement of CRRs for each CRR Holder will be based on the type of CRR holdings as described in Section 11.2.4.2. The CRR Holder's hourly CRR Settlement amount, which may be subject to pro-ration if necessary as described in this Section, will be the net of the holder's CRR Payments for CRR Options or CRR Obligations, and the holder's CRR Charges for CRR Obligations out of these holdings.

**11.2.4.4.1 Monthly Clearing of the CRR Balancing Account – Full Funding of CRRs.**

At the end of each month, all CRR Payment shortfalls for all CRR Holders shall be paid in full and all CRR Charge shortfalls shall be fully charged through the CRR Balancing Account clearing process. The net of these CRR Charges and CRR Payment shortfalls shall be added to the CRR Balancing Account for the applicable month. Any surplus or shortfall revenue amounts in the CRR Balancing Account will be distributed to Scheduling Coordinators in an amount equal to (a) the CRR Balancing Account surplus or shortfall amounts, times (b) the ratio of each Scheduling Coordinator's Measured Demand (net of the valid and balanced ETC, TOR or Converted Rights Self-Schedule quantities for which IFM Congestion Credits were provided in the same relevant month) divided by the total Measured Demand for all Scheduling Coordinators for the relevant month.

**11.2.4.5 CRR Balancing Account.**

The CRR Balancing Account shall accumulate: (1) the seasonal and monthly CRR Auction revenue amounts as described in Section 11.2.4.3 and (2) any surplus revenue or shortfall generated from hourly CRR Settlements as described in Section 11.2.4.4. Interest accruing due to the CRR Balancing Account shall be at the CAISO's received interest rate and shall be credited to the CRR Balancing Account.

**11.2.5 Payment by Out-of **Balancing Authority** Area Load **Serving Entity** to Obtain CRRs Through the CRR Allocation Process.**

**11.2.5.1** Pursuant to Section 36.9, in addition to other requirements specified therein, an **OBAALSE** will be eligible to participate in the CRR Allocation process if such entity has made a prepayment to the CAISO and has met the requirements in Section 36.9. The prepayment amount shall equal the MW of CRR requested times the Wheeling Access Charge associated with the Scheduling Point corresponding to the CRR Sink times the number of hours in the period for each requested CRR MW amount. Except as provided in Section 39.9.2, such prepayment will be made three (3) Business Days in advance of the submission of CRR nominations for Monthly CRRs, Seasonal CRRs and Long Term CRRs to the CRR Allocation. Within thirty (30) days following the completion of the CRR Allocation process for Monthly CRRs, Seasonal CRRs and Long Term CRRs, the CAISO shall reimburse such **OBAALSE** the amount of money pre-paid for any CRRs that were not allocated to the entity.

**11.2.5.2 Annual Prepayment Option.**

For entities that are eligible and elect for the annual prepayment pursuant to Section 36.9.2, the annual prepayment will be due three (3) Business Days in advance of the submission of CRR nominations for Tier LT in the CRR Allocation process. For allocated Long Term CRRs, each of the nine subsequent annual payments must be made at the beginning of the annual CRR Allocation process for the following year.

**11.2.5.3 Monthly Prepayment Option.**

If the **OBAALSE** qualified for the monthly prepayment option as specified in Section 36.9.2, the **OBAALSE** shall make its payments consistent with the monthly prepayment schedule specified in the applicable Business Practice Manual.

**11.2.5.4 Treatment of Prepaid WAC Amounts.**

For the amount of CRRs that were allocated to the entity, the CAISO will exempt the Scheduling Coordinator for such entity from the WAC for any Real-Time Interchange Export Schedules at the Scheduling Point corresponding to the sink of each allocated CRR, on an hourly basis for the period for which the CRR is defined, until the pre-paid funds are exhausted. At the end of the period for which the CRR is defined any remaining balance will be allocated to the Participating TOs in accordance with Section 26.1.4.3. To the extent the pre-paid balance amount is exhausted prior to the end of the duration of the awarded CRR, the Scheduling Coordinator designated by the CRR Holder that has been allocated CRRs pursuant to Section 36.9 will be charged for the WAC in accordance with Section 26.1.4.

**11.3 [NOT USED]**

**11.4 HASP Settlement of Scheduling Points.**

The CAISO shall settle both incremental and decremental Energy at the relevant Scheduling Points including Operational Adjustments for all Non-Dynamic System Resources based on the HASP Intertie LMP in accordance with Section 11.4.1 and 11.4.2. Energy dispatched using HASP Intertie Schedules is accounted as Instructed Imbalance Energy and its costs shall be included in the Real-Time Market Settlements in accordance with Section 11.5.

**11.4.1 HASP Settlement for Exports.**

For each Settlement Period that the CAISO clears Energy transactions at Scheduling Points in HASP, the Settlement for such transactions will be the CAISO HASP Intertie LMP multiplied by the MWh quantity of export scheduled at the individual Scheduling Point in excess of or less than the Day-Ahead Schedule, respectively.

#### **11.4.2 HASP Settlement for Imports.**

For each Settlement Period that the CAISO clears Energy transactions at Scheduling Points for all Non-Dynamic System Resources in HASP, the CAISO shall pay or charge Scheduling Coordinators for each System Resource an amount equal to the HASP Intertie LMP multiplied by the MWh quantity of import scheduled at the individual Scheduling Point in excess of or less than the import at that Scheduling Point scheduled in the Day-Ahead Schedule, respectively.

#### **11.5 Real-Time Market Settlements.**

The CAISO shall calculate and account for Imbalance Energy for each Dispatch Interval and settle Imbalance Energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO **Balancing Authority** Area and all System Resources dispatched in Real-Time. Imbalance Energy consists of IIE and UIE. IIE includes Energy associated with HASP Intertie Schedules. IIE is settled pursuant to Section 11.5.1 and UIE is settled pursuant to Section 11.5.2. In addition, the CAISO shall settle UFE as part of the Real-Time Market Settlements. **To the extent that the sum of the Settlements Amounts for IIE and UIE does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval.** Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments is settled as described in Section 11.5.6. The CAISO shall reverse **RTM** Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.



### **11.5.1 Instructed Imbalance Energy Settlements.**

For each Settlement Interval, IIE consists of the following types of Energy: (1) Optimal Energy; (2) HASP Scheduled Energy; (3) Residual Imbalance Energy; (4) Real-Time Minimum Load Energy; (5) Exceptional Dispatch Energy; (6) Regulation Energy; (7) Standard Ramping Energy; (8) Ramping Energy Deviation; (9) Derate Energy; (10) Real-Time Self-Schedule Energy; (11) MSS Load Following Energy; (12) Real-Time Pumping Energy; and (13) Operational Adjustments for the Day-Ahead and Real-Time. Payments and charges for IIE attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's IIE Settlement Amount. The IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The IIE Settlement Amounts for Optimal Energy, Real-Time Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, Derate Energy, Real-Time Pumping Energy, and Real-Time Self-Scheduled Energy shall be calculated as the product of the sum of all of these types of Energy and the Resource-Specific Settlement Interval LMP. For MSS Operators that have elected net Settlement, the IIE Settlement Amounts for Energy dispatched through the Real-Time Market optimization, Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, Derate Energy, MSS Load Following Energy, Real-Time Pumping Energy, and Real-Time Self-Schedule Energy shall be calculated as the product of the sum of all of these types of Energy and the Real-Time Settlement Interval MSS Price. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the IIE for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1. The remaining IIE Settlement Amounts are determined as follows: (1) IIE Settlement Amounts for the Energy from the HASP Intertie Schedules is settled per Section 11.4; (2) IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5.; and (3) IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

**11.5.1.1 Total IIE Settlement Amount.**

The total IIE Settlement Amount (\$) per Settlement Interval for each Scheduling Coordinator is the sum of the IIE Settlement Amounts for the Standard Ramping Energy, MSS Load Following Energy, Optimal Energy, Real-Time Minimum Load Energy, HASP Scheduled Energy, Regulation, Ramping Energy Deviation, Derate Energy, Real-Time Self-Schedule Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Real-Time Pumping Energy and Operational Adjustments for the Day-Ahead and Real-Time.

**11.5.1.2 Total IIE Quantity.**

The total IIE quantity (MWh) per Settlement Interval for each Scheduling Coordinator is the sum of Standard Ramping Energy, MSS Load Following Energy, Optimal Energy, Real-Time Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, Derate Energy, Real-Time Self-Schedule Energy, Residual Imbalance Energy, and Exceptional Dispatch Energy, Real-Time Pumping Energy, and Operational Adjustments for the Day-Ahead and Real-Time.

**11.5.2 Uninstructed Imbalance Energy.**

Scheduling Coordinators shall be paid or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates a UIE quantity. UIE quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE in two categories: (1) Tier 1 UIE is accounted as the quantity deviation from the resource's IIE; and (2) Tier 2 UIE is accounted as the quantity deviation from the resource's Day-Ahead Schedule. For Generating

Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources and all Participating Load, the Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE quantity and its Resource-Specific Tier 1 UIE Settlement Interval Price as calculated per Section 11.5.2.1, and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the simple average of the relevant Dispatch Interval LMPs. For resources within a System Unit of MSS Operators that have elected net Settlement, the Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE quantity and its Real-Time Settlement Interval MSS Price and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the Real-Time Settlement Interval MSS Price. The Tier 2 UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the Tier 2 UIE Settlement Amount for Demand of a net MSS Demand is calculated for the Trading Hour as the sum of the product of the hourly Tier 2 UIE quantity and the Real-Time Settlement Interval MSS Price.

**11.5.2.1 Resource Specific Tier 1 UIE Settlement Interval Price.**

The Resource-Specific Tier 1 UIE Settlement Interval Price is calculated as the resource's total IIE Settlement Amount calculated pursuant to Section 11.5.1.1 for that Settlement Interval divided by its total IIE quantity (MWh) calculated pursuant to Section 11.5.1.2.

**11.5.2.2 Hourly Real-Time LAP Price.**

The Hourly Real-Time LAP Price will apply to Demand and MSS Demand under net Settlement of Imbalance Energy, except for Demand not settled at the Default LAP as provided in Section 30.5.3.2.

The Hourly Real-Time LAP Price is calculated as the weighted average of the hourly average of the Dispatch Interval LMPs for the LAP, using as weights the Real-Time LAP nodal Loads in the relevant Trading Hour.

**11.5.2.3 Revenue Neutrality Resulting from Changes in LAP Load Distribution Factors.**

Any resulting revenue from changes in the LAP Load Distribution Factors between the Day-Ahead Market and the Real-Time Market shall be allocated to metered CAISO Demand in the corresponding Default LAP.

**11.5.3 Unaccounted For Energy (UFE).**

For each Settlement Interval, the CAISO will calculate UFE for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate UFE calculation and has met the requirements applicable to a CAISO Metered Entity. The UFE will be settled as Imbalance Energy at the Settlement Interval Locational Marginal Price calculated for each utility Service Area for which UFE is calculated separately. UFE attributable to meter measurement errors, load profile errors, Energy theft, and distribution loss deviations will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which UFE is calculated separately to total metered CAISO Demand within that utility Service Area.

**11.5.4 Pricing for Imbalance Energy and Allocation of Non-Zero Amounts of the Sum of IIE, UIE and UFE.**

**11.5.4.1 Application and Calculation of Dispatch Interval LMPs.**

Payments to Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected gross Settlement, that supply Imbalance Energy will be based on Resource-Specific Settlement Interval LMPs. The Resource-Specific Settlement Interval LMPs are established using Dispatch Interval LMPs. Dispatch Interval LMPs will apply to Generating Units, System Units for MSS Operators that have elected gross Settlement, Physical Scheduling Plants, Dynamic System Resources, and the Demand response portion of a Participating Load for Settlement of Imbalance Energy. The Dispatch Interval LMP will be calculated at each PNode associated with such resource irrespective of whether the resource at that PNode has received Dispatch Instructions. The Dispatch Interval LMPs are then used to calculate a Resource-Specific Settlement Interval LMP and a Resource Specific Tier 1 UIE Settlement Interval Price for each Generating Unit, System Unit or MSS Operator that has elected gross Settlement, Physical Scheduling Plant, Dynamic System Resource, and Participating Load within the CAISO Controlled Grid. Payments to Scheduling Coordinators for MSS Operators that have elected net Settlement that supply Imbalance Energy will be based on the Real-Time Settlement Interval MSS Price.

**11.5.4.2 Allocations of Non-Zero Amounts of the Sum of IIE, UIE and UFE.**

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a HASP and RTM Congestion Credit was provided as specified in Section 11.5.7; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section

11.5.7.2. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Total Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for IIE, UIE, and UFE, less Real-Time Congestion Offset, does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected Load following or net Settlement, or both, the CAISO will assess charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for IIE, UIE, and UFE, less Real-Time Congestion Offset based on their MSS Aggregation Net Measured Demand.

#### **11.5.5 Settlement Amount for Residual Imbalance Energy.**

For each Settlement Interval, Residual Imbalance Energy Settlement amounts shall be the product of the MWh of Residual Imbalance Energy for that Settlement Interval and the Bid that led to the Residual Imbalance Energy from the relevant Dispatch Interval in which the resource was dispatched. For MSS Operators the Settlement for Residual Imbalance Energy is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC).

#### **11.5.6 Settlement Amounts for IIE from Exceptional Dispatch.**

For each Settlement Interval, IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.9 is calculated as the sum of the products of the relevant IIE quantity for the Dispatch Interval and the relevant Settlement price for the Dispatch Interval for each type of Exceptional Dispatch as further described below. For MSS Operators the settlement for IIE from Exceptional Dispatch is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC).

**11.5.6.1 Settlement for IIE from Exceptional Dispatches used for System Emergency Conditions, to Avoid Market Interruption, Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies.**

The Exceptional Dispatch Settlement price for incremental IIE that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, to avoid a Market Interruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) Resource-Specific Settlement Interval LMP, (b) the Energy Bid Price, (c) the Default Energy Bid if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid Cost in excess of the applicable LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental IIE not associated with an Energy Bid that is delivered as a result of an Exceptional Dispatch instruction to avoid a Market Interruption, or to prevent or relieve a System Emergency is the minimum of the Resource-Specific Settlement Interval LMP, the Energy Bid price, or the negotiated price, if applicable and the Energy that does not have an Energy Bid price. All Energy costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for Emergency Conditions, to Avoid Market Interruption, and Avoid an Imminent System Emergency.**

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, to avoid Market Interruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to

Section 11.5.6.1 for the applicable Exceptional Dispatch at the Resource-Specific Settlement Interval LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost, (2) the Default Energy Bid cost, or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

**11.5.6.2 Settlement of IIE from Exceptional Dispatches Caused by Modeling Limitations.**

**11.5.6.2.1 Exceptional Dispatches Not Associated with an Energy Bid for Transmission-Related Modeling Limitations.**

The Exceptional Dispatch Settlement price for IIE not associated with an Energy Bid that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 is the maximum of the (a) Resource-Specific Settlement Interval LMP, (b) Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the (a) Resource-Specific Settlement Interval LMP, (b) Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.



**11.5.6.2.2 Exceptional Dispatches Associated with an Energy Bid for Transmission-Related Modeling Limitations.**

The Exceptional Dispatch Settlement price for incremental IIE associated with an Energy Bid that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the CAISO FNM as described in Section 34.9.3 is the maximum of the Resource-Specific Settlement Interval LMP or the Energy Bid price. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the Resource-Specific Settlement Interval LMP or the Energy Bid price. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid Costs in excess of the applicable LMP at the relevant Location is settled per Section 11.5.6.2.3.

**11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations.**

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.9.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2.1 or 11.5.6.2.2 for the applicable delivered Exceptional Dispatch quantity at the Resource-Specific Settlement Interval LMP and one of the following three costs: (1) the resource's Energy Bid Cost, 2) the Default Energy Bid cost, or 3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

**11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations.**

The Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 is the maximum of the (a) Resource-Specific Settlement Interval LMP, (b) Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total IIE Settlement Amount described in Section 11.5.1.1.

The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the (a) Resource-Specific Settlement Interval LMP, (b) Energy Bid Price, (c) or the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. All costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.2.5 Allocation of Exceptional Dispatch Excess Cost Payments.**

**11.5.6.2.5.1 Allocation of Exceptional Dispatch Excess Cost Payments to PTOs.**

The total Excess Cost Payments calculated pursuant to Section 11.5.6.2.3 for the IIE from Exceptional Dispatches instructed as a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 in that Settlement Interval shall be charged to the Participating Transmission Owner in whose PTO Service Territory the transmission-related modeling limitation as described in Section 34.9.3 is located. If the modeling limitation affects more than one Participating TO, the Excess Cost Payments shall be allocated pro-rata in proportion to the Participating TOs' Transmission Revenue Requirements. Costs allocated to Participating TOs under this section shall constitute Reliability Services Costs.

**11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators.**

Excess Cost Payments for the Exceptional Dispatches used for emergency conditions and to avoid Market Interruption and System Emergencies as determined pursuant to Section 11.5.6.1.1 shall be charged to Scheduling Coordinators as follows in a two-step process. First, each Scheduling Coordinator's charge shall be the lesser of:

- (i) the pro rata share of total Excess Cost Payment based upon the ratio of each Scheduling Coordinator's Net Negative Uninstructed Deviations to the total system Net Negative Uninstructed Deviations; or
- (ii) the amount obtained by multiplying the Scheduling Coordinator's Net Negative Uninstructed Deviation for each Settlement Interval and a weighted average price. The weighted average price is equal to the total Excess Cost Payments to be allocated divided by the MWh of Exceptional Dispatch Energy associated with the Excess Cost Payment.

Second, any remaining unallocated costs shall be allocated to all Scheduling Coordinators pro-rata based on their Measured Demand. For a Scheduling Coordinator of an MSS Operator that has elected to follow Load, allocation of this second category of Excess Cost Payments will be based on net metered MSS Demand. In addition, to the extent the Exceptional Dispatches are made to resolve congestion internal to the MSS, the Scheduling Coordinator for such an MSS will also be subject to these two categories of Excess Cost Payments.

A Scheduling Coordinator shall be exempt from the first category of the Excess Cost Payment allocation for a Settlement Interval if the Scheduling Coordinator has sufficient incremental Energy Bids from physically available resources in the Real-Time Market for Energy to cover its Net Negative Uninstructed Deviation in the given Settlement Interval and the prices of such Energy Bids do not exceed the applicable maximum Bid level as set forth in Section 39.

**11.5.6.3 Settlement for IIE from Exceptional Dispatches for RMR Units.**

**11.5.6.3.1 Pricing for Exceptional Dispatch of RMR Units.**

If the CAISO dispatches an RMR Unit that has selected Condition 2 of its RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the RMR Contract, the CAISO shall pay as follows:

- (a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable RMR Contract for any Start-Up incurred, and 1.5 times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;
- (b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified in Schedule D to the applicable RMR Contract for any Start-Up incurred, and the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = \frac{(AX^3 + BX^2 + CX + D) * P * E}{X} + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + De^{FX}) * P * E}{X} + \text{Variable O\&M Rate}$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable RMR Contract;

Variable O&M Rate (\$/MWh): as shown on Table C1-18 of the applicable RMR Contract.

**11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units.**

- (a) All costs associated with Energy provided by a Condition 2 RMR Unit operating other than according to a RMR Dispatch shall be allocated like other Instructed Imbalance Energy in accordance with Section 11.5.4.2.
- (b) Start-Up Costs for Condition 2 RMR Units providing service outside the RMR Contract, and any additional Start-Up Cost associated with a Condition 2 RMR Unit providing service under the RMR Contract when the unit's total service has exceeded an RMR Contract service limit but neither the RMR Contract counted MWh, counted service hours or counted Start-Ups under the RMR Contract have exceeded the applicable RMR Contract service limit, shall be treated similar to costs under Section 11.5.6.2.5.2.

**11.5.6.4 Settlement of IIE from Exceptional Dispatches used for Ancillary Services Testing and Pre-Commercial Operations Testing For Generating Units.**

The Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing or pre-commercial operations testing for Generating Units is the maximum of the Resource-Specific Settlement Interval LMP or the Energy Bid Price, if Energy is associated with an Energy Bid. All Energy costs for these types of Exceptional Dispatch will be included in the IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.5 Settlement of IIE from Black Start and Voltage Support.**

All IIE Settlement Amounts associated with Black Start and Voltage Support are derived pursuant to Section 11.10.

**11.5.6.6 Settlement of IIE from Exceptional Dispatches for HASP and Real-Time ETC and TOR Self-Schedules.**

The Exceptional Dispatch Settlement price for IIE from HASP and Real-Time ETC and TOR Self-Schedules shall be the Resource-Specific Settlement Interval LMP. The IIE Settlement Amount for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the Resource-Specific Settlement Interval LMP. All Energy costs for these types of Exceptional Dispatches will be included in the IIE Settlement Amount described in Section 11.5.1.1.

**11.5.7 HASP and RTM Congestion Credit and Marginal Cost of Losses Credit for Eligible TOR Self-Schedules.**

**11.5.7.1 HASP and RTM Congestion Credit for ETCs and TORs.**

The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules. The balanced portion will be based on the difference between: (1) minimum of the metered CAISO Demand, ETC or TOR Self-Schedule submitted in the HASP, or the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the Day-Ahead Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the

applicable HASP and RTM Congestion Credit for Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. For all exports and imports settled in the HASP, the CAISO shall use the MWh quantity specified in the HASP Intertie Schedule. For all Demand settled in the Real-Time Market the CAISO shall use the metered CAISO Demand associated with the applicable ETC or TOR. For all Supply settled in the Real-Time Market the CAISO shall use the quantity specified in the Dispatch Instructions.

**11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules.**

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the HASP or RTM pursuant to an existing agreement between the TOR holder and the CAISO as specified in Section 17.3.3, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and the CAISO applicable to the relevant TOR. The balanced portion of the TOR Self-Schedule will be based on the difference between: (1) minimum of the metered CAISO Demand or TOR Self-Schedule submitted in the HASP, or the TOR maximum capacity as specified in the TRTC Instructions; and (2) the Day-Ahead Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the MCL at each eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. For all exports and imports settled in the HASP, the CAISO shall use the MWh quantity specified in the HASP Intertie Schedule. For all Demand settled in the Real-Time Market the CAISO shall use the metered CAISO Demand associated with the applicable TOR. For all Supply settled in the Real-Time Market the CAISO shall use the quantity specified in the Dispatch Instructions.

**11.5.8 Settlement for Emergency Assistance.**

This Section 11.5.8 shall apply to Settlement for emergency assistance provided to or by the CAISO. In any case in which the CAISO has entered into an agreement regarding emergency assistance, which agreement has been accepted by FERC, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.8. Where the provisions of this Section 11.5.8 do not conflict with the provisions of the FERC-accepted agreement, the provisions of this Section 11.5.8 shall apply to the subject emergency assistance.

**11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Interruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy.**

The Settlement price for Energy that is delivered to the CAISO from a utility in another **Balancing Authority** Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a **Market Interruption**, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO **Balancing Authority** Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. **The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency**



assistance. The CAISO shall have the discretion to pay that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to pay such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to pay a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Payment by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the payment of a price based on cost support information, will be settled in two payments: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total IIE Settlement Amount as described in Section 11.5.1.1; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the amounts settled in accordance with Section 11.5.1.1 will be settled according to Section 11.5.4.2.

**11.5.8.1.1 Settlement and Allocation of Excess Costs Payments for Emergency Energy Purchases, Other than Exceptional Dispatch Energy, to Scheduling Coordinators.**

The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 is calculated for each purchase for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.8.1 for the delivered purchase quantity and the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point. The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 shall be allocated in the same manner as specified in Section 11.5.6.2.5.2 for the allocation of the Excess Cost Payments portion of payments for Exceptional Dispatches for emergency conditions.

**11.5.8.2 Settlement for Energy Supplied by the CAISO in Response to a Request for Emergency Assistance.**

The Settlement price for emergency Energy that is delivered by the CAISO to a utility in another **Balancing Authority** Area in response to a request for emergency assistance shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, which shall serve as the effective market price for that Energy, plus all other charges applicable to exports from the CAISO **Balancing Authority** Area, as specified in the CAISO Tariff and will be included in the total IIE Settlement Amount as described in Section 11.5.1.1 and will be allocated according to Section 11.5.4.2. Such price may be estimated prior to delivery and finalized in the Settlement process. The CAISO will establish a Scheduling Coordinator account, if necessary, for the purchaser for the sole purpose of facilitating the Settlement of such emergency assistance. Payment to the CAISO for such emergency assistance shall be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

**11.6 [NOT USED]**

**11.7 Additional MSS Settlements Requirements.**

**11.7.1 MSS Load Following Deviation Penalty.**

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall pay amounts for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these payments will be used as an offset to the CAISO's Grid Management Charge. The payments due from a Scheduling Coordinator will be calculated as follows:

**11.7.1.1** If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS, and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the payment for excess Energy outside of the MSS Deviation Band shall be rescinded and Scheduling Coordinator for the MSS Operator will pay the CAISO an amount equal to one hundred percent (100%) of the product of the highest LMP paid to the MSS Operator for its Generation in the Settlement Interval and the amount of the Imbalance Energy that is supplied in excess of the MSS Deviation Band.

**11.7.1.2** If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS, and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the CAISO an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The payment in the previous sentence is in addition to the charges for the Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

**11.7.2** The CAISO will assess the Scheduling Coordinator for the MSS the neutrality adjustments and Existing Contracts cash neutrality charges pursuant to Section 11.14 (or collect refunds therefrom) based on the net Measured Demand of the MSS.

**11.7.3** If the CAISO is charging Scheduling Coordinators for summer reliability or Demand reduction programs, the MSS Operator may petition the CAISO for an exemption of these charges. If the MSS Operator provides documentation to the CAISO by November 1 of any year demonstrating that the MSS Operator has secured capacity reserves for the following calendar year at least equal to one hundred and fifteen percent (115%), on an annual basis, of the peak Demand responsibility of the MSS Operator, the CAISO shall grant the exemption. Eligible capacity reserves for such a demonstration may

include on-demand rights to Energy, peaking resources, and Demand reduction programs. The peak Demand responsibility of the MSS Operator shall be equal to the annual peak Demand Forecast of the MSS Load plus any firm power sales by the MSS Operator, less interruptible Loads, and less any firm power purchases. Firm power for the purposes of this Section 11.7.3 shall be Energy that is intended to be available to the purchaser without being subject to interruption or curtailment by the supplier except for Uncontrollable Forces or emergency. To the extent that the MSS Operator demonstrates that it has secured capacity reserves in accordance with this Section 11.7.3, the Scheduling Coordinator for the MSS Operator shall not be obligated to bear any share of the CAISO's costs for any summer Demand reduction program or for any summer reliability Generation procurement program pursuant to Section 42.1.8 for the calendar year for which the demonstration is made.

**11.7.4** Unless specified otherwise in the MSS agreement(s), if the CAISO is compensating Generating Units for Emissions Costs, and if an MSS Operator charges the CAISO for the Emissions Costs of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on the MSS gross Measured Demand excluding out of state exports and the Generating Units shall be made available to the CAISO through the submittal of Energy Bids. If the MSS Operator chooses not to charge the CAISO for the Emissions Costs of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on the MSS's net Measured Demand excluding out-of-state exports. For MSS Operators that have elected to follow their Load, and if an MSS Operator chooses not to charge the CAISO for the Emissions Costs of the Generating Units serving that MSS Operator's Load, then that MSS's Scheduling Coordinator for that Load shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on that MSS's Net Negative Uninstructed Deviations with Load Following Energy included in the netting. The MSS Operator shall make the election whether to charge the CAISO for these costs on an annual basis on November 1 for the following calendar year.

## **11.8 Bid Cost Recovery.**

For purposes of determining the Unrecovered Bid Cost Uplift Payments for each Bid Cost Recovery Eligible Resource as determined in Section 11.8.5 and the allocation of Unrecovered Bid Cost Uplift Payments for each Settlement Interval, the CAISO shall sequentially calculate the Bid Costs, which can be positive (IFM, RUC or RTM Bid Cost Shortfall) or negative (IFM, RUC or RTM Bid Cost Surplus) in the IFM, RUC and the Real-Time Market, as the algebraic difference between the respective IFM, RUC or RTM Bid Cost and the IFM, RUC or RTM Market Revenues, which is netted across the CAISO Markets. In any Settlement Interval a resource is eligible for Bid Cost Recovery payments only if it is On, or in the case of a Participating Load, only if the resource has actually stopped or started consuming pursuant to the Dispatch Instruction. BCR Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on mitigated Bids as specified in Section 39.7. In order to be eligible for Bid Cost Recovery, Non-Dynamic Resource-Specific System Resources must provide to the CAISO Revenue Quality Meter Data demonstrating that they have performed in accordance with their CAISO commitments.

### **11.8.1 CAISO Determination of Self-Commitment Periods.**

For the purposes of identifying the periods during which a Bid Cost Recovery Eligible Resource is deemed self-committed and thus ineligible for Start-Up Costs, Minimum Load Costs, IFM Pump Shut-Down Costs and IFM Pumping Costs, the CAISO derives the Self-Commitment Periods as described below. MSS resources designated for Load following are considered to be self-committed if they have been scheduled with non-zero Load following capacity, or are otherwise used to follow Load in the Real-Time. The IFM and RUC Self-Commitment Periods will be available as part of the Day-Ahead Market results provided to the applicable Scheduling Coordinator. The Interim RTM Self-Commitment Periods as reflected in the HASP will be available as part of the HASP results for the relevant Trading Hour as provided to the applicable Scheduling Coordinator. The final RTM Self-Commitment Period is determined ex-post for Settlements purposes. ELS Resources committed through the ELC Process described in

Section 31.7 are considered to have been committed in the IFM Commitment Period for the applicable Trading Day for the purposes of determining BCR settlement in this section 11.8.

**11.8.1.1 IFM Self-Commitment Period.**

An IFM Self-Commitment Period for a Bid Cost Recovery Eligible Resource shall consist of one or more sets of consecutive Trading Hours during which the relevant Bid Cost Recovery Eligible Resource has either a Self-Schedule or, except for Self-Provided Ancillary Services for Non-Spinning Reserve by a Fast Start Unit, has a non-zero amount of Self-Provided Ancillary Services. An IFM Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be less than the relevant Minimum Run Time (MRT), rounded up to the next hour. Consequently, if a Bid Cost Recovery Eligible Resource first self-commits in hour  $h$  of the Trading Day, the self-commitment will be extended to hour  $h + \text{MRT}$ . Two IFM Self-Commitment Periods for a Bid Cost Recovery Eligible Resource may not be apart by less than the relevant Minimum Down Time (MDT) (rounded up to the next hour). Consequently, if a Bid Cost Recovery Eligible Resource has submitted a Self-Schedule or Submission to Self-Provide an Ancillary Service in hours  $h$  and  $h + n$ , and  $n$  is less than the MDT, the IFM Self-Commitment Period will be extended to the hours in between  $h$  and  $h + n$  inclusive. The number of IFM Self-Commitment Periods for a Bid Cost Recovery Eligible Resource within a Trading Day cannot exceed the relevant Maximum Daily Start-Ups (MDS), or  $\text{MDS} + 1$  if the first IFM Self-Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day. Consequently, if a Bid Cost Recovery Eligible Resource has submitted a Self-Schedule or Submission to Self-Provide an Ancillary Service, such that after applying the preceding two rules, the number of disjoint Self Commitment Periods for the Operating Day exceeds the Maximum Daily Start-Ups (MDS), or  $\text{MDS} + 1$  if the first IFM Self-Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day, the disjoint Self Commitment Periods with smallest time gap in between will be joined together to bring down the number of disjoint Self Commitment Periods to MDS or  $\text{MDS} + 1$  as relevant.

**11.8.1.2 Real-Time Self-Commitment Period.**

A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource shall consist of all consecutive Dispatch Intervals not in an IFM Commitment Period or a RUC Commitment Period where the Bid Cost Recovery Eligible Resource has a Self-Schedule or, except for Self-Provided Ancillary Services for Non-Spinning Reserve by a Fast Start Unit, has a non-zero amount of Self-Provided Ancillary Services. A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be less than the relevant MUT (rounded up to the next 15-minute Commitment Interval) when considered jointly with any adjacent IFM Self-Commitment Period. Consequently, if a Bid Cost Recovery Eligible Resource self-commits at time  $h$ , the self-commitment will be extended to Commitment Interval  $h + \text{MUT}$ , unless an IFM or RUC Commitment Period exists starting after hour  $h$ , in which case the self-commitment will be extended to Commitment Interval  $h + \min(\text{MUT}, t)$ . A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be apart from an IFM or RUC Commitment Period by less than the relevant MDT (rounded up to the next 15-minute Commitment Interval). Consequently, if a Bid Cost Recovery Eligible Resource self-commits at time  $T1$  and has a RUC Schedule at time  $T2 < T1$ , the Real-Time Market Self-Commitment Period will be extended to the interim Commitment Intervals if  $T1 - T2 < \text{MDT}$ . The number of Real-Time Market Self-Commitment Periods for a Bid Cost Recovery Eligible Resource within a Trading Day, when considered jointly with any adjacent IFM Self-Commitment Period, may not exceed the relevant MDS (or  $\text{MDS} + 1$  if the first Real-Time Market Self-Commitment Period is the continuation of a Real-Time Market Commitment Period from the previous Trading Day). Consequently, if a Bid Cost Recovery Eligible Resource self-commits at time  $T1$  and has a RUC Schedule at time  $T2 > T1$ , the Real-Time Market Self-Commitment Period will be extended to the interim Commitment Intervals if an additional Real-Time Market Start-Up at  $T1$  would violate the MDS constraint.

**11.8.2 IFM Bid Cost Recovery Amount.**

For purposes of determining the IFM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and the purposes of allocating Net IFM Bid Cost Uplift as described in Section 11.8.6.4 the CAISO shall calculate the IFM Bid Cost Shortfall or the IFM Bid Cost Surplus as the algebraic difference between the IFM Bid Cost and the IFM Market Revenues for each Settlement Interval. The IFM Bid Costs shall be calculated pursuant to Section 11.8.2.1 and the IFM Market Revenues shall be calculated pursuant to Section 11.8.2.2. **The Energy subject to IFM Bid Cost Recovery is the actual Energy delivered in the Real-Time that is within the Day-Ahead Schedule for each eligible resource.**

**11.8.2.1 IFM Bid Cost Calculation.**

For each Settlement Interval, the CAISO shall calculate IFM Bid Cost for each Bid Cost Recovery Eligible Resource as the algebraic sum of the IFM Start-Up, IFM Minimum Load Cost, IFM Pump Shut-Down Cost, IFM Energy Bid Cost, **IFM Pumping Cost**, and IFM AS Bid Cost.

**11.8.2.1.1 IFM Start-Up Cost.**

The IFM Start-Up Cost for any IFM Commitment Period shall equal to the Start-Up Costs submitted by the Scheduling Coordinator to the CAISO for the IFM divided by the number of Settlement Intervals in the applicable IFM Commitment Period. For each Settlement Interval, only the IFM Start-Up Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The following rules shall apply sequentially to qualify the IFM Start-Up Cost in an IFM Commitment Period:

- (a) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is an IFM Self-Commitment Period within or overlapping with that IFM Commitment Period.



- (b) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in the Day-Ahead Market anywhere within the applicable IFM Commitment Period.
- (c) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is no actual Start-Up at the start of the applicable IFM Commitment Period because the IFM Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Start-Up is delayed by the Real-Time Market past the IFM Commitment Period in question or cancelled by the Real-Time Market before the start-up process has started.
- (e) If an IFM Start-Up is terminated in the Real-Time within the applicable IFM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource was starting up, the IFM Start-Up Cost for that IFM Commitment Period shall be prorated by the ratio of the Start-Up Time before termination over the total IFM Start-Up Time.
- (f) The IFM Start-Up Cost is qualified if an actual Start-Up occurs within the applicable IFM Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval.

- (g) The IFM Start-Up Cost will be qualified if an actual Start-Up occurs earlier than the start of the IFM Commitment Period if the advance Start-Up is as a result of a Start-Up instruction issued in a RUC or Real-Time Market process subsequent to the IFM, or the advance Start-Up is uninstructed but is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the targeted IFM Start-Up.

#### **11.8.2.1.2 IFM Minimum Load Cost.**

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the IFM Minimum Load Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The IFM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval; or (3) the Bid Cost Recovery Eligible Resource is determined not actually On during the applicable Settlement Interval. For the purposes of IFM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is determined to not actually be On if the metered Energy in that Settlement Interval is less than the Tolerance Band referenced by the Minimum Load Energy.

#### **11.8.2.1.3 IFM Pump Shut-Down Cost.**

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pump Shut-Down Costs for each Settlement Interval shall be equal to the relevant Pump Shut-Down Cost submitted to CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour in which shut down is to occur if the unit is committed by the IFM not to pump and actually does not operate in pumping mode in that Settlement Interval (as detected by Meter Data).

**11.8.2.1.4 IFM Pumping Bid Cost.**

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative. The Pumping Cost is included in IFM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the IFM to pump or serve Load if it actually operates in pumping mode or serves Load in that Settlement Interval. The IFM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for actual Energy consumed in excess of the Day-Ahead Schedule for Demand.

**11.8.2.1.5 IFM Energy Bid Cost.**

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid submitted to the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, for any Settlement Interval is set to zero for any portion of the Day-Ahead Schedule that is not delivered from the otherwise Bid Cost Recovery Eligible Resource that has metered Generation below its Day-Ahead Schedule; any portion of the Day-Ahead Schedule that is actually delivered remains eligible for IFM Energy Bid Cost Recovery.

**11.8.2.1.6 IFM AS Bid Cost.**

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM upward AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour.

**11.8.2.2 IFM Market Revenue.**

For any Settlement Interval in a CAISO IFM Commitment Period the IFM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of: (1) the product of the MWh, in the relevant Day-Ahead Schedule in that Trading Hour where for Pumped-Storage Hydro Units and Participating Load operating in the pumping mode or serving Load, the MWh is negative, and the relevant IFM LMP, divided by the number of Settlement Intervals in a Trading Hour; and (2) the product of the IFM AS Award from each accepted IFM AS Bid and the relevant Resource-Specific ASMP, divided by the number of Settlement Intervals in a Trading Hour. For any Settlement Interval in a IFM Self-Commitment Period the IFM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of: (1) the product of the MWh above the greater of Minimum Load and Self-Scheduled Energy, in the relevant Day-Ahead Schedule in that Trading Hour and the relevant IFM LMP, divided by the number of Settlement Intervals in a Trading Hour; and (2) the product of the IFM AS Award from each accepted IFM AS Bid and the relevant Resource-Specific ASMP, divided by the number of Settlement Intervals in a Trading Hour.

**11.8.2.3 IFM Bid Cost Recovery Amounts for Metered Subsystems.**

The IFM Bid Cost Recovery for MSS Operators differs based on whether the MSS Operator has elected gross or net Settlement.

**11.8.2.3.1 MSS Elected Gross Settlement.**

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the IFM Bid Cost and the IFM Market Revenue are calculated similarly to non-MSS resources on an individual resource basis as described in Sections 11.8.2.1 and 11.8.2.2, respectively.

**11.8.2.3.2 MSS Elected Net Settlement.**

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the Energy affected by IFM Bid Cost Recovery is the MSS level net Energy where the MSS Supply exceeds the MSS Demand within the MSS. The IFM Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level. The IFM Bid Cost as described in Section 11.8.2.1 above and IFM Market Revenue as provided in Section 11.8.2.2 above, of each MSS will be, respectively, the total of the IFM Bid Costs and IFM Market Revenues of all BCR Eligible Resources within the MSS. The IFM Bid Cost Shortfalls and Surpluses for Energy and AS are first calculated separately for the MSS for each Trading Hour of the Trading Day with qualified Start-Up Cost and qualified Minimum Load Cost included in the IFM Bid Cost Shortfalls and Surpluses for Energy calculation. The IFM Bid Cost Shortfall or Surplus of Energy in each Trading Hour is then pro-rated by the MSS's ratio of the net positive MSS Generation Schedule to the gross MSS Generation Schedule of that Trading Hour. If the MSS CAISO Demand is in excess of the MSS Generation in a given Trading Hour in the Day-Ahead Schedule, the CAISO will set the pro-rating ratio for that Trading Hour to zero. The MSS's overall IFM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the pro-rated IFM Bid Cost Shortfall or Surplus for Energy and the IFM Bid Cost Shortfall or Surplus for AS for each Trading Hour.

**11.8.3 RUC Bid Cost Recovery Amount.**

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2.

**11.8.3.1 RUC Bid Cost Calculation.**

For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for a Bid Cost Recovery Eligible Resource as the algebraic sum of the RUC Start-Up Cost, RUC Minimum Load Cost and RUC Availability Bid Cost.

**11.8.3.1.1 RUC Start-Up Cost.**

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

- (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period.
- (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.
- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.

- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.
- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs earlier than the start of the RUC Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.

**11.8.3.1.2 RUC Minimum Load Cost.**

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Generating Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC

Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not actually On in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of RUC Minimum Load Cost, a Bid Cost Recovery Eligible Resource is determined to not actually be On if the metered Energy in that Settlement Interval is less than the Tolerance Band referenced by the Minimum Load Energy.

#### **11.8.3.1.3 RUC Availability Bid Cost.**

The product of the RUC Award with the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour. The RUC Availability Bid Cost for a Bid Cost Recovery Eligible Resource for a Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is operating below its RUC Schedule, and also has a negative Uninstructed Imbalance Energy (UIE) magnitude in that Settlement Interval in excess of: (1) five (5) MWh divided by the number of Settlement Intervals in the Trading Hour; or (2) three percent (3%) of its maximum capacity divided by the number of Settlement Intervals in a Trading Hour.

#### **11.8.3.2 RUC Market Revenues.**

For any Settlement Interval, the RUC Market Revenue for a Bid Cost Recovery Eligible Resource is the RUC Availability Payment as specified in Section 11.2.2.1 divided by the number of Settlement Intervals in a Trading Hour. If the RUC Availability Bid Cost of a BCR Eligible Resource is reduced to zero (0) in a Settlement Interval because of Uninstructed Deviation as stated in Section 11.8.3.1.3, then the RUC Market Revenue for that resource for that Settlement Interval shall also be set to zero (0) since the resource is subject to rescission of RUC Availability Payments as specified in Section 31.5.7.



**11.8.3.3 RUC Bid Cost Recovery for Metered Subsystem.**

**11.8.3.3.1 MSS Elected Gross Settlement.**

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Cost and the RUC Market Revenue are calculated similarly to non-MSS resources on an individual resource basis as described in Sections 11.8.3.1 and 11.8.3.2, respectively.

**11.8.3.3.2 MSS Elected Net Settlement.**

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated on an MSS level, consistent with the Energy Settlement. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

**11.8.4 RTM Bid Cost Recovery Amount.**

For purposes of determining the RTM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and for the purposes of allocation of Net RTM Bid Cost Uplift as described in Section 11.8.6.6 the CAISO shall calculate the RTM Bid Cost Shortfall or the RTM Bid Cost Surplus as the algebraic difference between the RTM Bid Cost and the RTM Market Revenues for each Settlement Interval. The RTM Bid Costs shall be calculated pursuant to Section 11.8.4.1 and the RTM Market Revenues shall be calculated pursuant to Section 11.8.4.2. The Energy subject to RTM Bid Cost Recovery is the actual Energy delivered in the Real-Time associated with Instructed Imbalance Energy described in Section 11.5.1, excluding Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, Ramping Energy Deviation, Regulation Energy and MSS Load Following Energy.

**11.8.4.1 RTM Bid Cost Calculation.**

For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each Bid Cost Recovery Eligible Resource, as the algebraic sum of the RTM Start-Up Cost, RTM Minimum Load Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost and RTM AS Bid Cost.

**11.8.4.1.1 RTM Start-Up Cost.**

For each Settlement Interval of the applicable Real-Time Market Commitment Period, the Real-Time Market Start-Up Cost shall consist of the Start-Up Cost of the Generating Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in the applicable Real-Time Market Commitment Period. For each Settlement Interval, only the Real-Time Market Start-Up Cost in a CAISO Real-Time Market Commitment Period is eligible for Bid Cost Recovery. The following rules shall be applied in sequence and shall qualify the Real-Time Market Start-Up Cost in a Real-Time Market Commitment Period:

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day.

- (d) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.
- (e) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period.
- (f) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.

**11.8.4.1.2 RTM Minimum Load Cost.**

The **RTM** Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the **RTM** Minimum Load Cost in a CAISO **RTM**

Commitment Period is eligible for Bid Cost Recovery. The **RTM Minimum Load Cost** for any Settlement Interval is zero if: (1) the Settlement Interval is included in a **RTM Self-Commitment Period** for Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR **Contract** or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) the Bid Cost Recovery Eligible Resource is not actually **On** in that Settlement Interval; or (4) that Settlement Interval is included in an IFM or RUC Commitment Period. **For the purposes of RTM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is determined to not actually be On if the metered Energy in that Settlement Interval is less than the Tolerance Band referenced by the Minimum Load Energy.**

#### **11.8.4.1.3 RTM Pump Shut-Down Cost.**

The **RTM Pump Shut-Down Cost** is the relevant Pump Shut-Down Cost submitted by the Scheduling Coordinator for Pumped-Storage Hydro Units and Participating Load committed by the Real-Time Market to stop pumping and serving Load and actually does not operate in pumping mode or serve Load in that Settlement Interval, divided by the number of Settlement Intervals in a Trading Hour.

#### **11.8.4.1.4 RTM Pumping Bid Cost.**

For Pumped-Storage Hydro Units and Participating Load only, the **RTM Pumping Bid Cost** for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO **in the HASP or RTM** divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative since it represents the amount the entity is willing to pay to pump or serve Load. The Pumping Cost is included in **RTM Bid Cost** computation for a Pumped-Storage Hydro Unit and Participating Load committed by the Real-Time Market to pump or serve Load, if it actually operates in pumping mode or serves Load in that Settlement Interval. The **RTM Energy Bid Cost** for a Participating Load for any Settlement Interval is set to zero for any Energy consumed in excess of instructed Energy.

**11.8.4.1.5 RTM Energy Bid Cost.**

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each Instructed Imbalance Energy (IIE) portion, except Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, if any, for each Dispatch Interval in the Settlement Interval. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource except Participating Loads for a Settlement Interval is set to zero for any undelivered Real-Time Instructed Imbalance Energy by the Bid Cost Recovery Eligible Resource. Any Uninstructed Imbalance Energy in excess of Instructed Imbalance Energy is also not eligible for Bid Cost Recovery.

**11.8.4.1.6 RTM AS Bid Cost.**

For each Settlement Interval, the Real-Time Market AS Bid Cost shall be the product of the average Real-Time Market AS Award from each accepted AS Bid submitted in the Settlement Interval for the Real-Time Market, reduced by any relevant tier-1 No Pay capacity in that Settlement Interval (but not below zero), with the relevant AS Bid price. The average Real-Time Market AS Award for a given AS in a Settlement Interval is the sum of the 15-minute Real-Time Market AS Awards in that Settlement Interval, each divided by the number of 15-minute Commitment Intervals in a Trading Hour and prorated to the duration of the Settlement Interval (10/15 if the Real-Time Market AS Award spans the entire Settlement Interval, or 5/15 if the Real-Time Market AS Award spans half the Settlement Interval).

**11.8.4.2 RTM Market Revenue Calculations.**

**11.8.4.2.1** For each Settlement Interval in a CAISO Real-Time Market Commitment Period, the RTM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of the following:

- (a) The sum of the products of the Instructed Imbalance Energy (including Energy from Minimum Load of Bid Cost Recovery Eligible Resources committed in RUC where for Pumped-Storage Hydro Units and Participating Load operating in the pumping mode or serving Load, the MWh is negative), except Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, MSS Load following Energy, Ramping Energy Deviation and Regulation Energy, with the relevant Real-Time Market LMP, for each Dispatch Interval in the Settlement Interval;
- (b) The product of the Real-Time Market AS Award from each accepted Real-Time Market AS Bid in the Settlement Interval with the relevant ASMP, divided by the number of fifteen (15)-minute Commitment Intervals in a Trading Hour (4), and prorated to the duration of the Settlement Interval.
- (c) The relevant tier-1 No Pay charges for that Bid Cost Recovery Eligible Resource in that Settlement Interval.

**11.8.4.2.2** For each Settlement Interval in a non-CAISO Real-Time Market Commitment Period, the Real-Time Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of the following:

- (a) The sum of the products of the Instructed Imbalance Energy (excluding the Energy from Minimum Load of Bid Cost Recovery Eligible Resources committed in RUC), except, HASP Self-Scheduled Energy, Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Real-Time Market LMP, for each Dispatch Interval in the Settlement Interval;
- (b) The product of the Real-Time Market AS Award from each accepted Real-Time Market AS Bid in the Settlement Interval with the relevant ASMP, divided by the number of fifteen (15)-minute Commitment Intervals in a Trading Hour (4), and prorated to the duration of the Settlement Interval.
- (c) The relevant tier-1 No Pay charges for that Bid Cost Recovery Eligible Resource in that Settlement Interval.

**11.8.4.3 RTM Bid Cost Recovery for Metered Subsystems.**

In addition to the exclusions to actual Energy delivered as provided in Section 11.8.4, for MSS resources, the Energy subject to RTM Bid Cost Recovery also excludes Minimum Load Energy if the resource is not committed by the CAISO in the Real-Time. As provided below, the RTM Bid Cost Recovery for MSS Operators differs based on whether the MSS Operator has elected gross or net Settlement; except that the calculation of the RTM Bid Costs and RTM Market Revenues for Ancillary Services will be as provided in Sections 11.8.4.1.6 and 11.8.4.2 and does not vary on the basis of the MSS's election of gross or net Settlement.

**11.8.4.3.1 MSS Elected Gross Settlement.**

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RTM Bid Cost and RTM Market Revenue of the Real-Time delivered Instructed Imbalance Energy subject to Bid Cost Recovery is determined for each resource identically to the non-MSS resource following the general principles in Section 11.8.4. The RTM Bid Cost Shortfall or Surplus for Energy and Ancillary Services in total is determined for each Trading Hour of the RTM over the Trading Day by taking the algebraic difference between the RTM Bid Cost and RTM Market Revenue.

**11.8.4.3.2 MSS Elected Net Settlement.**

For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RTM Bid Cost Shortfall or Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RTM Bid Cost Shortfall or Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the Real-Time Settlement Interval MSS Price. The RTM Bid Cost Shortfall and Surplus for Energy and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Cost and qualified Minimum Load Cost included into the RTM Bid Cost Shortfalls and Surpluses of Energy calculation. The RTM Bid Cost Shortfall or Surplus for Energy for each Settlement Interval is pro-rated by the ratio of the net positive metered Generation to the gross metered Generation of the MSS for that interval. If the MSS metered CAISO Demand is in excess of the MSS Generation in a given Settlement Interval, the CAISO will set the pro-rating ratio for that Settlement Interval to zero. The MSS's overall IFM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the pro-rated RTM Bid Cost Shortfalls and Surpluses for Energy and the RTM Bid Cost Shortfalls and Surpluses for AS for each Settlement Interval.



### **11.8.5 Unrecovered Bid Cost Uplift Payment.**

Scheduling Coordinators shall receive an Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, including resources for MSS Operators that have elected gross Settlement, if the net of all IFM Bid Cost Shortfalls and Surpluses calculated pursuant to Section 11.8.2, RUC Bid Cost Shortfalls and Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Uplift Payment is at the MSS level. The MSS IFM, RUC, and RTM Bid Cost Shortfall or Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and Surpluses for that MSS over a Trading Day is positive.

### **11.8.6 System-wide IFM, RUC and RTM Bid Cost Uplift Allocation.**

#### **11.8.6.1 Determination of IFM, RUC and RTM Bid Cost Uplift.**

For each Settlement Interval, the CAISO shall determine the IFM, RUC and RTM Bid Cost Uplift for purposes of allocating the IFM, RUC and RTM Bid Cost Uplift as described below. In determining the IFM, RUC and RTM Bid Cost Uplifts below, the Unrecovered Bid Cost Uplift Payments for MSS BCR Eligible Resources in Metered Subsystems where the MSS Operator has elected net Settlement will be included on an MSS basis and not on an individual resource basis.

- (i) The IFM Bid Cost Uplift shall be the net of the IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments.

- (ii) The RUC Bid Cost Uplift shall be the net of the RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments.
- (iii) The RTM Bid Cost Uplift shall be the net of the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments.

**11.8.6.2 Sequential Netting of IFM, RUC and RTM Bid Cost Uplift.**

For each Settlement Interval, the Net IFM, RUC or Real-Time Market Bid Cost Uplift is determined for the purposes of allocating Net IFM, RUC or Real-Time Market Bid Cost Uplift by the following netting rules applied sequentially:

- (i) The Net IFM Bid Cost Uplift, if positive, is reduced to the greater of zero or any positive IFM Bid Cost Uplift offset by negative Real-Time Market Bid Cost Uplift first and offset by any negative RUC Bid Cost Uplift.
- (ii) The Net RUC Bid Cost Uplift is equal to the greater of zero or any positive RUC Bid Cost Uplift offset by any remaining negative Real-Time Market Bid Cost Uplift after netting negative Real-Time Market Bid Cost Uplift in (i) and offset by any negative IFM Bid Cost Uplift.
- (iii) The Net Real-Time Market Bid Cost Uplift is equal to the greater of zero or any positive Real-Time Market Bid Cost Uplift offset by any remaining negative RUC Bid Cost Uplift after netting negative RUC Bid Cost Uplift in (i) above and any remaining negative IFM Bid Cost Uplift after netting negative IFM Bid Cost Uplift in (ii).

**11.8.6.3 Determination of Total Positive CAISO Markets Uplifts.**

Any negative IFM, RUC or Real-Time Market Bid Cost Uplifts are set to \$0 and any positive Net IFM Bid Cost Uplifts, RUC Bid Cost Uplifts, or Real-Time Market Bid Cost Uplifts are further reduced by the uplift ratio in 11.8.6.3(iii) to determine the Total CAISO Markets Uplift as follows;

- (i) The Total CAISO Markets Uplift is determined as the sum of the Net IFM Bid Cost Uplift, the Net RUC Bid Cost Uplift, and the Net Real-Time Market Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and Real-Time Market.
- (ii) The Total Positive CAISO Market Uplift, is determined as the sum of the positive IFM Bid Cost Uplift, positive RUC Bid Cost Uplift and positive Real-Time Market Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and Real-Time Market.
- (iii) The uplift ratio is equal to the Total CAISO Markets Uplift divided by the Total Positive CAISO Market Uplift.

**11.8.6.4 Allocation of Net IFM Bid Cost Uplift.**

For each Trading Hour of the IFM the hourly Net IFM Bid Cost Uplift is determined as the sum over the Settlement Intervals in that Trading Hour of the product of any positive Net IFM Bid Cost Uplift remaining in the Settlement Interval after the sequential netting in Section 11.8.6.2 and the application of the uplift ratio as determined in 11.8.6.3. The hourly Net IFM Bid Cost Uplift is allocated in two tiers as follows:

- (i) In the first tier, the hourly Net IFM Bid Cost Uplift is allocated to Scheduling Coordinators in proportion to their non-negative IFM Load Uplift Obligation, but with an IFM Bid Cost Uplift rate not exceeding the ratio of the hourly Net IFM Bid Cost Uplift for the Trading Hour divided by the sum of all hourly Generation scheduled in the Day-Ahead Schedule and IFM upward AS Awards for all Scheduling Coordinators from CAISO-committed Bid Cost Recovery Eligible Resources in that Trading Hour. The IFM Load Uplift Obligation for each Scheduling Coordinator, including Scheduling Coordinators for Metered Subsystems regardless of their MSS optional elections (net/gross Settlement, Load following, RUC opt-in/out), is the difference between the total Demand scheduled in the Day-Ahead Schedule of that Scheduling Coordinator and the scheduled Generation from the Self-Schedules in the Day-Ahead Schedule of that Scheduling Coordinator, plus imports scheduled by that Scheduling Coordinator in its Day-Ahead Schedule, adjusted by any applicable Inter-SC Trades of IFM Load Uplift Obligations.
- (ii) In the second tier, Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected both to not follow their Load and gross Settlement, will be charged for an amount equal to any remaining hourly Net IFM Bid Cost Uplift for the Trading Hour in proportion to the Scheduling Coordinator's Measured Demand. Scheduling Coordinators for MSS Operators that have elected to either follow their Load or net Settlement, or both, will be charged for an amount equal to any remaining hourly Net IFM Bid Cost Uplift for the Trading Hour in proportion to their MSS Aggregation Net Measured Demand.

**11.8.6.5 Allocation of RUC Compensation Costs.**

**11.8.6.5.1 Calculation of RUC Compensation Costs.**

For each Trading Hour of the RUC, the CAISO shall calculate the RUC Compensation Costs as the sum of the RUC Availability Payment and the hourly Net RUC Bid Cost Uplift.

**11.8.6.5.2 Calculation of the Hourly Net RUC Bid Cost Uplift.**

For each Trading Hour of the RUC, the hourly Net RUC Bid Cost Uplift is determined as the sum over the Settlement Intervals in that Trading Hour of the product of any positive Net RUC Bid Cost Uplift remaining in the Settlement Interval after the sequential netting in Section 11.8.6.2 and the application of the uplift ratio as determined in 11.8.6.3. Consistent with Section 31.5.2.2, Scheduling Coordinators for MSS Operators that have opted out of RUC participation, or opt-out of RUC by default as a result of having elected to Load follow, will not be subject to any RUC Bid Cost Uplift allocation. Scheduling Coordinators for MSS Operators that have opted-into RUC, and consequently also are non-Load following and under gross Settlement, will receive the allocation of hourly Net RUC Bid Cost Uplift like all other Scheduling Coordinators.

**11.8.6.5.3 Allocation of the RUC Compensation Costs.**

- (i) In the first tier, the RUC Compensation Costs are allocated to Scheduling Coordinators, based on their Net Negative CAISO Demand Deviation in that Trading Hour. The Scheduling Coordinator shall be charged at a rate which is the lower of (1) the RUC Compensation Costs divided by the Net Negative CAISO Demand Deviation for all Scheduling Coordinators in that Trading Hour; or (2) the RUC Compensation Costs divided by the RUC Capacity, for all Scheduling Coordinators in that Trading Hour. Participating Load shall not be subject to the first tier allocation of RUC Compensation Costs.

- (ii) In the second tier, the Scheduling Coordinator shall be charged an amount equal to any remaining **RUC Compensation Costs** in proportion to the Scheduling Coordinator's metered CAISO Demand in any Trading Hour.

#### **11.8.6.6 Allocation of Net RTM Bid Cost Uplift.**

The hourly Net **RTM Bid Cost** Uplift is computed for the Trading Hour as the product of the uplift ratio in 11.8.6.3 and the sum over all Settlement Intervals of the Trading Hour of any positive Net **RTM Bid Cost** Uplift after the sequential netting in Section 11.8.6.2. The hourly **RTM Bid Cost** Uplift is allocated to Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected to not follow their Load and gross Settlement, in proportion to their Measured Demand for the Trading Hour. For Scheduling Coordinators for MSS Operators that have elected to either Load follow or net Settlement, or both, the hourly **RTM Bid Cost** Uplift is allocated in proportion to their **MSS Aggregation Net Measured Demand**. Accordingly, each Scheduling Coordinator shall be charged an amount equal to its Measured Demand times the **RTM Bid Cost** Uplift rate, where the **RTM Bid Cost** Uplift rate is computed as the Net **RTM Bid Cost** Uplift amount divided by the sum of Measured Demand across all Scheduling Coordinators for the Trading Hour.

#### **11.9 Inter-SC Trades.**

##### **11.9.1 Physical Trades.**

Inter-SC Trades of Energy in the Day-Ahead Market will be settled separately from Inter-SC Trades of Energy in the HASP. Both the Day-Ahead and HASP Inter-SC Trades of Energy will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the Day-Ahead Market that are confirmed through the Physical Trade post market confirmation as provided in Section 28.1.6.3 shall be settled at the Day-Ahead LMP at the relevant PNode. All MWh quantities of

Physical Trades that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Existing Zone (EZ) Generation Trading Hub price. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the HASP that are confirmed through the Physical Trade post market confirmation pursuant to Section 28.6.1.3 shall be settled at the simple average of Dispatch Interval LMP at the relevant Pricing Node. All MWh quantities of Physical Trades submitted for Settlement in HASP that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Real-Time price for the EZ Generation Trading Hub.

### **11.9.2 Inter-SC Trades at Aggregated Pricing Nodes.**

Inter-SC Trades of Energy at Aggregated Pricing Nodes in the Day-Ahead Market will be settled separately from Inter-SC Trades at Aggregated Pricing Nodes in the HASP. Both the Day-Ahead and HASP Inter-SC Trades at Aggregated Pricing Nodes will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Inter-SC Trades at Aggregated Pricing Nodes submitted to the CAISO for Settlement in the Day-Ahead Market shall be settled at the relevant Day-Ahead Aggregated Pricing Node price such as the Existing Zone (EZ) Generation Trading Hub price or LAP price. All MWh quantities of Inter-SC Trades at Aggregated Pricing Nodes submitted to the CAISO for Settlement in the HASP shall be settled at the relevant Real-Time Aggregated Pricing Node price.

### **11.10 Settlements for Ancillary Services.**

#### **11.10.1 Settlements for Contracted Ancillary Services.**

The CAISO shall operate a daily Settlement function for Ancillary Services it contracts for with Scheduling Coordinators. The Scheduling Coordinators supplying Ancillary Services will be paid based on the prices and quantities determined in accordance with this Section 11.10.

### **11.10.1.1 Ancillary Services in DAM.**

The IFM calculates hourly Day-Ahead Ancillary Service Awards and establishes Ancillary Service Marginal Prices (ASMPs) for the accepted Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve Bids. The IFM co-optimizes Energy and Ancillary Services subject to resource, network and regional constraints, and awards Ancillary Services resources in economic merit order subject to those constraints. For each service, the economic merit order is determined as the sum of the Ancillary Service capacity Bid price of the resource and the foregone opportunity cost of Energy in the IFM for that resource. Payments to Scheduling Coordinators shall be equal to the ASMP for the each Ancillary Service multiplied by the quantity of the capacity awarded for the Ancillary Service. The ASMP is marginal cost of providing an Ancillary Service in the relevant resource location (\$/MW/hr). The ASMPs determined by the IFM optimization process at each resource location where an Ancillary Service Bid is accepted will be no lower than the sum of (i) the Ancillary Service capacity Bid price submitted for that resource, and (ii) the foregone opportunity cost of Energy in the IFM for that resource. The foregone opportunity cost of Energy is measured as the positive difference between the IFM LMP at the resource's Pricing Node and the resource's Energy Bid price (e.g., if the resource's Energy Bid price is higher than the LMP, the opportunity cost is \$0). If a resource has submitted an Ancillary Service Bid but no Energy Bid and is under an obligation to offer Energy in the DAM (e.g. a non-hydro Resource Adequacy Resource), its Default Energy Bid will be used, and its opportunity cost calculated accordingly. If a resource has submitted an Ancillary Service Bid but no Energy Bid and is not under an obligation to offer Energy in the DAM, its Energy opportunity cost is \$0 (since it cannot be dispatched for Energy even if the LMP at its Location goes to the Bid cap). Suppliers with Self-Provided Ancillary Services are not eligible to receive ASMPs; Self-Provided Ancillary Services are priced at the user rate for the service being self-provided.



**11.10.1.1 Congestion Charges for Day-Ahead Intertie Ancillary Service Awards**

Suppliers of Day-Ahead Ancillary Services Awards over the Interties also are charged for Congestion if the Ancillary Service Award is at a congested Scheduling Point. The charge shall be equal to the Shadow Price of the applicable congested Scheduling Point multiplied by the quantity of the Ancillary Service Award for the Settlement Period.

**11.10.1.2 Ancillary Services Provided in HASP.**

For Ancillary Services provided from System Resources in the HASP, hourly pre-dispatch schedules, awards, and prices are established in HASP optimization. Suppliers of Ancillary Services from System Resources are paid an amount equal to the product of the simple average of the ASMPs computed for 15-minute intervals of HASP for the each Ancillary Service times the quantity of the capacity awarded for the Ancillary Service for the Settlement Period. Scheduling Coordinators for resources that receive an Ancillary Service Award in the Day-Ahead Market that are unable to satisfy their Ancillary Services Obligation due to an Outage or derate, may use the HASP to substitute another resource to provide the awarded Ancillary Service. The Scheduling Coordinator for the substituting resource must: (a) submit an Outage notification to the CAISO indicating that the awarded resource is not available, and (b) provide another resource to fulfill the awarded Ancillary Service. The substitution must clear the co-optimization in HASP (including Ancillary Service Regional Limits) and the substitution will be exposed to a price difference between the ASMPs, or if self provided, between the ASMP and the user rate, if any. Scheduling Coordinators that receive an Ancillary Service Award at the Scheduling Point in HASP are charged the simple average of the 15-minute MCC using the relevant Shadow Price of the applicable congested Scheduling Point.

**11.10.1.2.1 Congestion Charges for HASP Intertie Ancillary Service Awards.**

Suppliers of HASP Ancillary Services Awards at Scheduling Points are also charged for Congestion if the Ancillary Service Award is at a congested Scheduling Point. The charge shall be equal to the simple average of the 15 minute Shadow Price of the applicable congested Scheduling Point multiplied by the quantity of the Ancillary Service Award for the Settlement Period.

**11.10.1.3 Ancillary Services Provided in Real-Time.**

For Ancillary Services provided from resources internal to the CAISO Balancing Authority Area in the Real-Time Market, the RTUC process that is performed every fifteen (15) minutes establishes fifteen (15) minute Ancillary Service Schedules, awards, and prices for the upcoming quarter of the Operating Hour. Suppliers of Ancillary Services from resources internal to the CAISO Balancing Authority Area are paid a price equal to  $\frac{1}{4}$  of the fifteen (15) minute ASMP (in \$/MW/h) in each fifteen (15) minute interval for the each Ancillary Service times the amount of the capacity awarded (MW) for the Ancillary Service in the relevant Ancillary Services Region. Suppliers with Ancillary Service Awards receive the ASMP at the resource's location. Suppliers that self-provide Ancillary Services in the Real-Time Market are not eligible to receive ASMP; rather to the extent the self-provision is qualified it will be valued at the user rate for the relevant service (*i.e.*, will either reduce the Ancillary Services Obligation or receive the user rate if it exceeds the Scheduling Coordinator's Ancillary Service Obligation).

**11.10.1.3.1 Congestion Charges for Real-Time Intertie Ancillary Service Awards from Dynamic System Resources.**

Suppliers of Real-Time Ancillary Services Awards at Scheduling Points for Dynamic System Resources are also charged for Congestion if the award is at a congested Scheduling Point. The charge shall be equal to the simple average of the fifteen (15) minute Shadow Price of the applicable congested Scheduling Point multiplied by the quantity of the Ancillary Service Award for the Settlement Period.

**11.10.1.4 Voltage Support.**

The total payments for each Scheduling Coordinator for Voltage Support shall be the sum of the short-term procurement payments, based on opportunity cost, as described in Section 8.3.8, and the payments under long-term contracts.

**11.10.1.5 Black Start.**

**Quantities.** The following quantities shall be used in the Settlement process for Black Start:

$EnQBS_{ijt}$  = Energy output from Black Start made by Generating Unit i from Scheduling Coordinator j (or Black Start Generator j, as the case may be) for Settlement Period t, pursuant to the CAISO's order to produce.

**Prices.** The prices used in the Settlement process for Black Start are those described in the contracts referred to in Section 8.3.9.

*Adjustment* = penalty described in Section 8.10.7.

**Payments.** Scheduling Coordinators for owners of Reliability Must-Run Units (or Black Start Generators, as the case may be) shall receive the following payments for Energy output from Black Start facilities:

$$BSEN_{ijt} = (EnQBS_{ijt} * EnBid_{ijt}) + BSSUP_{ijt-Adjustment}$$

where  $BSSUP_{ijt}$  is the start-up payment for a Black Start successfully made by Generating Unit i of Scheduling Coordinator j (or Black Start Generator j) in Trading Interval t calculated in accordance with the applicable Reliability Must-Run Contract (or the Interim Black Start Agreement as the case may be).

**11.10.1.6 Inadvertent Interchange between Balancing Authority Areas.**

The CAISO shall calculate imbalances between scheduled, instructed and actual quantities of Energy provided based upon Meter Data obtained pursuant to Section 10. Schedules between Balancing Authority Areas shall be deemed as being delivered in accordance with Good Utility Practice. Dynamic Schedules shall be integrated over time through the Operating Hour and the MWh quantity obtained by such integration shall be deemed to be the associated scheduled Interchange for that Operating Hour. The difference between actual and scheduled Interchange shall then be addressed in accordance with the WECC and NERC inadvertent Interchange practices and procedures. Following this practice, all Dynamic Schedules for Ancillary Services provided to the CAISO from Dynamic System Resources in other Balancing Authority Areas shall be deemed delivered to the CAISO. The difference between the Energy requested by the CAISO and that actually delivered by the other Balancing Authority Area shall then be accounted for and addressed through the WECC and NERC inadvertent Interchange practices and procedures.

**11.10.2 Settlement for User Charges for Ancillary Services.**

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve include the cost incurred by the CAISO across the DAM, HASP, and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services.

Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5. The cost of Voltage Support and Black Start shall be allocated to Scheduling Coordinators as described in Sections 11.10.7 and 11.10.8.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services) may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the DAM, HASP, and the Real-Time Market due to the operation of Section 8.2.3.5 is zero, then the user rate for that Ancillary Service type will be zero.

With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total payments to Scheduling Coordinators pursuant to this Section 11.10.2 for the DAM, HASP, and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the DAM, HASP, and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total payments to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.4, 11.10.2.2.3, 11.10.3.3, and 11.10.4.3 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.

**11.10.2.1 Regulation Service.**

Regulation Up Reserve and Regulation Down Reserve charges shall be calculated separately.

**11.10.2.1.1 Regulation Down Reserve.**

The charges a Scheduling Coordinator must pay for Regulation Down Reserve for each Settlement Period of the Trading Day are based upon the product of Scheduling Coordinator's hourly obligation for Regulation Down Reserve (MW) and the hourly user rate for Regulation Down Reserve (\$/MW).

**11.10.2.1.2 Hourly User Rate for Regulation Down Reserve.**

The hourly user rate for Regulation Down is the total Regulation Down Reserve Cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Down by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Down Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Regulation Down Reserve capacity in the DAM, HASP, and Real-Time Market for the Settlement Period, minus, (ii) the payments rescinded in the Settlement Period due to the unavailability of the Regulation Down under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Down Reserves is equal to: (i) the amount (MW) of total awarded Regulation Down Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Down Reserve capacity associated with payments rescinded for the Settlement Period pursuant to any of the provisions of Section 8.10.8.

**11.10.2.1.3 Hourly Net Obligation for Regulation Down Reserve.**

Each Scheduling Coordinator's hourly net obligation for Regulation Down is determined as follows: the Scheduling Coordinator's metered CAISO Demand multiplied by the Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Down, reduced by accepted Self-Provided Ancillary Services specified as Regulation Down, plus or minus any Regulation Down Reserve obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's Ancillary Services Obligation percentage is the total hourly Real-Time Regulation Down required divided by the hourly metered CAISO Demand.

**11.10.2.1.4 Regulation Down Neutrality Adjustment.**

For each Settlement Period, the difference between the Regulation Down Reserve Cost determined in Section 11.10.2.1.2 and the total revenue collected from all Scheduling Coordinators in the Regulation Down charge pursuant to Section 11.10.2.1.3 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Down obligation quantity.

**11.10.2.2 Regulation Up.**

The charges a Scheduling Coordinator must pay for Regulation Up for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Regulation Up (MW) and the hourly user rate for Regulation Up (\$/MW).

**11.10.2.2.1 Hourly User Rate for Regulation Up.**

The hourly user rate for Regulation Up is the total Regulation Up cost (\$) for each Settlement Period divided by the total Net Procurement of Regulation Up by the CAISO (MW) for each Settlement Period.

The CAISO's Regulation Up cost is equal to: (i) the revenues paid to the suppliers of the total awarded Regulation Up capacity in the Day-Ahead Market, HASP, and Real-Time Market for the Settlement Period, minus, (ii) the payments rescinded in the Settlement Period due to the unavailability of the Regulation Up under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Up is equal to: (i) the amount (MWs) of total awarded Regulation Up capacity in the Day-Ahead Market, HASP, and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Up capacity associated with payments rescinded for the Settlement Period, pursuant to any of the provisions of Section 8.10.8.

#### **11.10.2.2.2 Hourly Net Obligation for Regulation Up.**

Each Scheduling Coordinator's hourly net obligation for Regulation Up is determined as follows: (a) the Scheduling Coordinator's metered CAISO Demand multiplied by the Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Up, reduced by accepted Self-Provided Ancillary Services specified as Regulation Up, plus or minus any Regulation Up Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Up is the total hourly Real-Time Regulation Up divided by the hourly metered CAISO Demand.

#### **11.10.2.2.3 Regulation Up Neutrality Adjustment.**

For each Settlement Period, the difference between the Regulation Up net requirement at the hourly Regulation Up user rate determined in Section 11.10.2.2.2 and the total revenue collected from all Scheduling Coordinators in the Regulation Up charge pursuant to Section 11.10.2.2.1 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Up Reserve Obligation quantity. The Regulation Up net requirement is the Real-Time Regulation Up requirement net of the sum of effective qualified Regulation Up self-provision over all resources.



### **11.10.3 Spinning Reserves.**

The charges a Scheduling Coordinator must pay for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCFAF) computed for the Trading Hour as specified in Section 11.10.5.

#### **11.10.3.1 Hourly User Rate for Spinning Reserves.**

The hourly user rate for Spinning Reserves is the ratio of: 1) sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and 2) the Net Procurement quantity of Spinning Reserves by the CAISO (\$/MW). The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MW) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

### **11.10.3.2 Hourly Net Obligation for Spinning Reserves.**

Each Scheduling Coordinator's hourly net obligation for Spinning Reserves is determined as follows: the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Spinning Reserves in the hour to the CAISO's total Operating Reserve Obligations in the hour (and if negative, multiplied by NOROCAF), reduced by the accepted Self-Provided Ancillary Services for Spinning Reserves, plus or minus any Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of five percent (5%) of its Real-Time Demand (except the Demand covered by firm purchases from outside the CAISO **Balancing Authority** Area) met by Generation from hydroelectric resources plus seven percent (7%) of its Demand (except the Demand covered by firm purchases from outside the CAISO **Balancing Authority** Area) met by Generation from non-hydroelectric resources, plus one hundred percent (100%) of any Interruptible Imports, which can only be submitted as a Self-Schedule in the Day-Ahead Market, and on-demand obligations which it schedules.

### **11.10.3.3 Spinning Reserve Neutrality Adjustment.**

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.1 and the total revenue collected from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.2 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

**11.10.4 Non-Spinning Reserves.**

The charges an SC must pay for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly user rate for Non-Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

**11.10.4.1 Hourly User Rate for Non-Spinning Reserves.**

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO (\$/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of

awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

#### **11.10.4.2 Hourly Net Obligation for Non-Spinning Reserves.**

Each Scheduling Coordinator's hourly net obligation for Non-Spinning Reserves is determined as follows: the product of the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour (and if negative, multiplied by NOROCAP) multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Non-Spinning Reserves in the hour to the CAISO's total Operating Reserve obligations in the hour, reduced by the accepted Self-Provided Ancillary Services for Non-Spinning Reserves, plus or minus any Non-Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of **five percent (5%)** of its Real-Time Demand (except the Demand covered by firm purchases from outside the CAISO **Balancing Authority** Area) met by Generation from hydroelectric resources plus **seven percent (7%)** of its Demand (except the Demand covered by firm purchases from outside the CAISO **Balancing Authority** Area) met by Generation from non-hydroelectric resources, plus **one hundred percent (100%)** of any Interruptible Imports, **which can only be submitted as a Self-Schedule in the Day-Ahead Market**, plus **five percent (5%)** (if hydro) or **seven percent (7%)** (if thermal) of any unit-contingent or dynamic imports which it schedules.

#### **11.10.4.3 Non-Spinning Reserve Neutrality Adjustment.**

For each Settlement Period, the difference between the Non-Spinning Reserve **net** requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.1 and the total revenue collected from all Scheduling Coordinators in the Non-Spinning Reserve **charge** pursuant to Section 11.10.4.2 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve **net** requirement is the Real-Time Non-Spinning Reserve **requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.**

**11.10.5 Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF).**

In exceptional cases, it may happen that the net total quantity of Operating Reserve Obligations of all Scheduling Coordinators in a Trading Hour after accounting for qualified self provision is negative. In this case the net negative Operating Reserve Obligation is not usable by the CAISO, since Self-Provided Ancillary Service is qualified before IFM based on CAISO's estimate of firm imports. In such a case, the negative Operating Reserve Obligations of all Scheduling Coordinators with negative Operating Reserve Obligation is reduced pro rata. This is done by computing the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) as the lower of one (1) or the ratio of (a) net total quantity of Operating Reserve Obligations of all Scheduling Coordinators with positive Operating Reserve Obligation net of qualified self provision of Operating Reserves, but before any Inter-SC Trades of Ancillary Services, and (b) the sum of negative Operating Reserve Obligations of all Scheduling Coordinators with negative Operating Reserve Obligation before considering any Self-Provided Ancillary Services or Inter-SC Trade of AS.

**11.10.6 Upward Ancillary Services Neutrality Adjustment.**

For each Settlement Period the difference between the upwards Ancillary Service cost and the product of the total Ancillary Service net requirements at the relevant Ancillary Service user rate will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation net of Inter-SC Trades of Ancillary Services. The upwards Ancillary Service cost is the sum of the Regulation Up, Spinning Reserve and Non-Spinning Reserve cost described in Sections 11.10.2.2.1, 11.10.3.1 and 11.10.4.1. The Ancillary Service net requirement is the sum of the Real-Time Regulation Up net requirement in Section 11.10.2.2.3, Spinning Reserve net requirement in Section 11.10.3.3 and Non-Spinning Reserve net requirement in Section 11.10.4.3.

**11.10.7 Voltage Support.**

The short-term market Voltage Support user rate for Settlement Period t for Zone x shall be calculated as follows:

$$VSSTRate_{xt} = \frac{\sum_{i,j} VSST_{xijt}}{\sum_j QChargeVS_{xjt}}$$

$VSST_{xijt}$  = Voltage Support payment to Scheduling Coordinator j in respect of Generating Unit i in Zone x in the short-term market applicable to Settlement Period t.

$QChargeVS_{xjt}$  = charging quantity for Voltage Support for Scheduling Coordinator j for Settlement Period t in Zone x equal to the total metered Demand in Zone x (including exports to neighboring Control Areas and excluding metered Demand inside an MSS) by Scheduling Coordinator j for Settlement Period t.

The monthly long-term Voltage Support contract user rate for Settlement Period t for Zone x shall be calculated as follows:

$$VSLTRate_{xm} = \frac{\sum_{i,j} VSLT_{xijm}}{\sum_{jm} QChargeVS_{xjt}}$$

where:

$VSLT_{xijm}$  = long-term Voltage Support contract payment to Scheduling Coordinator j for owner of Reliability Must-Run Unit i in Zone x for month m.

The short-term market Voltage Support charges for Settlement Period t payable by Scheduling Coordinator j will be calculated as follows:

$$VSSTCharge_{jt} = VSSTRate_t * QChargeVS_{jt}$$

where  $VSSTCharge_{jt}$  is the amount payable by Scheduling Coordinator j for short-term market Voltage Support for Settlement Period t.

$VSSTRate_t$  is the short-term market Voltage Support user rate for Settlement Period t. The monthly long-term Voltage Support contract charge for month m payable by Scheduling Coordinator j will be calculated as follows:

$$VSLTCharge_m = VSLTRate_m * \sum_m QChargeVS_{jt}$$

where  $VSLTCharge_m$  is the amount payable by Scheduling Coordinator j for long-term Voltage Support for month m.

$VSLTRate_m$  is the monthly long-term Voltage Support contract user rate charged by the CAISO to Scheduling Coordinators for month m.

#### **11.10.8 Black Start.**

$QChargeBlackstart_{jt}$  = charging quantity for Black Start for Scheduling Coordinator j for Settlement Period t equal to the total metered Demand (excluding exports to neighboring **Balancing Authority** Areas and metered Demand of a MSS) by Scheduling Coordinator j for Settlement Period t.

The Black Start Energy payment user rate for Settlement Period t will be calculated as follows:

$$BSRate_t = \frac{\sum_{i,j} BSE_{ij,t}}{\sum_j QChargeBlackstart_{jt}}$$

where  $BSE_{ij,t}$  is the CAISO payment to Scheduling Coordinator j for owner of Reliability Must-Run Unit (or to Black Start Generator j, as the case may be) for Generating Unit i providing Black Start Energy in Settlement Period t.

The Black Start Energy user charge for Settlement Period t for Scheduling Coordinator j will be calculated as follows:

$$BSCharge_{jt} = BSRate_t * QChargeBlackStart_{jt}$$

**11.10.9 Settlements of Rescission of Payments for Ancillary Services Capacity that is Undispatchable, Unavailable, and Undelivered Capacity.**

The rescission of payments for Ancillary Services for Undispatchable, Unavailable, and Undelivered Capacity applies to Ancillary Services that are awarded in the Day-Ahead Market, HASP or Real-Time Market and the rescission will be the weighted average of the Ancillary Service Marginal Prices (ASMPs) and Ancillary Services Award amounts for a resource across the Day-Ahead Market, HASP and Real-Time Market. For Self-Provided Ancillary Service capacity that becomes Undispatchable Capacity, Unavailable Capacity, or Undelivered Capacity, the rescission of Ancillary Services self-provision in the Day-Ahead Market, HASP and Real-Time Market reduces the relevant Scheduling Coordinator's effective Ancillary Services self-provision in the Ancillary Services cost allocation, effectively resulting in a charge back at the relevant Ancillary Services rate. The rescission of payments in this Section 11.10.9 shall not apply to a capacity payment for any particular Ancillary Service if the Ancillary Service Marginal Price (ASMP) is less than or equal to zero.



**11.10.9.1 Rescission of Payments for Undispatchable Ancillary Service Capacity.**

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the Ancillary Service capacity payment for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, System Unit or System Resource for the Settlement Interval shall be rescinded; provided, however, that to the extent an Ancillary Service procured in the IFM from a System Resource becomes Undispatchable Capacity due to an Intertie transmission derate before the Operating Hour for which it was procured, in rescinding the Ancillary Service capacity payment, the CAISO shall credit back to the Scheduling Coordinator any Congestion Charge assessed pursuant to Section 11.10.1.1.1, but at the lower of the Day-Ahead and HASP Shadow Price on the corresponding Intertie.

**11.10.9.2 Rescission of Payments for Unavailable Ancillary Service Capacity.**

Payments to the Scheduling Coordinator representing the Generating Unit, Participating Load, System Unit or System Resource for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall not be eliminated to the extent of the deficiency if: (i) the deficiency in the availability of Ancillary Service capacity from the Generating Unit, Participating Load, System Unit or System Resource is attributable to control exercised by the CAISO in that Settlement Interval through AGC operation, an RMR Dispatch Notice, or an Exceptional Dispatch; or (ii) a penalty is imposed under Section 8.10.7 with respect to the deficiency.

In calculating the amount of the payment to be rescinded under Section 8.10.8.2, the CAISO shall reduce the payment for Ancillary Service capacity otherwise payable for the Settlement Interval by the product of the applicable prices and the amount of Ancillary Service capacity from which the Generating Unit, Participating Load, System Unit or System Resource has supplied Uninstructed Imbalance Energy in that Settlement Interval.

**11.10.9.3 Rescission of Payments for Undelivered Ancillary Service Capacity.**

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity payment associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. However, no capacity payment shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, System Unit, or System Resource is less than a deadband amount published by CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh.

**11.10.9.4 Allocation of Rescinded Ancillary Services Capacity Payments.**

Payments rescinded pursuant to Sections 8.10.8 and 11.10.9 shall be allocated to Scheduling Coordinators in proportion to CAISO *Balancing Authority* Area Measured Demand for the same Trading Day. Regulation capacity payments rescinded pursuant to Section 8.10.8.6 shall be allocated to Scheduling Coordinators in proportion to CAISO *Balancing Authority* Area metered CAISO Demand for the same Trading Day.

**11.11 High Voltage Access Charges and Transition Charges, and Wheeling Through and Wheeling Out Transactions.**

**11.11.1 High Voltage Access Charges and Transition Charges.**

High Voltage Access Charges and Transition Charges will be levied in accordance with Section 26.1 and Appendix F, Schedule 3.

**11.11.2 Wheeling Through and Wheeling Out Transactions.**

The CAISO shall calculate, account for and settle charges and payments for Wheeling Through and Wheeling Out transactions in accordance with Section 26.1.4 and Appendix F, Schedule 3, Section 14.

**11.12 Participating Intermittent Resources.**

**11.12.1 Uninstructed Energy by Participating Intermittent Resources.**

Uninstructed Imbalance Energy associated with deviations by a Participating Intermittent Resource shall be settled as provided in this Section 11.12.1 for every Settlement Period in which such Participating Intermittent Resource meets the scheduling requirements established in the Eligible Intermittent Resources Protocol in Appendix Q. The net Uninstructed Imbalance Energy in each Settlement Interval shall be assigned to a deviation account specific to each Participating Intermittent Resource. The net balance in each deviation account at the end of each calendar month shall be paid (or charged) to the Scheduling Coordinator for the associated Participating Intermittent Resource at the average price specified in Section 34.19.2.5. If the above-referenced scheduling requirements for Participating Intermittent Resources are not met, then charges (payments) for Uninstructed Imbalance Energy during such Settlement Periods shall be determined in accordance with Section 11.5.2.

**11.12.2 Allocation of Costs From Participating Intermittent Resources.**

The charges (payments) for Uninstructed Imbalance Energy that would have been calculated if the Settlement Interval deviations by each Participating Intermittent Resource were priced at the appropriate Resource-Specific Settlement Interval LMP shall be assigned to a monthly balancing account for all Participating Intermittent Resources in the CAISO **Balancing Authority** Area. The balance in such

account at the end of each month shall be netted against the aggregate payments (charges) by Scheduling Coordinators on behalf of Participating Intermittent Resources. The resulting balance shall be assigned to each Scheduling Coordinator in the same proportion that such Scheduling Coordinator's aggregate Net Negative Uninstructed Deviations in that month bears to the aggregate Net Negative Uninstructed Deviations for all Scheduling Coordinators in the CAISO **Balancing Authority** Area in that month.

**11.12.3 Payment of Participating Intermittent Resource Fees.**

**11.12.3.1 Forecasting Fee.**

A fee to defray the costs of the implementation of the forecasting service for Participating Intermittent Resources shall be assessed to Scheduling Coordinators for Participating Intermittent Resources as specified in Schedule 4 of Appendix F.

**11.12.3.2 Process Fee.**

A fee to defray the costs of processing the Participating Intermittent Resource Export Fee **will be levied** as specified in Schedule 4 of Appendix F.

**11.12.3.3 Participating Intermittent Resource Export Fee.**

A Participating Intermittent Resource Export Fee will be levied in accordance with Section 5.3 of Appendix Q and Schedule 4 of Appendix F.

**11.12.4 Price for Uninstructed Deviations for Participating Intermittent Resources.**

**Uninstructed** Deviations associated with each Participating Intermittent Resource in a Scheduling Coordinator's portfolio shall be settled as provided in Section 34.19.2.5 at the monthly weighted average Dispatch Interval LMP, where the weights are the **metered Generation** quantities associated with each Dispatch Interval LMP.

**11.13 Settlements and Billing of Reliability Must-Run Charges and Payments.**

**11.13.1 Objectives.**

The objective of this Section 11.13 is to inform RMR Owners which are responsible for preparation of Invoices, and Responsible Utilities, which are responsible for payment of Reliability Must-Run Charges pursuant to Section 41.7, of the manner in which the RMR Charges referred to in Section 41.6 shall be verified and settled and of the procedures regarding the billing, invoicing and payment of these RMR Charges.

**11.13.2 Accounts.**

**11.13.2.1 Facility Trust Account.**

The CAISO shall establish a Facility Trust Account for each RMR Contract. Each Facility Trust Account shall consist of two segregated commercial bank accounts: (1) an RMR Owner Facility Trust Account, which will be held in trust for the RMR Owner, and (2) a Responsible Utility Facility Trust Account, which will be held in trust for the Responsible Utility. RMR Charges paid by the Responsible Utility to the CAISO in connection with the RMR Contract will be deposited into the RMR Owner Facility Trust Account and RMR Payments from the CAISO to the RMR Owner will be withdrawn from such account, all in accordance with this Section 11.13, Section 41.6, and the RMR Contract. RMR Refunds received by the CAISO from the RMR Owner in accordance with the RMR Contract will be deposited into the Responsible Utility Facility Trust Account and such RMR Refunds will be withdrawn from such account and paid to the Responsible Utility in accordance with this Section 11.13, Section 41.6, and the RMR Contract. The RMR Owner Facility Trust Account and the Responsible Utility Facility Trust Account shall have no other funds commingled in them at any time.

**11.13.2.2 RMR Owner's Settlement Accounts.**

Each RMR Owner shall establish and maintain a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fed-Wire where payments to and from the Facility Trust Accounts shall be made in accordance with this Section 11.13. Each RMR Owner shall notify the CAISO of its Settlement Account details upon entering into its RMR Contract with the CAISO and may notify the CAISO from time to time of any changes by giving at least fifteen (15) days notice before the new account becomes operational.

**11.13.3 RMR Payments Calendar.**

The CAISO shall issue an RMR Payments Calendar for the purposes of this Section 11.13 which shall contain those dates set forth in Section 9.1 (b) of the RMR Contract and the following information:

- (a) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Estimated RMR Invoice pursuant to their RMR Contract;
- (b) the date on which the CAISO is required to initiate proposed adjustments to the Estimated RMR Invoice to the Responsible Utility and to the RMR Owner;
- (c) the date by which the RMR Owners are required to issue their Revised Estimated RMR Invoice reflecting appropriate revisions to the original Estimated RMR Invoice agreed upon by the Responsible Utility and the RMR Owner (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Estimated RMR Invoice should be deemed as the Revised Estimated RMR Invoice.);

- (d) the date on which the CAISO is required to issue to the Responsible Utility or RMR Owner the CAISO Invoice based on the Revised Estimated RMR Invoice;
- (e) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Adjusted RMR Invoice pursuant to their RMR Contract;
- (f) the date on which the CAISO is required to initiate proposed adjustments to the Adjusted RMR Invoice to the Responsible Utility and the RMR Owner;
- (g) the date by which the RMR Owners are required to issue their Revised Adjusted RMR Invoice reflecting appropriate revisions to the original Adjusted RMR Invoice agreed upon by the Responsible Utility and the RMR Owner. (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Adjusted RMR Invoice should be deemed as the Revised Adjusted RMR Invoice.);
- (h) the date on which the CAISO is required to issue to the Responsible Utility or the RMR Owner the CAISO Invoice based on the Revised Adjusted RMR Invoice;
- (i) the dates by which the Responsible Utility and RMR Owner must have notified the CAISO of any dispute in relation to the CAISO Invoice, Estimated RMR Invoice or Adjusted RMR Invoice (including the Revised Estimated RMR Invoice and Revised Adjusted RMR Invoice) or the CAISO's proposed adjustments;
- (j) the date and time by which Responsible Utilities or RMR Owners are required to have made payments into the RMR Owner Facility Trust Account or Responsible Utility Facility Trust Account in payment of the CAISO Invoices relating to each Revised Estimated RMR Invoice and each Revised Adjusted RMR Invoice; and

- (k) the date and time by which the CAISO is required to have made payments into the RMR Owners' Facility Trust Accounts or Responsible Utilities' Facility Trust Accounts in payment of the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice pursuant to their RMR Contract.

If the day on which any CAISO Invoice, any RMR Invoice, or any payment is due is not a Business Day, such statement or invoice shall be issued or payment shall be due on the next succeeding Business Day.

Information relating to charges for Energy or Ancillary Services which are payable by the CAISO pursuant to Sections 8 and 11 to the Scheduling Coordinators representing the RMR Owners will be contained in the RMR Payments Calendar.

**11.13.4 Information Provided by RMR Owners to the CAISO.**

Each RMR Invoice and any Prior Period Change Worksheet shall include, or be accompanied by, information about RMR Payments and RMR Refunds in sufficient detail to enable the CAISO to verify all RMR Charges and all RMR Refunds, and such information shall be copied to the Responsible Utility. Each RMR Invoice shall separately show the amounts due for services from each Reliability Must-Run Unit.

This information shall be provided in an electronic form in accordance with the RMR Invoice template developed jointly and agreed to by the CAISO, Responsible Utilities and RMR Owners in accordance with the RMR Contracts and the principles in Schedule O to those RMR Contracts, and maintained on the CAISO Website.



**11.13.5 Validation of RMR Charges and RMR Refunds.**

The CAISO shall validate, based on information provided by each RMR Owner pursuant to paragraph 4, the amount due from the relevant Responsible Utility for RMR Charges and the amount due to the relevant Responsible Utility for RMR Refunds applicable to the Reliability Must-Run Generation and Ancillary Services of that RMR Owner, but shall not represent or warrant the accuracy or completeness of the information provided by the RMR Owner. The CAISO shall provide copies of its exception report and information to the relevant Responsible Utility and RMR Owner.

The CAISO shall not be obligated to pay the Responsible Utility any RMR Refunds unless and until the CAISO has received corresponding RMR Refunds into the Responsible Utility Facility Trust Account from the RMR Owner.

**11.13.6 Description of the Billing Process.**

**11.13.6.1 Issuance of RMR Invoices by the RMR Owner.**

Each RMR Owner shall provide any RMR Invoice to the CAISO in the electronic form, mutually agreed by the parties, which may be updated by agreement with the CAISO, Responsible Utilities and RMR Owners from time to time in accordance with the requirements of Schedule O of the RMR Contract, on each of the days specified in the RMR Payments Calendar, and shall send to the relevant Responsible Utility a copy of that invoice on the day of issue.

**11.13.6.2 Review of the RMR Invoice by the CAISO.**

The CAISO shall review each RMR Invoice within the period specified in the RMR Payments Calendar and is required to initiate proposed adjustments to that invoice to the RMR Owner and the relevant Responsible Utility. Once the CAISO initiates proposed adjustments, the RMR Owner shall issue a Revised Estimated RMR Invoice or Revised Adjusted RMR Invoice.

**11.13.6.3 Issuance of CAISO Invoices by the CAISO.**

The CAISO shall provide to the Responsible Utility and the RMR Owner on the dates specified in the RMR Payments Calendar CAISO Invoices showing:

- (a) the amounts which, on the basis of the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice, as the case may be, and pursuant to Section 11.13, are to be paid by or to the relevant Responsible Utility and RMR Owner;
- (b) the Payment Date, being the date on which such amounts are to be paid and the time for such payment;
- (c) details (including the account number, bank name and Fed-Wire transfer instructions) of the RMR Owner Facility Trust Account to which any amounts owed by the Responsible Utility are to be paid, or of the RMR Responsible Utility Facility Trust Account to which any amounts owed by the RMR Owner are to be paid.

**11.13.6.4 Resolving Disputes Relating to Invoices.**

**11.13.6.4.1 Review of the Invoices by the Responsible Utility.**

Each Responsible Utility shall have the review period specified in the RMR Payments Calendar to review RMR Invoices and CAISO Invoices, validate and propose adjustments to such invoices, and notify the CAISO of any dispute. Notwithstanding the above, each Responsible Utility shall have the review time specified in Section 41.6 to dispute such invoice.

**11.13.6.4.2 Dispute Notice.**

If a Responsible Utility disputes any item or calculation relating to any revised RMR Invoice, or any CAISO Invoice, it shall provide the CAISO, with a copy to the RMR Owner, via email or such other communication mode as the parties may mutually agree upon, a notice of dispute at any time from the receipt of the copy of such invoice from the RMR Owner or the CAISO to the expiration of the period for review set out in Section 11.13. The CAISO shall initiate a corresponding dispute with the RMR Owner under the RMR Contract.

**11.13.6.4.3 Contents of Dispute Notice.**

The notice of dispute shall state clearly the Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or CAISO Invoice in dispute, the item disputed (identifying specific Reliability Must-Run Units and time periods), the reasons for the dispute, and the proposed amendment (if appropriate) and shall be accompanied by all available evidence reasonably required to support the claim.

**11.13.6.4.4 Prior Period Change Agreed to by the RMR Owner.**

Subject to Sections 11.13.6.4.5 or 11.13.6.4.6, if the RMR Owner agrees with the proposed change, the change shall be shown in a Prior Period Change Worksheet and included in the next appropriate May or December Estimated RMR Invoice as specified in Article 9.1 of the RMR Contract.

**11.13.6.4.5 Dispute Involving the RMR Owner.**

If the dispute relates to an item originating in any RMR Invoice, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

**11.13.6.4.6 Dispute Involving an Alleged Error or Breach or Default of the CAISO's Obligations Under Section 41.6.**

If the dispute relates to an alleged error or breach or default of the CAISO's obligations under Section 41.6, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

**11.13.6.4.7 Payment Pending Dispute.**

Subject to Section 41.6, if there is any dispute relating to an item originating in an RMR Invoice that is not resolved prior to the Payment Date, the Responsible Utility shall be obligated to pay any amounts shown in the relevant CAISO Invoice on the Payment Date irrespective of whether any such dispute has been resolved or is still pending. The Responsible Utility may notify the CAISO that the payment is made under protest, in which case the CAISO shall notify the RMR Owner that payment is made under protest. In accordance with Section 9.6 of the RMR Contract, if such dispute is subsequently resolved in favor of the Responsible Utility that made the payment under protest, then any amount agreed or determined to be owed by the RMR Owner to the CAISO shall be repaid by the RMR Owner to the CAISO, with interest at the interest rate specified in the RMR Contract from the date of payment by the CAISO to the RMR Owner of the disputed amount to the date of repayment by the RMR Owner, as specified in Section 11.13.6.4.4. If an RMR Owner does not agree to make the change pursuant to Section 11.13.6.4.4, then such repayment shall be made by CAISO's deduction of such amount from the next CAISO Invoices until extinguished, or if the RMR Contract has terminated, by paying a RMR Refund in such amount to the Responsible Utility Facility Trust Account, subject to the limitation of Section 41.6.2.

**11.13.7 Payment Procedures.**

**11.13.7.1 Payment Date.**

The Payment Date for RMR Payments to and RMR Refunds from RMR Owners shall be the due date specified in the RMR Contract and in the RMR Payments Calendar and the same shall be the Payment Date for the CAISO and Responsible Utilities in relation to RMR Charges, provided that the RMR Owner has furnished the Responsible Utility and the CAISO with the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice no less than nine (9) calendar days before the due date. The Payment Date shall be stated on the CAISO Invoice.

**11.13.7.2 Payment Method.**

All payments and refunds by the CAISO to RMR Owners and Responsible Utilities shall be made via Fed-Wire. However, if the RMR Owner is also the Responsible Utility, at the discretion of the RMR Owner, payments and refunds may be made by memorandum account instead of wire transfer.

**11.13.7.3 Payment by RMR Owners and Responsible Utilities.**

Each RMR Owner shall remit to the Responsible Utility Facility Trust Account the amount shown on the relevant CAISO Invoice as payable by that RMR Owner not later than 10:00 am on the Payment Date.

Subject to Section 41.6, each Responsible Utility shall remit to the RMR Owner Facility Trust Account the amount shown on the relevant CAISO Invoice not later than 10:00 am on the Payment Date.

**11.13.7.4 Payment by the CAISO.**

The CAISO shall verify the amounts available for distribution to Responsible Utilities and/or RMR Owners on the Payment Date and shall give instructions to the CAISO Bank to remit from the relevant Facility Trust Account to the relevant settlement account maintained by each Responsible Utility or RMR Owner the amounts determined by the CAISO to be available for payment to each Responsible Utility or RMR Owner.

**11.13.7.5 Payment Default by RMR Owner or Responsible Utility.**

If by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes the RMR Default Amount will not be or has not been remitted, the CAISO shall immediately notify the RMR Owner and the Responsible Utility. Where the RMR Default Amount was due from the Responsible Utility, the CAISO and RMR Owner shall proceed as set forth in Section 41.6 and the applicable provision of the RMR Contract. Where the RMR Default Amount was due from the RMR Owner, the CAISO and the Responsible Utility shall proceed as set forth in the applicable provision of the RMR Contract.

**11.13.7.5.1 Default Relating to Market Payments.**

For the avoidance of doubt, non payment to RMR Owners, or their respective Scheduling Coordinators, of charges for Energy or Ancillary Services which are payable by the CAISO to Scheduling Coordinators representing such RMR Owners shall be dealt with pursuant to Sections 11.3 to 11.30 (inclusive).

**11.13.7.6 Set-off.**

**11.13.7.6.1 Set-off in the Case of a Defaulting Responsible Utility.**

The CAISO is authorized to apply any amount to which any defaulting Responsible Utility is or will be entitled from the Responsible Utility Facility Trust Account in or towards the satisfaction of any amount owed by that Responsible Utility to the RMR Owner Facility Trust Account arising under the settlement and billing process set out in this Section 11.13.

For the avoidance of doubt, neither the CAISO nor any Responsible Utility will be authorized to set off any amounts owed by that Responsible Utility in respect of one Facility Trust Account against amounts owed to that Responsible Utility in respect of another Facility Trust Account or any amounts owed by that Responsible Utility under this Section 11.13 against amounts owed to that Responsible Utility except as provided by Section 41.6.

**11.13.7.6.2 Set-off in the Case of a Defaulting RMR Owner.**

The CAISO is authorized to apply any amount to which any defaulting RMR Owner is or will be entitled from the RMR Owner Facility Trust Account in or towards the satisfaction of any amount owed by that RMR Owner to the Responsible Utility Facility Trust Account in accordance with Article 9 of the RMR Contract and Sections 41.6 and 11.10.2.

For the avoidance of doubt, neither the CAISO nor any RMR Owner will be authorized to set off any amounts owed by that RMR Owner in respect of one Facility Trust Account against amounts owed to that RMR Owner in respect of another Facility Trust Account or any amounts owed by that RMR Owner under this Section 11.13 against amounts owed to that RMR Owner under the RMR Contract.

**11.13.7.7 Default Interest.**

Responsible Utilities shall pay interest on RMR Default Amounts to the CAISO at the interest rate specified in the RMR Contract for the period from the relevant Payment Date to the date on which the payment is received by the CAISO.

RMR Owners shall pay interest to the CAISO on RMR Default Amounts at the interest rate specified in the RMR Contract for the period from the date on which payment was due to the date on which the payment is received by the CAISO.

The CAISO shall pay interest to RMR Owners at the interest rate specified in the RMR Contract for the period from the date on which payment is due under the RMR Contract to the date on which the payment is received by the RMR Owner.

The CAISO shall pay interest to Responsible Utilities at the interest rate specified in the relevant RMR Contract for the period from the date following the date it received an RMR Refund from the relevant RMR Owner to the date in which the payment is received by the relevant Responsible Utility.

Where payment of an RMR Default Amount is made by exercise of a right of set-off or deduction, payments shall be deemed received when payment of the sum which takes that set-off or deduction into account is made.

**11.13.8 Overpayments.**

The provisions of Sections 11.29.19.3 and 11.29.19.4 shall apply to RMR Owners and Responsible Utilities which have been overpaid by the CAISO and references to CAISO Creditors in these sections and in the relevant Sections of the CAISO Tariff shall be read, for the purposes of this Section 11.13, to mean RMR Owners and Responsible Utilities as applicable. Disputed amounts shall not be considered to be overpayments until and unless the dispute is resolved.

**11.13.9 Communications.**

**11.13.9.1 Method of Communication.**

CAISO Invoices will be issued by the CAISO via the CAISO's secure communication system. RMR Invoices and Prior Period Change Worksheets will be issued by the RMR Owner in an electronic form mutually agreed by the parties and maintained on the CAISO Website. The CAISO shall also post Prior Period Change examples and Prior Period Change guidelines as specified in Article 9.1 of the RMR Contract.

**11.13.9.2 Emergency Procedures.**

**11.13.9.2.1 Emergency Affecting the CAISO.**

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may deem any Estimated RMR Invoice or any Adjusted RMR Invoice to be correct without thorough verification and may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13.



**11.13.9.2.2 Emergency Affecting the RMR Owner.**

In the event of an emergency or a failure of any of the RMR Owner's systems, the RMR Owner may use Estimated RMR Invoices as provided in the applicable section of the RMR Contract or may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13 and its RMR Contract. Details of the variation will be published on the CAISO Website. Communications of an emergency nature on a due date or a Payment Date relating to payments shall be made by the fastest practical means including by telephone.

**11.13.10 Confidentiality.**

The provisions of Sections 11.29.10.1 and 20.5 shall apply to this Section 11.13 between and among the RMR Owners, the CAISO and Responsible Utilities. Except as may otherwise be required by applicable law, all confidential information and data provided by RMR Owner or the CAISO to the Responsible Utility pursuant to the RMR Contract, Section 41.6 or this Section 11.13 shall be treated as confidential and proprietary to the providing party to the extent required by Section 12.5 and Schedule N of the RMR Contract and will be used by the receiving party only as permitted by such Section 12.5 and Schedule N.

**11.14 Neutrality Adjustments.**

The CAISO shall be authorized to levy additional charges or make additional payments as special adjustments in regard to:

- (a) amounts required to reach an accounting trial balance of zero in the course of the Settlement process in the event that the charges calculated as due from CAISO Debtors are lower than payments calculated as due to the CAISO Creditors for the same Trading Day. These charges will be allocated amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day on a monthly basis. In the event that the

charges due from CAISO Debtors are higher than the payments due to CAISO Creditors, the CAISO shall allocate a payment to the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day on a monthly basis; and

- (b) awards payable by or to the CAISO pursuant to good faith negotiations or CAISO ADR Procedures that the CAISO is not able to allocate to or to collect from a Market Participant or Market Participants in accordance with Section 13.5.3. These charges will be allocated among Scheduling Coordinators over an interval determined by the CAISO and pro rata based on Measured Demand during that interval.

**11.15 Payments Under Section 42.1 Contracts.**

The CAISO shall calculate and levy charges for the recovery of costs incurred under contracts entered into by the CAISO under the authority granted in Section 42.1 in accordance with Section 42.1.8 or any other contract approved by FERC.

**11.16 Additional Ancillary Services and RUC Capacity Obligation Rescission of Payments Requirements.**

The following provisions apply to the Settlement of rescission of payments for Ancillary Services and RUC Capacity in addition to the provisions of Sections 8.10.8 and 11.10.9 for Ancillary Services and Sections 31.5.7 and 11.2.2.2 for RUC Capacity.

**11.16.1 Order of Payment Rescission for Resources with More Than One Capacity Obligation in a Settlement Interval.**

If the Generating Unit, Participating Load, System Unit or System Resource is scheduled to provide more than one capacity obligation in a Settlement Interval, the order in which the non-compliant Ancillary Service and RUC Capacity will be apportioned to the various services under Section 8.10.8 is as follows. For Undispatchable Capacity the non-compliant capacity is first apportioned to RUC Capacity and then to any Non-Spinning Reserves. If the amount of Undispatchable Capacity exceeds the amount of Non-Spinning Reserves, then the payment shall be eliminated for Spinning Reserves. For Unavailable Capacity or Undelivered Capacity the non-compliant capacity is first apportioned to any Non-Spinning Reserves. If the amount of non-compliant Ancillary Service capacity exceeds the amount of Non-Spinning Reserves, then the payment shall be eliminated for Spinning Reserves. If the same Ancillary Service is scheduled in the Day-Ahead Market, HASP or Real-Time Market, then the payments shall be rescinded in proportion to the amount of each Ancillary Service scheduled in each market. If the same Ancillary Service is self-provided and Bid, the order of rescission will be first the amount of Ancillary Service amounts submitted in Bids and then the Self-Provided Ancillary Service.

**11.16.2 Load Following Metered Subsystems with an Obligation to Provide Ancillary Service Capacity or RUC Capacity in a Settlement Interval.**

If a Load following MSS Operator is scheduled to provide Ancillary Service capacity, RUC Capacity, or some combination thereof in a Settlement Interval and if the scheduled capacity or a portion thereof is unavailable for some reason during the Settlement Interval, the non-compliant Ancillary Services and RUC Capacity (i.e., Undispatchable, Unavailable, or Undelivered Capacity) will be not be apportioned to the capacity designated by the MSS Operator as Load following up capacity and Load following down capacity. In determining which of the MSS Operator's capacity obligations were not available in Real-Time, the capacity designated by the MSS Operator as Load following up capacity and Load following down capacity shall be preserved or take precedence over the other capacity obligations.

**11.17 CAISO Operating and Capital Reserves Account.**

Revenues collected to fund the CAISO financial operating reserves shall be deposited in **the CAISO** Operating and Capital Reserves Account until such account reaches a level specified by the CAISO Governing Board. The **CAISO** Operating and Capital Reserves Account shall be calculated separately for each GMC service category. The allocation factors, reassignments and reallocations specified in **Appendix F**, Schedule 1, Parts E and F, will be accounted for in the development of the **CAISO** Operating and Capital Reserves Account for each component. If the **CAISO** Operating and Capital Reserves Account as calculated for such service category is fully funded, surplus funds will be considered an offset to the **CAISO's** revenue requirement of the next fiscal year.

**11.18 Emissions Costs.**

**11.18.1 Obligation to Pay Emissions Cost Charges.**

Each Scheduling Coordinator shall be obligated to pay a charge in accordance with this Section 11.18, which will be used to pay the verified Emissions Costs incurred by an **Emissions Eligible** Generator during a CAISO Commitment Period. The CAISO shall levy this administrative charge (the Emissions Cost charge) each month, against all Scheduling Coordinators based upon each Scheduling Coordinator's **Balancing Authority** Area Gross Load and Demand within California outside of the CAISO **Balancing Authority** Area that is served by exports from the CAISO **Balancing Authority** Area. Scheduling Coordinators shall make payment for all Emissions Cost charges in accordance with the CAISO Payments Calendar.

**11.18.2 CAISO Emissions Cost Trust Account.**

All Emissions Cost charges received by the CAISO shall be deposited in the CAISO Emissions Cost Trust Account. The CAISO Emissions Cost Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time.

**11.18.3 Rate for the Emissions Cost Charge.**

The rate at which the CAISO will assess the Emissions Cost charge shall be at the projected annual total of all Emissions Costs incurred by Emissions Eligible Generators during CAISO Commitment Period, adjusted for interest projected to be earned on the monies in the CAISO Emissions Cost Trust Account, divided by the sum of the Balancing Authority Area Gross Load and the projected Demand within California outside of the CAISO Balancing Authority Area that is served by exports from the CAISO Balancing Authority Area of all Scheduling Coordinators for the applicable year ("Emissions Cost Demand"). The initial rate for the Emissions Cost charge, and all subsequent rates for the Emissions Cost charge, shall be posted on the CAISO Website.

**11.18.4 Adjustment of the Rate for the Emissions Cost Charge.**

The CAISO may adjust the rate at which the CAISO will assess the Emissions Cost charge on a monthly basis, as necessary, to reflect the net effect of the following:

- (a) the difference, if any, between actual Emissions Cost Demand and projected Emissions Cost Demand;
- (b) the difference, if any, between the projections of the Emissions Costs incurred by Emissions Eligible Generators during a CAISO Commitment Period and the actual Emissions Costs incurred by Emissions Eligible Generators during a CAISO Commitment Period as invoiced to the CAISO and verified in accordance with this Section 11.18; and

- (c) the difference, if any, between actual and projected interest earned on funds in the CAISO Emissions Cost Trust Account.

The adjusted rate at which the CAISO will assess the Emissions Cost charge shall take effect on a prospective basis on the first day of the next calendar month. The CAISO shall publish all data and calculations used by the CAISO as a basis for such an adjustment on the CAISO Website at least five (5) days in advance of the date on which the new rate shall go into effect.

**11.18.5 Credits and Debits of Emissions Cost Charges Collected from Scheduling Coordinators.**

In addition to the surcharges or credits permitted under Section 11.29.7.3, the CAISO may credit or debit, as appropriate, the account of a Scheduling Coordinator for any over- or under-assessment of Emissions Cost charges that the CAISO determines occurred due to the error, omission, or miscalculation by the CAISO or the Scheduling Coordinator.

**11.18.6 Submission of Emissions Cost Invoices.**

Scheduling Coordinators for Generators eligible for Bid Cost Recovery that incur Emissions Costs during a CAISO Commitment Period may submit to the CAISO an invoice in the form specified on the CAISO Website (the Emissions Cost Invoice) for the recovery of such Emissions Costs. Emissions Cost Invoices shall not include any Emissions Costs specified in an RMR Contract for a unit. All Emissions Cost Invoices must include a copy of all final invoice statements from air quality districts demonstrating the Emissions Costs incurred by the applicable Generating Unit, and such other information as the CAISO may reasonably require to verify the Emissions Costs incurred during a CAISO Commitment Period.

**11.18.7 Payment of Emissions Cost Invoices.**

The CAISO shall pay Scheduling Coordinators for all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period. If the Emissions Costs indicated in the applicable air quality districts' final invoice statements include emissions produced by operation not during a CAISO Commitment Period, the CAISO shall pay an amount equal to Emissions Costs multiplied by the ratio of the MWh associated with the CAISO Commitment Period to the total MWh associated with such Emissions Costs. The CAISO shall pay Emissions Cost Invoices each month in accordance with the CAISO Payments Calendar from the funds available in the CAISO Emissions Cost Trust Account. To the extent there are insufficient funds available in the CAISO Emissions Cost Trust Account in any month to pay all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period, the CAISO shall make pro rata payment of such Emissions Costs and shall adjust the rate at which the CAISO will assess the Emissions Cost charge in accordance with Section 11.18.4. Any outstanding Emissions Costs owed from previous months will be paid in the order of the month in which such costs were invoiced to the CAISO. The CAISO's obligation to pay Emissions Costs is limited to the obligation to pay Emissions Cost charges received. All disputes concerning payment of Emissions Cost Invoices shall be subject to CAISO ADR Procedures, in accordance with Section 13.

**11.19 FERC Annual Charges.**

**11.19.1 FERC Annual Charge Recovery Rate.**

**11.19.1.1 Obligation for FERC Annual Charges.**

Each Scheduling Coordinator shall be obligated to pay for the FERC Annual Charges for its use of the CAISO Controlled Grid to transmit electricity, including any use of the CAISO Controlled Grid through Existing Contracts scheduled by the Scheduling Coordinator. Any FERC Annual Charges to be assessed by FERC against the CAISO for such use of the CAISO Controlled Grid shall be assessed against Scheduling Coordinators at the FERC Annual Charge Recovery Rate, as determined in accordance with

Section 11.19.1. Such assessment shall be levied monthly against all Scheduling Coordinators based upon each Scheduling Coordinator's metered Demand and exports.

**11.19.1.2 Annual Charges Assessment.**

Scheduling Coordinators shall pay FERC Annual Charges assessed against them by the CAISO on a monthly or annual basis. Scheduling Coordinators that pay FERC Annual Charges on a monthly basis shall make the payment for such charges within five (5) Business Days after issuance of the market Invoice or Payment Advice containing the charges. Scheduling Coordinators that must pay FERC Annual Charges on an annual basis shall make the payment for such charges within five (5) Business Days from the Payment Date stated on the Invoice for FERC Annual Charges. The FERC Annual Charges for a given Trading Month that are due monthly will be issued to Scheduling Coordinators twice a month in accordance with the CAISO Payments Calendar in the same Invoice and Payment Advice that contains the market Settlement and Grid Management Charge. The FERC Annual Charges for a given trading month that are due annually will be issued to Scheduling Coordinators twice a month on the same day as the market Invoice and Payment Advice but in a separate Invoice as indicated in Section 11.29.10. Once the final FERC Annual Charge Recovery Rate is received from FERC in the spring or summer of the following year, revised FERC Annual Charges will be calculated and included on a supplemental Invoice or Payment Advice. All Scheduling Coordinators shall make payment for such charges within five (5) Business Days after the CAISO issues such supplemental Invoice.

**11.19.2 FERC Annual Charge Trust Account.**

All funds collected by the CAISO for FERC Annual Charges shall be deposited in the FERC Annual Charge Trust Account. The FERC Annual Charge Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time. The CAISO shall disburse funds from the FERC Annual Charge Trust Account in order to pay the FERC any and all FERC Annual Charges assessed against the CAISO.



**11.19.3 Determination of the FERC Annual Charge Recovery Rate.**

**11.19.3.1 Annual Charge Obligation.**

The FERC Annual Charge Recovery Rate shall be set at the projected total FERC Annual Charge Obligation with regard to transactions on the CAISO Controlled Grid during the year in which the FERC Annual Charge Recovery Rate is collected, adjusted for interest projected to be earned on the monies in the FERC Annual Charge Trust Account ("Annual Charge Obligation"), divided by the projected Demand and exports during that year for all entities subject to assessment of FERC Annual Charges by the CAISO ("Annual Charge Demand"). The FERC Annual Charge Recovery Rate for the period from January 1, 2001 until the first adjustment of the FERC Annual Charge Recovery Rate goes into effect shall be posted on the CAISO Website at least fifteen (15) days in advance of the date on which the initial rate will go into effect.

**11.19.3.2 Adjustments to FERC Annual Charge Recovery Rate.**

The CAISO may adjust the FERC Annual Charge Recovery Rate on a quarterly basis, as necessary, to reflect the net effect of the following:

- (a) the difference, if any, between actual Annual Charge Demand and projected Annual Charge Demand during the year-to-date;
- (b) the difference, if any, between the projections of the Annual Charge Obligation and the Annual Charge Demand upon which the charge for the year is based and the CAISO's most current projections of those values, provided that the projection of the Annual Charge Obligation may only be adjusted on an annual basis for changes in the Federal Energy Regulatory Commission's budget for its electric regulatory program or changes in the projected total transmission volumes subject to assessment of FERC Annual Charges;

- (c) the difference, if any, between actual and projected interest earned on funds in the FERC Annual Charge Trust Account; and
- (d) any positive or negative balances of funds collected for FERC Annual Charges in a previous year after all invoices for FERC Annual Charges for that year have been paid by the CAISO, other than those that are addressed through the mechanism described in Section 11.19.3.4.

**11.19.3.3 Effectiveness of FERC Annual Charge Recovery Rate.**

The adjusted FERC Annual Charge Recovery Rate shall take effect on the first day of the calendar quarter. The CAISO shall publish all data and calculations used by the CAISO as a basis for such an adjustment on the CAISO Website at least fifteen (15) days in advance of the date on which the new rate shall go into effect.

**11.19.3.4 Under- or Over-Recovery of FERC Annual Charge Recovery Rate.**

If the FERC Annual Charges assessed by FERC against the CAISO for transactions on the CAISO Controlled Grid during any year exceed or fall short of funds collected by the CAISO for FERC Annual Charges with respect to that year by a range of ten percent (10%) or less, the CAISO shall take such under- or over-recovery into account through an adjustment to the FERC Annual Charge Recovery Rate in accordance with this Section. Any deficiency of available funds necessary to pay for any assessment of FERC Annual Charges payable by the CAISO may be covered by an advance of funds from the CAISO's Grid Management Charge, provided any such advanced funds will be repaid. If the CAISO's collection of funds for FERC Annual Charges with respect to any year results in an under- or over-recovery of greater than ten percent (10%), the CAISO shall either assess a surcharge against all active Scheduling Coordinators for the amount under-recovered or shall issue a credit to all active Scheduling Coordinators for the amount over-recovered. Such surcharge or credit shall be allocated among all active Scheduling Coordinators based on the percentage of each active Scheduling Coordinators metered

Demand and exports during the relevant year. For purposes of this section, an “active Scheduling Coordinator” shall be a Scheduling Coordinator certified by the CAISO in accordance with this CAISO Tariff at the time the CAISO issues a surcharge or credit under this section. The CAISO will issue any surcharges or credits under this section within 60 days of receiving a FERC Annual Charge assessment from the FERC.

**11.19.4 Credits and Debits of FERC Annual Charges Collected from Scheduling Coordinators.**

In addition to the surcharges or credits permitted under this CAISO Tariff, the CAISO shall credit or debit, as appropriate, the account of a Scheduling Coordinator for any over- or under-assessment of FERC Annual Charges that the CAISO determines occurred due to the error, omission, or miscalculation by the CAISO or the Scheduling Coordinator.

**11.20 NERC/WECC Charges.**

**11.20.1 Responsibility for NERC/WECC Charges.**

- (a) The CAISO shall invoice Scheduling Coordinators for all of the NERC/WECC Charges that are invoiced to the CAISO by the WECC on behalf of itself, NERC, and/or regional advisory bodies. Each Scheduling Coordinator shall be obligated to pay the CAISO all of the NERC/WECC Charges it is invoiced by the CAISO in accordance with this Section 11.20. Each Scheduling Coordinator’s responsibility for NERC/WECC Charges is based on the Scheduling Coordinator’s NERC/WECC Metered Demand.
- (b) The CAISO’s calculation of collateral requirements and other credit requirements under the CAISO Tariff will not include any adjustment for a Scheduling Coordinator’s NERC/WECC Charges.

**11.20.2 Process for Invoicing NERC/WECC Charges Assessed for 2007.**

With regard to the NERC/WECC Charges assessed by the WECC for 2007, the following process shall apply:

- (a) The CAISO will issue a Market Notice that will include the following: (i) the total NERC/WECC Charges for 2007 that were invoiced to the CAISO by the WECC and (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand for 2005. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for 2005. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for 2005.
- (b) The CAISO will issue a Market Notice setting forth the Final NERC/WECC Charge Rate for the 2007 WECC assessment. The Final NERC/WECC Charge Rate for the 2007 WECC assessment shall be based on (i) the total NERC/WECC Charges for 2007 that were invoiced to the CAISO by the WECC divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand for 2005, including any adjustments to the calculation of NERC/WECC Metered Demand for 2005 made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.2(a).

- (c) Within thirty (30) calendar days after the CAISO issues the Market Notice in Section 11.20.2 (b), the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for 2007 to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand for 2005 multiplied by (ii) the Final NERC/WECC Charge Rate for the 2007 WECC assessment. The CAISO shall deduct from the Final NERC/WECC Charge Invoices for the 2007 WECC assessment any amounts that Scheduling Coordinators have already paid directly to the WECC for NERC/WECC Charges for 2007 as reported to the CAISO by the WECC.

**11.20.3 Process for Invoicing NERC/WECC Charges Assessed for 2008.**

With regard to the NERC/WECC Charges to be assessed by the WECC for 2008, the following process shall apply:

- (a) The CAISO will issue a Market Notice that will include the total of all Scheduling Coordinators' NERC/WECC Metered Demand for 2006. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for 2006. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for 2006.

- (b) The CAISO will report to the WECC the total of all Scheduling Coordinators' NERC/WECC Metered Demand for 2006, including any adjustments to the calculation of NERC/WECC Metered Demand for 2006 made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.3(a). This report shall facilitate the WECC calculation of actual NERC/WECC Charges to be invoiced to the CAISO for 2008.
- (c) Within five (5) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for 2008, the CAISO shall issue a Market Notice setting forth the Final NERC/WECC Charge Rate for 2008. The Final NERC/WECC Charge Rate for 2008 shall be based on (i) the total NERC/WECC Charges for 2008 that were invoiced to the CAISO by the WECC, divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand for 2006, as reported to the WECC.
- (d) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for 2008, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for 2008 to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand for 2006, multiplied by (ii) the Final NERC/WECC Charge Rate for 2008.

**11.20.4 Process for Invoicing NERC/WECC Charges Assessed for Years After 2008.**

With regard to the NERC/WECC Charges to be assessed by the WECC for each NERC/WECC Charge Assessment Year after 2008, the following processes shall apply:

- (a) The CAISO will issue a Market Notice that will include the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year.
- (b) The CAISO will report to the WECC the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year, including any adjustments to the calculation of NERC/WECC Metered Demand for that year made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.4(a). The report will also include any adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the CAISO has time to reflect in the report and that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement. This report shall facilitate the WECC's calculation of actual NERC/WECC Charges to be invoiced to the CAISO for the NERC/WECC Charge Assessment Year.

- (c) The CAISO will issue a Market Notice setting forth the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.
- (d) By August 31 of the year preceding the NERC/WECC Charge Assessment Year, the CAISO will issue Preliminary NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year.
- (e) Within five (5) Business Days after receipt of the WECC's invoice to the CAISO setting forth the assessment of NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO shall issue a Market Notice setting forth the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. The Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year shall be based on (i) the total NERC/WECC Charges for the NERC/WECC Charge Assessment Year that were invoiced to the CAISO by the WECC, divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand including any adjustments to the calculation of NERC/WECC Metered Demand as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.



- (f) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for the NERC/WECC Charge Assessment Year to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand as adjusted pursuant to Sections 11.20.(b) and 11.20.4(e) and pursuant to any additional adjustments that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement, multiplied by (ii) the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. If and to the extent that a Scheduling Coordinator has not already paid all of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that it is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator is still required to pay. If and to the extent that a Scheduling Coordinator has already paid in excess of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that the Scheduling Coordinator is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator will be credited.

**11.20.5 Timely Payments.**

Scheduling Coordinators shall make timely payments to the ISO pursuant to Preliminary NERC/WECC Charge Invoices within thirty (30) calendar days of issuance of such invoices. Scheduling Coordinators shall make timely payments to the CAISO pursuant to Final NERC/WECC Charge Invoices within fifteen (15) Business Days of issuance of such invoices.

**11.20.6 NERC/WECC Charge Trust Account.**

The CAISO shall deposit all payments received pursuant to Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices in the NERC/WECC Charge Trust Account. The NERC/WECC Charge Trust Account shall be separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time. The CAISO shall disburse funds from the NERC/WECC Charge Trust Account in order to pay the WECC any and all NERC/WECC Charges invoiced to the CAISO.

**11.20.7 Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices.**

The CAISO shall invoice NERC/WECC Charges to Scheduling Coordinators by issuing Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices. The Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices shall be issued in accordance with the schedules set forth in this Section 11.20, provided that the CAISO may issue a Market Notice informing Scheduling Coordinators that the CAISO will implement a temporary modification to that schedule and setting forth the reasons for such modification, in which case the modified schedule described in that Market Notice shall govern.

**11.20.7.1 Confirmation.**

It is the responsibility of each Scheduling Coordinator to notify the CAISO if the Scheduling Coordinator fails to receive a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice in accordance with the applicable schedule. Each Scheduling Coordinator shall be deemed to have received its Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice on the date specified in the applicable schedule, unless the Scheduling Coordinator notifies the CAISO to the contrary.

**11.20.7.2 Validation.**

Each Scheduling Coordinator shall have the opportunity to review the terms of the Preliminary NERC/WECC Charges Invoices and the Final NERC/WECC Charge Invoices that it receives. The Scheduling Coordinator shall be deemed to have validated each Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice unless it has raised a dispute within ten (10) calendar days from the date of issuance. Once validated, a Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice shall be binding on the Scheduling Coordinator to which it relates.

**11.20.7.3 Disputes and Disput-Related Corrections.**

Scheduling Coordinators shall be prohibited from disputing any Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice, except on grounds that an error in a Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice is due to a mere typographical or other ministerial error by the CAISO. A Scheduling Coordinator that wishes to dispute a NERC/WECC Charge Invoice on such grounds shall give the CAISO notice of dispute in writing within ten (10) calendar days of issuance. The notice of dispute shall state clearly the issue date of the Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice, the item or calculation disputed, and the reasons for the dispute, and shall be accompanied by all available evidence reasonably required to support the claim. If the Scheduling Coordinator is correct that the Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice contains a typographical or other ministerial error and the resolution of the dispute makes correction necessary, the CAISO shall issue a corrected Preliminary NERC/WECC Charge Invoice or a corrected Final NERC/WECC Charge Invoice within fifteen (15) calendar days of issuance of the invoice that is being corrected.

Each Scheduling Coordinator that receives a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice shall pay any net debit and shall be entitled to receive any net credit in a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice on the Payment Date, regardless of whether there is any dispute regarding the amount of the debit or credit. The CAISO will issue corrected Preliminary NERC/WECC Charge Invoices or corrected Final NERC/WECC Charge Invoices if the resolution of a dispute concerning a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice, brought pursuant to this Section 11.20, makes such a correction necessary.

**11.20.8 Provision of Payments and Information to the WECC.**

- (a) With regard to NERC/WECC Charges assessed for 2007, the CAISO will forward to the WECC, within five (5) Business Days after the deadline for timely payments of Final NERC/WECC Charge Invoices pursuant to Section 11.20.2 has expired, (i) the amounts collected pursuant to Final NERC/WECC Charge Invoices for 2007 and (ii) a list of all Scheduling Coordinators that have failed to make full payment pursuant to their Final NERC/WECC Charge Invoices and the amounts that are unpaid.
- (b) With regard to NERC/WECC Charges assessed for years after 2007, the CAISO will forward to the WECC, at least three (3) Business Days prior to January 2 of each NERC/WECC Charge Assessment Year, (i) the amounts collected pursuant to Final NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year and (ii) a list of all Scheduling Coordinators that have failed to make full payment pursuant to their NERC/WECC Charge Invoices and the amounts that are unpaid.

- (c) Under no circumstances shall the CAISO be obligated to pay to the WECC, NERC or any regional advisory body, or to their successors or assignees, any NERC/WECC Charges or any interest charges related to NERC/WECC Charges except for those NERC/WECC Charges actually paid to the CAISO by Scheduling Coordinators. The CAISO shall have no obligations whatsoever to pursue collections of NERC/WECC Charges other than the obligation to invoice Scheduling Coordinators and to provide information to the WECC or NERC as provided for in the CAISO Tariff. Notwithstanding the foregoing, the CAISO shall have the right, at its sole discretion, to recoup, set off and apply any amount to which a Scheduling Coordinator is or will be entitled, in or towards the satisfaction of any of that Scheduling Coordinator's past-due NERC/WECC Charges in accordance with Section 11.29.13.7.
- (d) The CAISO shall, on request, certify in writing the NERC/WECC Charges owed by a Scheduling Coordinator that remain unpaid and shall provide certified copies of the relevant Preliminary NERC/WECC Charge Invoices, Final NERC/WECC Charge Invoices, and other documentation on which the CAISO's certificate was based to the WECC, NERC, and the applicable Scheduling Coordinators. A CAISO certificate given under this Section 11.20.7(d) may be used as prima facie evidence of the amount due in any legal proceedings.

**11.21 [NOT USED]**

**11.22 Grid Management Charge.**

**11.22.1 CAISO's Obligations.**

**11.22.1.1 FERC's Uniform System of Accounts.**

The CAISO shall maintain a set of financial statements and records in accordance with the FERC's Uniform System of Accounts.

**11.22.1.2 [NOT USED]**

**11.22.2 Costs Included in the Grid Management Charge.**

*The Grid Management Charge shall include the following costs incurred by the CAISO, as described in more detail in Appendix F, Schedule 1:*

(1) CAISO Operating Costs;

(2) CAISO Other Costs and Revenues;

(3) CAISO Financing Costs; and

(4) CAISO Operating and Capital Reserves Costs.

**11.22.2.1 [NOT USED]**

**11.22.2.2 [NOT USED]**

**11.22.2.3 [NOT USED]**

**11.22.2.4 [NOT USED]**

**11.22.2.5 Allocation of the Grid Management Charge Among Scheduling Coordinators.**

The costs recovered through the Grid Management Charge shall be allocated to the service charges that comprise the Grid Management Charge. If the CAISO's revenue requirement for any service charge changes from the most recent FERC-approved revenue requirement for that service charge, the costs recovered through that service charge shall be delineated in a filing to be made at FERC as set forth in Section 11.22.2.6. The service charges, as described in more detail in Appendix F, Schedule 1, Parts A and F, are as follows:

- (1) Core Reliability Services – Demand Charge;
- (2) Core Reliability Services – Energy Exports Charge;
- (3) Energy Transmission Services – Net Energy Charge;
- (4) Energy Transmission Services – Uninstructed Deviations Charge;
- (5) Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights Charge;
- (6) Forward Scheduling Charge;
- (7) Market Usage Charge; and
- (8) Settlements, Metering, and Client Relations Charge.

The charges shall be levied separately monthly in arrears on all Scheduling Coordinators based on the billing determinants specified below for each charge in accordance with formulae set out in Appendix F, Schedule 1, Part A, subject to the requirements set out in Appendix F, Schedule 1, Part F.

**11.22.2.5.1 Core Reliability Services – Demand Charge.**

The Core Reliability Services – Demand Charge for a Scheduling Coordinator’s Load that is not associated with Energy Exports is calculated according to the formula in Appendix F, Schedule 1, Part A, subject to the requirements set out in Appendix F, Schedule 1, Part F.

**11.22.2.5.2 Core Reliability Services – Energy Exports Charge.**

The Core Reliability Services – Energy Exports Charge for the load associated with a Scheduling Coordinator’s Energy Exports is calculated according to the formula in Appendix F, Schedule 1, Part A, subject to the requirements set out in Appendix F, Schedule 1, Part F.



**11.22.2.5.3 Energy Transmission Services – Net Energy Charge.**

The Energy Transmission Services – Net Energy Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A, *subject to the requirements set out in Appendix F, Schedule 1, Part F.*

**11.22.2.5.4 Energy Transmission Services – Uninstructed Deviations Charge.**

The Energy Transmission Services – Uninstructed Deviations Charge for each Scheduling Coordinator is calculated using that Scheduling Coordinator's net Uninstructed *Imbalance Energy* by Settlement Interval, according to the formula in Appendix F, Schedule 1, Part A, *subject to the requirements set out in Appendix F, Schedule 1, Part F.*

**11.22.2.5.5 Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights Charge.**

*The Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A, subject to the requirements set out in Appendix F, Schedule 1, Part F.*

**11.22.2.5.6 Forward Scheduling Charge.**

The Forward Scheduling Charge for each Scheduling Coordinator is calculated

according to the formula in Appendix F, Schedule 1, Part A, *subject to the requirements set out in Appendix F, Schedule 1, Part F.*

**11.22.2.5.7 Market Usage Charge.**

The Market Usage Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A, *subject to the requirements set out in Appendix F, Schedule 1, Part F.*

**11.22.2.5.8 Settlements, Metering, and Client Relations Charge.**

The Settlements, Metering, and Client Relations Charge for each Scheduling Coordinator is fixed at \$1000.00 per month, per Scheduling Coordinator ID with an invoice value other than \$0.00 in the current *Trading Month*, as indicated in Appendix F, Schedule 1, Part A, *subject to the requirements set out in Appendix F, Schedule 1, Part F.* Excess GMC costs related to the provision of these services that are not recovered through this charge are allocated to the other GMC service categories as specified in Appendix F, Schedule 1, Part E.

**11.22.2.6 Calculation and Adjustment of the Grid Management Charge.**

The charges set forth in Section 11.22.2.5 that comprise the Grid Management Charge shall be calculated through the formula set forth in Appendix F, Schedule 1, Part A. The formula set forth in Appendix F, Schedule 1, Part C sums the CAISO Operating Costs (less any available expense recoveries), CAISO Other Costs and Revenues, CAISO Financing Costs, and CAISO Operating and Capital Reserves Costs associated with each of the CAISO service charges to obtain a total revenue requirement. This revenue requirement is allocated among the charges of the GMC through the application of the factors specified in Appendix F, Schedule 1, Part E.

The revenue requirement for each service then shall be divided by the forecast annual or periodic billing determinant volume to obtain a rate for each service, which will be payable by Scheduling Coordinators as set forth in Section 11.22.2.5. The rates so established will be adjusted annually, through the operation of the formula set forth in Appendix F, Schedule 1, Part A. The CAISO shall post on the CAISO Website each year, before the adjusted rates go into effect, as described in Appendix F, Schedule 1, Part D, data showing the rates adjusted to reflect any change in the annual revenue requirement, variance between forecast and actual costs for the previous year or period, or any surplus revenues from the previous year or period (as defined in Section 11.17), or the inability to recover from a Scheduling Coordinator its share of the Grid Management Charge, or any under-achievement of a forecast of the billing determinant volumes used to establish the rates. The circumstances under which the CAISO is permitted to put the adjusted rates into effect without submitting a filing to the FERC are described in Appendix F, Schedule 1, Part D. Appendix F, Schedule 1, Part B sets forth the conditions under which a quarterly adjustment to the Grid Management Charge will be made.

#### **11.22.2.6.1 Credits and Debits of the Grid Management Charge.**

In addition to the adjustments permitted under Section 11.29.7.3.3, the CAISO shall credit or debit, as appropriate, the account of a Scheduling Coordinator for any overpayment or underpayment of the Grid Management Charge that the CAISO determines occurred due to error, omission, or miscalculation by the CAISO or the Scheduling Coordinator.

#### **11.22.3 MSS GMC Charges.**

If the CAISO is charging Grid Management Charges for Uninstructed *Imbalance Energy*, and the Scheduling Coordinator for a Load-following MSS has Uninstructed *Imbalance Energy* associated with the MSS's resources, then the CAISO will net the Generation and imports into the MSS to match the Demand and exports out of the MSS, and will not assess *the Grid Management Charge* associated with Uninstructed *Imbalance Energy* for such portion of Energy that is used to match MSS Demand and net exports.

**11.22.3.1** If Generation, above the amount to cover Demand and exports, was sold into the CAISO's Real-Time Market, then the Scheduling Coordinator for the MSS will be charged *the Grid Management Charge* associated with Uninstructed *Imbalance Energy* for this quantity.

**11.22.3.2** If insufficient Generation and imports was available to cover Demand and exports, and the Scheduling Coordinator for the MSS purchased *Uninstructed Imbalance Energy* from the CAISO Markets, then such Scheduling Coordinator will be charged *the Grid Management Charge* associated with Uninstructed *Imbalance Energy* for this quantity.

**11.22.3.3** *Grid Management Charges* associated with *Uninstructed Imbalance Energy* (the *Energy Transmission Services – Uninstructed Deviations and Market Usage Charges*) will be treated on a net basis *by Settlement interval. The Core Reliability Services – Demand Charge, Core Reliability Services – Energy Exports Charge, and Energy Transmission Services – Net Energy Charge* will be charged based on *Metered Balancing Authority Area* Load, *including* exports out of the MSS. Ancillary Service Bids accepted by the CAISO and Instructed Imbalance Energy will be assessed the *applicable Market Usage Charges*.

**11.23 Penalties for Uninstructed Imbalance Energy.**

Effective December 1, 2004, the CAISO shall not charge any Uninstructed Deviation Penalties pursuant to this Section 11.23 until FERC issues an order authorizing the CAISO to charge Uninstructed Deviation Penalties pursuant to this section. Beginning with Settlement Statements for the first Trading Day for which FERC authorizes the CAISO to charge Uninstructed Deviation Penalties pursuant to this section, the CAISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a Tolerance Band from their Dispatch Operating Point, for dispatched resources, or their Day-Ahead Schedule otherwise. The Uninstructed Deviation Penalty will be applied as follows:

- (a) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval. The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval in which the CAISO has not declared a staged System Emergency;
- (b) The Uninstructed Deviation Penalty will apply to pre-Dispatched Bids from Non-Dynamic System Resources identified, when such a pre-Dispatch Instruction is issued more than forty (40) minutes prior to the relevant Operating Hour, subject to the following conditions: i) the Uninstructed Deviation Penalty will only apply to the pre-Dispatched amount of the Bid that is declined or not delivered, ii) the Uninstructed Deviation Penalty will not apply to a portion of a pre-Dispatched Bid that is subsequently not delivered at the direction of a **Balancing Authority**,

including the CAISO, due to a curtailment of transmission capability or to prevent curtailment of native firm load occurring subsequent to issuing the pre-Dispatch Instruction, iii) the Uninstructed Deviation Penalty will not apply to Uninstructed Imbalance Energy resulting from declining subsequent intra-hour Dispatch Instructions. Dynamically scheduled Dynamic System Resources, to the extent they deviate from their Day-Ahead Schedule plus any Dispatch Instructions, will be subject to the Uninstructed Deviation Penalty.

- (c) The Uninstructed Deviation Penalty will not apply to Load or Curtailable Demand.
- (d) **[NOT USED]**
- (e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the Eligible Intermittent Resources Protocol in Appendix Q. No other applicable charges will be affected by this exemption. The Uninstructed Deviation Penalty also will not apply to Qualifying Facilities (QFs), including those that are dynamically scheduled, that have not executed and are not required pursuant to this CAISO Tariff to execute a Participating Generator Agreement (PGA) or Qualifying Facility Participating Generator Agreement.
- (f) All MSS resources designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net settlement election) are exempt from Uninstructed Deviation Penalties in this Section 11.23. All MSS resources not designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net Settlement election) are subject to Uninstructed Deviation Penalties in this Section 11.23.

- (g) The Uninstructed Deviation Penalty will apply to Generating Units providing Regulation and dynamically scheduled Dynamic System Resources providing Regulation to the extent that Uninstructed Deviations from such resources exceed each resource's actual Regulation range plus the applicable Tolerance Band. Resources providing Regulation and generating within their relevant Regulating range (or outside their relevant Regulating range as a direct result of CAISO control or instruction) will be deemed to have zero (0) deviations for purposes of the Uninstructed Deviation Penalty.
- (h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource individually, except as specified in Appendix R, which specifies when Uninstructed Deviations from individual resources may be aggregated.
- (i) **The Uninstructed Deviation Penalty shall not apply to any Uninstructed Imbalance Energy resulting from compliance with a directive by the CAISO or the Reliability Coordinator.**
- (j) **[NOT USED]**
- (k) The Uninstructed Deviation Penalty will not apply when the applicable LMP is negative or zero.
- (l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to one hundred percent (100%) of the corresponding LMP. The relevant LMP will be calculated for each UDP Location as the ten-minute weighted average price of two five-minute Dispatch Interval LMPs and the two five-minute optimal Instructed Imbalance Energy quantities. The net effect of the Uninstructed Deviation Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the Tolerance Band will be that the CAISO will not pay for such Energy.

- (m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to fifty percent (50%) of the corresponding Resource-Specific Settlement Interval LMP or, in the case of aggregated resources, the Settlement Interval Penalty Location Real-Time LMP.
- (n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the CAISO or the CAISO has initiated the test for the purposes of validating unit performance.
- (o) The Uninstructed Deviation Penalty shall not apply to any excess Energy delivered from or any shortfall of Energy not delivered from an Exceptional Dispatch, involving a Generating Unit or a System Unit unless the CAISO and the supplier have agreed upon the time of, duration of, and amount of Energy to be delivered in the out-of-market transaction and the CAISO reflects the out-of-market transaction in its Real-Time Expected Energy calculations. The Uninstructed Deviation Penalty shall apply to Energy outside the Tolerance Band from out-of-market transactions with dynamically scheduled Dynamic System Resources to the extent the agreed-to Energy is not delivered or over-delivered, and to any Energy from Non-Dynamic System Resources to the extent the agreed-to Energy is not delivered if that over- or under-delivery was due to action taken by or not taken by the System Resource and not the result of action taken by a **Balancing Authority** due to a curtailment of firm transmission capability or to prevent curtailment of native firm load occurring subsequent to the out-of-market transaction.



- (p) The Uninstructed Deviation Penalty shall not apply to Generating Units and dynamically scheduled Dynamic System Resources with Uninstructed Imbalance Energy if the Generating Unit or dynamically scheduled Dynamic System Resource was physically incapable of delivering the expected Energy or if systems malfunctions prevent receipt of Dispatch Instructions, provided that the Generating Unit or dynamically scheduled Dynamic System Resource had notified the CAISO within thirty (30) minutes of the onset of an event that prevents the resource from performing its obligations. A Generating Unit or dynamically scheduled Dynamic System Resource must notify CAISO operations staff of its reasons for failing to deliver the Expected Energy in accordance with Section 9.3.10.6 and must provide information to the CAISO that verifies the reason the resource failed to comply with the Dispatch Instruction within forty-eight (48) hours of the Operating Hour in which the instruction is issued.
- (q) Adjustments to any Generating Unit, Curtailable Demand and System Resource Day-Ahead Schedules or HASP Intertie Schedules made in accordance with the terms of TRTC Instructions for Existing Contracts or TORs shall not be subject to Uninstructed Deviation Penalties. Valid changes to ETC Self-Schedules or TOR Self-Schedules submitted after the close of the HASP or the RTM shall not be subject to Uninstructed Deviation Penalties.
- (r) Any changes made to Schedules prior to the CAISO issuing HASP Intertie Schedules shall not be subject to Uninstructed Deviation Penalties.
- (s) Uninstructed Deviation Penalties shall not be charged to any deviation from a Dispatch Instruction that does not comply with the requirements set forth in this CAISO Tariff.

- (t) Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of above-LMP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that Settlement Interval. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with Section 11.29.9.6.3.
- (u) Condition 2 RMR Units shall be exempt from Uninstructed Deviation Penalties.
- (v) The Uninstructed Deviation Penalty shall not apply to positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit from the time the Generating Unit synchronizes to the grid to the earlier of (1) the Settlement Interval in which the Generating Unit produces a quantity of Energy that represents an average rate of delivery over such Settlement Interval in excess of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band, or (2) the first Settlement Interval after the expiration of a period of time that begins at the end of the Settlement Interval in which the Generating Unit synchronizes to the grid and ends after the Generating Unit's maximum Start-Up Time as specified in the Master File. The Uninstructed Deviation Penalty shall not apply to any positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit for a duration equal to the minimum of two Settlement Intervals or the time specified in the Master File for the Generating Unit to disconnect from the grid after reaching its Minimum Operating Limit following either (1) the last Settlement Interval of an hour in which the Generating Unit had a non-zero Day-Ahead Schedule or (2) the Settlement Interval in which the Generating Unit is expected to reach its Minimum Operating Limit based on the applicable Ramp Rate when the CAISO instructed the Generating Unit to Shut-Down. The amount of

Uninstructed Imbalance Energy exempted from the Uninstructed Deviation Penalty shall not exceed the amount of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band. This exception from the application of the Uninstructed Deviation Penalty does not apply to Dynamic System Resources.

- (w) UDP shall not apply to deviations by a Generating Unit that are attributable to any automatic response to a system disturbance, including a response to correct frequency decay, in accordance with Applicable Reliability Criteria for the duration of the system disturbance, and for an additional five (5) minutes when a Generating Unit's deviation is in the same direction as the mitigating frequency response.
- (x) The Uninstructed Deviation Penalty shall not apply in the event that a malfunction in a CAISO system application causes an infeasible Dispatch Instruction to be communicated or prevents timely communication of a Dispatch Instruction or a SLIC malfunction prevents a resource from reporting an event that affects the resource's ability to deliver Energy.
- (y) The Uninstructed Deviation Penalty shall not apply to a failure to comply with a manual Dispatch Instruction that is not confirmed by a Dispatch Instruction transmitted through the CAISO's Automated Dispatch System.
- (z) The Uninstructed Deviation Penalty shall not apply if a Dispatch Instruction is validated after the start time of the instruction from the Settlement Interval in which the Dispatch Instruction was first effective to the earliest Settlement Interval, inclusive, in which the resource is able to respond to the Dispatch Instruction.

**11.24 Interim Scheduling Report, Charge and Allocation.**

**11.24.1 Interim Scheduling Report.**

The CAISO will provide to each Scheduling Coordinator on a weekly basis a report of the difference between a Scheduling Coordinator's metered CAISO Demand and the total CAISO Demand scheduled by the Scheduling Coordinator in its Day-Ahead Schedule, based on available Meter Data. The CAISO shall treat such reports as confidential in accordance with Section 20. Such reports shall be prepared as provided in the applicable Business Practice Manual.

**11.24.2 Interim Scheduling Charge.**

In the event that a Scheduling Coordinator's Net Negative CAISO Demand Deviation in its applicable LAP exceeds fifteen percent (15%) of the Scheduling Coordinator's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP for five percent (5%) or more of the total Trading Hours in any given month, the Scheduling Coordinator shall pay through the end of the applicable calendar month the monthly Interim Scheduling Charge as follows:

- (a) For any given Trading Hour in which the Scheduling Coordinator's Net Negative CAISO Demand Deviation in its applicable LAP is greater than fifteen percent (15%) and less than twenty percent (20%) of the Scheduling Coordinator's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP, the Scheduling Coordinator shall pay \$150/MWh for its Net Negative CAISO Demand Deviation that is greater than fifteen percent (15%) and less than twenty percent (20%) of its cleared total CAISO Demand as represented in its Day-Ahead Schedule in the applicable LAP in that Trading Hour.

- (b) For any given Trading Hour in which the Scheduling Coordinator's Net Negative CAISO Demand Deviation in its applicable LAP is greater than or equal to twenty percent (20%) of the Scheduling Coordinator's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP, the Scheduling Coordinator shall pay \$250/MWh for its Net Negative CAISO Demand Deviation greater than or equal to twenty percent (20%) of its cleared total CAISO Demand as represented in its Day-Ahead Schedule in the applicable LAP in that Trading Hour.

### **11.24.3 Exemptions from the Interim Scheduling Charge.**

The Interim Scheduling Charge shall not apply to the following circumstances:

- (a) For any given Trading Day for Scheduling Coordinators in each applicable LAP in which the CAISO's daily Day-Ahead peak CAISO Forecast of CAISO Demand is ninety-five percent (95%) or less than daily actual metered CAISO Demand in the respective northern and southern regions of the CAISO **Balancing Authority** Area as further described in the Business Practice Manuals.
- (b) For any given Trading Hour when a Scheduling Coordinator's peak metered CAISO Demand is less than or equal to 500 MW in a particular LAP, that Scheduling Coordinator shall not be subject to the Interim Scheduling Charge.
- (c) For metered CAISO Demand by Participating Loads.
- (d) For metered CAISO Demand that is MSS Load following Demand.
- (e) For any given Trading Hour when the Hourly Real-Time LAP Price is less than the Day-Ahead LAP Price for the same Trading Hour in the applicable LAP.
- (f) For metered CAISO Demand of Station Power Loads.**

**11.24.4 Allocation of Revenue Collected Under the Interim Scheduling Charge.**

Any revenues collected with the assessment of the Interim Scheduling Charge shall be treated as "Other Revenues" as described in Part C of Schedule 1 of Appendix F. The Interim Scheduling Charge revenues will be used to offset the revenue requirement associated with the Market Usage Charge.

**11.25 [NOT USED]**

**11.26 [NOT USED]**

**11.27 Voltage Support and Black Start Charges.**

The CAISO shall calculate, account for and settle charges and payments for Voltage Support and Black Start as set out in Sections 11.10.1.4, 11.10.1.5, 11.10.7, 11.10.8, and the applicable Business Practice Manual.

**11.28** The CAISO shall calculate, charge and disburse all collected default Interest in accordance with the CAISO Tariff.

**11.29 Billing and Payment Process.**

The CAISO will calculate for each charge the amounts payable by the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each Settlement Period of the Trading Day, and the amounts payable to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for each Settlement Period of that Trading Day and shall arrive at a net amount payable for each charge by or to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for that Trading Day. Each of these amounts will appear in the Initial Settlement Statement T+38BD, Initial Settlement Statement Reissue, Recalculation Settlement Statement and the Recalculation Settlement Statement T+76BD that the CAISO will provide to the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO.

The components of the Grid Management Charge will be included in the Initial Settlement Statement T+38BD, Initial Settlement Statement Reissue, Recalculation Settlement Statement and the Recalculation Settlement Statement T+76BD with the other types of charges referred to in Section 11, but a separate Invoice for the Grid Management Charge, stating the rate, billing determinant volume, and total charge for each of its components, will be issued by the CAISO to the Scheduling Coordinator.

**11.29.1** The billing and payment process shall be based on the issuance of Initial Settlement Statement T+38BD, Initial Settlement Statement Reissue, Recalculation Settlement Statement and the Recalculation Settlement Statement T+76BD for each Settlement Period in each Trading Day.

**11.29.2** Payment for the charges referred to in Section 11.1.2 (except for the charges payable under long-term contracts) for each Trading Day in each calendar month shall be made five (5) Business Days after issuance of the Initial Settlement Statement T+38BD for the last day of the relevant calendar month. Payment for adjustments will be made five (5) Business Days after issuance of the Initial Settlement Statement Reissue or Recalculation Settlement Statement for the last day of the relevant month. Payments for FERC Annual Charges will be made in accordance with Section 11.19.

**11.29.3 Prepayments.**

- (a) A Scheduling Coordinator or CRR Holder may choose to pay at an earlier date than the Payment Date specified in the CAISO Payments Calendar by way of prepayment provided it notifies the CAISO by electronic means before submitting its prepayment.
- (b) Prepayment notifications must specify the dollar amount prepaid.
- (c) Prepayments must be made by Scheduling Coordinators or CRR Holder via Fed-Wire into their CAISO prepayment account designated by the CAISO. The relevant Scheduling Coordinator or CRR Holder shall grant the CAISO a security interest on all funds in its CAISO prepayment account.

- (d) On any Payment Date the CAISO shall be entitled to cause funds from the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account to be transferred to the CAISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator's or CRR Holder's payment obligation arising in relation to that Payment Date by way of set-off or recoupment.
- (e) Any funds held in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall be treated as part of that Scheduling Coordinator's or CRR Holder's Financial Security.
- (f) Interest (or other income) accruing on the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall inure to the benefit of that Scheduling Coordinator or CRR Holder and shall be added to the balance of its CAISO prepayment account on a monthly basis.
- (g) Funds held in a CAISO prepayment account by a Scheduling Coordinator or CRR Holder may be recouped, offset or applied by the CAISO to any outstanding financial obligations of that Scheduling Coordinator or CRR Holder to the CAISO or to other Scheduling Coordinators or CRR Holders under this CAISO Tariff.

**11.29.4 System Failure.**

**11.29.4.1 At CAISO Debtor's Bank.**

If any CAISO Debtor becomes aware that a payment will not, or is unlikely to be, remitted to the CAISO Bank by 10:00 am on the relevant Payment Date for any reason (including failure of the Fed-Wire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay). The CAISO Debtor shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the Payment Date, or as soon as possible thereafter.



**11.29.4.2 At the CAISO's Bank.**

In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall use reasonable efforts to establish alternative methods of remitting funds to the CAISO Creditors' Settlement Accounts by close of banking business on that Payment Date, or as soon as possible thereafter. The CAISO shall notify the CAISO Debtors and the CAISO Creditors of occurrence of the system failure and the alternative methods and anticipated time of payment.

**11.29.5 General Principles for Production of Settlement Statements.**

**11.29.5.1 Basis of Settlement.**

The basis of each Settlement Statement shall be the debiting or crediting of an account in the name of the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO in the general ledger set up by the CAISO to reflect all transactions, charges or payments settled by the CAISO.

**11.29.5.2 Right to Dispute.**

All Scheduling Coordinators, CRR Holders, Black Start Generators or Participating TOs shall have the right to dispute any item or calculation set forth in any Initial Settlement Statement in accordance with this CAISO Tariff.

**11.29.5.3 Data Files.**

Settlement Statements relating to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be accompanied by data files of supporting information that includes the following for each Settlement Period of the Trading Day:

- (a) the aggregate quantity (in MWh) of Energy supplied or withdrawn by the Scheduling Coordinator Metered Entities represented by the Scheduling Coordinator;

- (b) the aggregate quantity (in MW) and type of Ancillary Services capacity provided or purchased;
- (c) the relevant prices that the CAISO has applied in its calculations;
- (d) details of the scheduled quantities of Energy and Ancillary Services accepted by the CAISO in the Day-Ahead Market and the Hour-Ahead Market;
- (e) details of Imbalance Energy and penalty payments;
- (f) details of the CRR Payments or CRR Charges, and any payments or charges associated with the CRR Auctions; and
- (g) detailed calculations of all fees, charges and payments allocated among Scheduling Coordinators and each Scheduling Coordinator's share.

**11.29.5.4 Settlement Software.**

The CAISO Settlement software shall be audited by an independent firm of auditors competent to carry out audits of such software to determine its consistency with the CAISO Tariff. In any dispute regarding Settlement calculations, a certificate of such firm of auditors that the CAISO software is consistent with the CAISO Tariff shall be prima facie proof that the charges shown in a Settlement Statement have been calculated in a method consistent with the CAISO Tariff. Nothing in this section will be deemed to establish the burden of proof with respect to Settlement calculations in any proceeding.

**11.29.6 Calculation in the Event of Lack of Meter Data for the Balancing of Market Accounts.**

Settlements shall not be cleared for final processing until the accounting trial balance is zero. In order to publish a Settlement Statement, the CAISO may use estimated, disputed or calculated Meter Data.

When actual verified Meter Data is available and all of the disputes raised by Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs during the validation process described in Section 11.29.8 have been determined, the CAISO shall recalculate the amounts payable and receivable by the affected Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs or by all Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs, if applicable, as soon as reasonably practical and shall show any required adjustments as a debit or credit in the next Settlement Statement.

**11.29.7 Settlements Cycle.**

**11.29.7.1 Timing of the Settlements Process.**

**11.29.7.1.1 Initial Settlement Statement T+38BD.**

The CAISO shall provide to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for validation an Initial Settlement Statement for each Trading Day within thirty-eight (38) Business Days of the relevant Trading Day, covering all Settlement Periods in that Trading Day. Each Initial Settlement Statement will include a statement of:

- (a) the amount payable or receivable by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge referred to in Section 11 for each Settlement Period in the relevant Trading Day;
- (b) the total amount payable or receivable by that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for all Settlement Periods in that Trading Day after the amounts payable and the amounts receivable under (a) have been netted off pursuant to Section 11.29; and
- (c) the components of each charge in each Settlement Period except for information contained in the Imbalance Energy report referred to in this Section 11.29.7.1.1.

Each **Initial Settlement Statement** shall also be accompanied by a breakdown of the components of the Imbalance Energy Charge (the Imbalance Energy report).

**11.29.7.1.2** Each Scheduling Coordinator, **CRR Holder**, Black Start Generator or Participating TO shall have a period of eight (8) Business Days from the issuance of an **Initial Settlement Statement** during which it may review the **Initial Settlement Statement T+38BD** and notify the CAISO of any errors. No later than fifty-one (51) Business Days after the Trading Day to which it relates, the CAISO shall issue an **Initial Settlement Statement Reissue or a Recalculation Settlement Statement** to each Scheduling Coordinator or **CRR Holder** for that Trading Day.

**11.29.7.1.3 Initial Settlement Statement Reissues and Recalculation Settlement Statements.**

The CAISO shall provide to each Scheduling Coordinator, **CRR Holder**, Black Start Generator or Participating TO an **Initial Settlement Statement Reissue or a Recalculation Settlement Statement** in accordance with the CAISO Tariff and the CAISO Payments Calendar. The **Initial Settlement Statement Reissue or Recalculation Settlement Statement** shall be in a format similar to that of the **Initial Settlement Statement** and shall include **the same granularity of** information provided in the **Initial Settlement Statement** as amended following the validation procedure.

**11.29.7.1.4** Each Scheduling Coordinator, **CRR Holder**, Black Start Generator or Participating TO shall have a period of ten (10) Business Days from the issuance of the **Initial Settlement Statement Reissue or Recalculation Settlement Statement** during which it may review the Incremental Changes on the **Initial Settlement Statement Reissue or Recalculation Settlement Statement** and notify the CAISO of any errors. No later than twenty-five (25) Business Days from the date of issuance of the **Initial Settlement Statement Reissue or Recalculation Settlement Statement**, the CAISO shall **issue the 76<sup>th</sup> Day Recalculation Settlement Statement** and shall incorporate any required corrections in a subsequent **Initial Settlement Statement**.

**11.29.7.2 Basis for Billing and Payment.**

The Initial Settlement Statement T+38BD, Initial Settlement Statement Reissue, Recalculation Settlement Statement and the Recalculation Settlement Statement T+76BD shall constitute the basis for billing and associated automatic funds transfers in accordance with this CAISO Tariff. The Initial Settlement Statement T+38BD shall constitute the basis for billing and associated automatic funds transfers for all charges in the first instance. The Initial Settlement Statement Reissue and Recalculation Settlement Statement shall constitute the basis for billing and associated automatic funds transfers for adjustments to charges set forth in the Initial Settlement Statement T+38BD. Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall pay any net debit and shall be entitled to receive any net credit shown in an Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit.

**11.29.7.2.1 Elimination of Invoices under \$10.00.**

Preliminary and final Invoices and Payment Advices due to or from any Market Participant for amounts less than \$10.00 will be adjusted to \$0.00 and no amount will be due to or from that Market Participant for that Invoice or Payment Advice.

**11.29.7.3 Settlement Statement Re-runs and Post Final Adjustments.**

The CAISO is authorized to perform Settlement Statement Re-runs following approval of the CAISO Governing Board. A request to perform a Settlement Statement Re-run may be made at any time by a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO by notice in writing to the CAISO Governing Board. The CAISO Governing Board shall, in considering whether to approve a request for a Settlement Statement Re-run, determine in its reasonable discretion whether there is good cause to justify the performance of a Settlement Statement Re-run.

**11.29.7.3.1** If a Settlement Statement Re-run is ordered by the CAISO Governing Board, the CAISO shall arrange to have the Settlement Statement Re-run carried out as soon as is reasonably practicable following the CAISO Governing Board's order, subject to the availability of staff and computer time, compatible software, appropriate data and other resources.

**11.29.7.3.2** The cost of a Settlement Statement Re-run shall be borne by the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO requesting it, unless the Settlement Statement Re-run was needed due to a clerical oversight or error on the part of the CAISO staff.

**11.29.7.3.3** Where a Settlement Statement Re-run indicates that the accounts of Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs should be debited or credited to reflect alterations to Settlements previously made under this CAISO Tariff, for those Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs affected by the statement re-run, the CAISO shall reflect the amounts to be debited or credited in the next subsequent Recalculation Settlement Statement that it issues following the Settlement Statement Re-run to which the provisions of this Section 11 apply.

**11.29.7.3.4** Reruns, post closing adjustments and the financial outcomes of CAISO ADR Procedures and any other dispute resolution may be invoiced separately from monthly market activities. The CAISO shall provide a Market Notice at least thirty (30) days prior to such invoicing identifying the components of such Invoice or Payment Advice.

## **11.29.8 Confirmation and Validation.**

### **11.29.8.1 Confirmation.**

It is the responsibility of each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO to notify the CAISO if it fails to receive a Settlement Statement on the date specified for the publication of such Settlement Statement in the CAISO Payments Calendar. Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have received its Settlement Statement on the dates specified, unless it notifies the CAISO to the contrary.

**11.29.8.2 Validation.**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall have the opportunity to review the terms of the Initial Settlement Statement T+38BD that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO shall be deemed to have validated each Initial Settlement Statement unless it has raised a dispute or reported an exception within eight (8) Business Days from the date of issuance. Once validated, an Initial Settlement Statement shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, unless the CAISO performs a Settlement Statement Re-run pursuant to Section 11.29.7.3.

The notice of dispute, if any, shall state clearly the Trading Day, the issue date of the Initial Settlement Statement, the item disputed, the reasons for the dispute, the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim.

**11.29.8.3 Validation of Initial Settlement Statement Reissue and Recalculation Settlement Statements.**

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall have the opportunity to review the Incremental Changes that appear on the Initial Settlement Statement Reissue and Recalculation Settlement Statement that it receives. The Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to have validated the Incremental Changes on each Initial Settlement Statement Reissue and Recalculation Settlement Statement unless it has raised a dispute or reported an exception regarding those Incremental Changes within ten (10) Business Days from the date of issuance. Once validated, the Incremental Changes on the Initial Settlement Statement Reissue and Recalculation Settlement Statement shall be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to which it relates, unless the CAISO performs a Settlement Statement Re-run pursuant to Section 11.29.7.3.

The notice of dispute shall state clearly the Trading Day, the issue date of the Initial Settlement Statement Reissue and Recalculation Settlement Statement, the item disputed, the reasons for the dispute, the amount claimed (if appropriate) and shall be accompanied with all available evidence reasonably required to support the claim. The only Recalculation Settlement Statement that cannot be disputed is the one issued on T+59BD.

#### **11.29.8.4 Recurring Disputes or Exceptions.**

A Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO may request the CAISO to treat as recurring a dispute or exception raised in accordance with Sections 11.29.8.1 and 11.29.8.2 above, if a dispute or exception would apply to subsequent Initial and the Initial Settlement Statement Reissue and Recalculation Settlement Statements. A request for recurring treatment may be made for any valid reason provided that subsequent Initial Settlement Statements T+38BD, Initial Settlement Statement Reissue and Recalculation Settlement Statements would be affected, including but not limited to, that the disputed calculation will recur, or that a disagreement as to policy will affect calculations in subsequent Initial Settlement Statement T+38BD, the Initial Settlement Statement Reissue and Recalculation Settlement Statements. If a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO wishes to request that the CAISO treat a dispute as recurring, it shall, in the notice, clearly indicate that it requests such treatment and set forth in detail the reasons that support such treatment. To the extent possible, the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall state the types of charges and dates to which the dispute will apply, and provide estimates of the amounts that will likely be claimed on each date.



The CAISO shall make a determination on such a request within five (5) Business Days of receipt. To preserve its right to dispute an item, a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO must continue to raise a dispute or report an exception until it is notified by the CAISO that the CAISO agrees to treat the dispute or exception as recurring. If the CAISO grants a request to treat a dispute or exception as recurring, the dispute raised or exception reported by the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO shall be deemed to apply to every subsequent Initial Settlement Statement T+38BD, the Initial Settlement Statement Reissue and Recalculation Settlement Statement provided to the Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO from the date that the CAISO grants the request for recurrent treatment until: a) ninety (90) days have elapsed, unless the CAISO indicates a different expiration date on its response to the request, in which case the expiration date shall be as stated by the CAISO in its response or b) the dispute or exception is resolved, whichever is shorter. The CAISO may deny a request that the CAISO treat a dispute as recurring for any valid reason, including because the request is not adequately specific as to the basis for recurring treatment or the subsequent calculations that will be affected.

**11.29.8.5 Amendment.**

Regarding a dispute related to an Initial Settlement Statement, if the CAISO agrees with the amount claimed, it shall incorporate the relevant data into the Initial Settlement Statement Reissue or Recalculation Settlement Statement. Regarding a dispute related to an Incremental Change in an Initial Settlement Statement Reissue or Recalculation Settlement Statement, the CAISO shall make a determination on the dispute no later than twenty-five (25) Business Days from the issuance of the Initial Settlement Statement Reissue or Recalculation Settlement Statement, and, if the CAISO agrees with the amount claimed, shall incorporate the relevant data into the next Recalculation Settlement Statement issued on T+76BD.

**11.29.8.6 CAISO Contact.**

If the CAISO does not agree with the amount claimed or if it requires additional information, it shall make reasonable efforts (taking into account the time it received the notice of dispute and the complexity of the issue involved) to contact the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO to resolve the issue before issuing the Initial Settlement Statement Reissue or Recalculation Settlement Statement. If it is not possible to contact the relevant party, the CAISO shall issue the Initial Settlement Statement Reissue or Recalculation Settlement Statement without taking into account the dispute notice.

**11.29.8.7 Payment Pending Dispute.**

Each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO which receives an Invoice or Payment Advice shall pay any net debit and shall be entitled to receive any net credit shown in the Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit. The provisions of Section 13 shall apply to the disputed amount.

**11.29.9 Payment Procedures.**

**11.29.9.1 All Payments to Be Made Through the CAISO.**

All Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs shall discharge their obligations to pay the amounts owed by them and shall receive payments of all amounts owed to them under this CAISO Tariff only through the CAISO.

**11.29.9.2 CAISO Accounts to be Established.**

The CAISO is authorized to establish and maintain bank accounts held in trust for Market Participants and obtain lines of credit and other banking facilities (not exceeding an aggregate amount set by the CAISO Governing Board) necessary for the operation of its Settlement and billing procedures. Unless

otherwise specified in this CAISO Tariff the CAISO will recover all costs incurred in connection with these CAISO banking facilities through the appropriate component of the Grid Management Charge. The CAISO shall establish and operate the following accounts:

**11.29.9.2.1** A CAISO Clearing Account to and from which all payments are made;

**11.29.9.2.2** A CAISO Reserve Account from which any debit balances on the CAISO Clearing Account at the close of banking business on each Business Day shall be settled or reduced in accordance with this CAISO Tariff. The CAISO shall use the Financial Security provided by a Scheduling Coordinator, CRR Holder, or Candidate CRR Holder pursuant to Section 12, if necessary, to clear any debit balances on the CAISO Reserve Account that may arise as a result of that Scheduling Coordinator's or CRR Holder's failure to pay an amount due under this CAISO Tariff;

**11.29.9.2.3** A CAISO Surplus Account; and

**11.29.9.2.4** Such other accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under this CAISO Tariff. The CAISO shall notify Market Participants of the establishment of such accounts through the CAISO Website and by issuance of a Market Notice.

**11.29.9.3 Accounts of the Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs.**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fed-Wire where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for

receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Interim Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.

**11.29.9.4 Declaration of Trust.**

All CAISO Accounts established pursuant to Section 11.29.9.2 shall be opened and operated by the CAISO on trust for Market Participants, in accordance with this CAISO Tariff. Each such account shall be maintained at a bank or other financial institution in California and shall bear a name indicating that it is a trust account.

**11.29.9.5 No Co-Mingling.**

The CAISO shall not co-mingle any funds standing to the credit of a CAISO Account with its other funds and shall promptly withdraw any amounts paid into a CAISO Account representing amounts paid for the account of the CAISO.

**11.29.9.6 Use of Accounts.**

**11.29.9.6.1 Clearing Account.**

- (a) Subject to Section 11.29.3 each CAISO Debtor shall remit to the CAISO Clearing Account the amount shown on the invoice as payable by that CAISO Debtor for value not later than 10:00 a.m. on the Payment Date.
- (b) On the Payment Date the CAISO shall be entitled to cause the transfer of such amounts held in a Scheduling Coordinator's or CRR Holder's CAISO prepayment account to the CAISO Clearing Account as provided in Section 11.29.3.

The CAISO shall calculate the amounts available for distribution to CAISO Creditors on the Payment Date and shall give irrevocable instructions to the CAISO Bank to remit from the CAISO Clearing Account to the relevant Settlement Accounts maintained by the CAISO Creditors, the aggregate amounts determined by the CAISO to be available for payment to CAISO Creditors for value by close of business on the Payment Date if no CAISO Debtors are in default. If a CAISO Debtor is in default and until all defaulting amounts have been collected, the CAISO shall make payments as soon as practical within five (5) Business Days of the collection date posted in the CAISO Payments Calendar. If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear.

The CAISO is authorized to instruct the CAISO Bank to debit the CAISO Clearing Account and transfer to the relevant CAISO Account sufficient funds to pay in full the Grid Management Charge **and FERC Annual Charges** falling due on any Payment Date with priority over any other payments to be made on that or on subsequent days out of the CAISO Clearing Account.

**11.29.9.6.2 Reserve Account.**

The CAISO Reserve Account shall be available to the CAISO for the purpose of providing funds to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors. If there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors and clear the account on any Payment Date, due to payment default by one or more CAISO Debtors, the CAISO shall transfer funds from the CAISO Reserve Account to the CAISO Clearing Account to clear it by close of banking business on that Payment Date pursuant to Section 11.29.13.4.

If the CAISO Reserve Account is drawn upon, the CAISO shall as soon as possible thereafter take any necessary steps against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action, to replenish the CAISO Reserve Account including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator, Candidate CRR Holder or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator, Candidate CRR Holder or CRR Holder if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

The proceeds of drawings under any line of credit, other credit facility, or other Financial Security of the CAISO Reserve Account shall be held on trust for CAISO Creditors. If the CAISO Reserve Account is replenished as provided for in this Section 11.29.9.6.2, any credits shall be held on trust for all CAISO Creditors.

**11.29.9.6.2.1 Replenishing the CAISO Reserve Account Following Payment Default.**

If the CAISO has debited the CAISO Reserve Account then:

- (a) If, after the CAISO has debited the CAISO Reserve Account on a Payment Date, the CAISO Bank receives a remittance from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Reserve Account, such remittance shall be credited to the CAISO Reserve Account.
- (b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Reserve Account.

- (c) If after taking reasonable action the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered, such amounts shall be deemed to be owing by those Market Participants who were CAISO Creditors on the relevant Payment Date pro rata to the net payments they received on that Payment Date and shall be accounted for by way of a charge in the next Settlement Statements of those CAISO Creditors. Such charge shall be credited to the CAISO Reserve Account.

**11.29.9.6.3 Surplus Account.**

The CAISO shall establish and maintain a bank account denominated the CAISO Surplus Account. The CAISO Surplus Account shall include the following:

- (a) Any amounts paid to the CAISO in respect of penalties or Sanctions referred to in Section 11.14 shall be credited to the CAISO Surplus Account, subject, however, to Section 11.29.9.6.1(b).
- (b) The funds referred to in Section 11.29.9.6.1(a) pertaining to penalties or Sanctions as provided in Section 11.14 shall first be applied towards any expenses, loss or costs incurred by the CAISO except for that portion of those amounts collected pursuant to 37.9.4. Any excess after such application will be credited to the CAISO Surplus Account pursuant to 11.29.9.6.1(a).
- (c) The funds referred to in Section 11.29.9.6.1(a) pertaining to default Interest referred to in Section 11.29.13.1 shall first be applied towards any unpaid CAISO Creditor balances for the Trading Month in which the default Interest was assessed and second to any other unpaid CAISO Creditor balances. Only after all unpaid CAISO Creditor balances are satisfied in full will any excess funds pertaining to default Interest be credited to the CAISO Surplus Account pursuant to Section 11.29.9.6.1(a).

In the event that there are funds in the CAISO Surplus Account in excess of an amount to be determined by the CAISO Governing Board and identified in a Market Notice by the CAISO to Market Participants, the amount of such excess will be distributed to Scheduling Coordinators using the same method of apportioning the refund as the method employed in apportioning the liability for the Grid Management Charge.

**11.29.10 Billing and Payment.**

The CAISO shall prepare and send to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO two Invoices or Payment Advices for each calendar month. The first Invoice or Payment Advice will be based on the Initial Settlement Statement T+38BD and the second Invoice or Payment Advice will be based on the Initial Settlement Statement Reissue or Recalculation Settlement Statement(s). Each Invoice or Payment Advice will show amounts which are to be paid by or to each Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO, the Payment Date, being the date on which such amounts are to be paid or received and details of the CAISO Clearing Account to which any amounts owed by Scheduling Coordinators, CRR Holder, Black Start Generator or Participating TO are to be paid.

The Invoices or Payment Advices will also include the total charges for each component of the Grid Management Charge, the total charges associated with any Interest for each relevant Trading Month, the FERC Annual Charges due monthly, as well as any disbursements associated with a shortfall receipt distribution.

A separate Invoice for the FERC Annual Charges due annually will be issued by the CAISO to the Scheduling Coordinator in accordance with Section 11.19.1.2. The CAISO will issue separate Invoices for NERC/WECC Charges as described in Section 11.20.

A separate Invoice for a shortfall allocation will be issued by the CAISO to Scheduling Coordinators in the event of a payment default in accordance with Section 11.29.17.1.



Settlement Statement Reruns, post closing adjustments and the financial outcomes of CAISO ADR Procedures and any other dispute resolution may be invoiced separately from monthly market activities. The CAISO shall provide a Market Notice at least thirty (30) days prior to such invoicing identifying the components of such Invoice or Payment Advice.

**11.29.10.1 Emergency Procedures.**

**11.29.10.2 Use of Estimated Data.**

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may use estimated Settlement Statements and Invoices and Payment Advices and may implement any temporary variation of the timing requirements relating to the Settlement and billing process contained in the CAISO Tariff. Details of the variation and the method chosen to produce estimated data, Settlement Statements and Invoices and Payment Advices will be published on the CAISO Website.

**11.29.10.3 Payment of Estimated Statements and Invoices.**

When estimated Settlement Statements and Invoices or Payment Advices are issued by the CAISO, payments between the CAISO and Market Participants shall be made on an estimated basis and the necessary corrections shall be made by the CAISO as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO. Failure to make such estimated payments shall result in the same consequences as a failure to make actual payments.

**11.29.10.4 Validation and Correction of Estimated Statements and Invoices.**

The CAISO shall use its best efforts to verify the estimated data and to make the necessary corrections as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO.

**11.29.10.5 Estimated Statements to be Final.**

In the event that the CAISO is of the opinion that, despite its best efforts, it is not possible for it to verify the estimated data because actual data is not reasonably expected to become available to the CAISO in the foreseeable future, the CAISO shall consult with the Market Participants in order to develop the most appropriate substitute data including using data provided by Market Participants. Following such determination of substitute data, the CAISO shall send to the relevant Market Participants revised Settlement Statements and Invoices and Payment Advices. The provisions of Section 11.29.8.6 shall apply to payment of revised Invoices issued in accordance with these emergency procedures. Failure to make payments of such revised Invoices shall result in the same consequences as a failure to make actual payments.

**11.29.11 Instructions for Payment.**

Each Scheduling Coordinator or CRR Holder shall remit to the CAISO Clearing Account the amount shown on the Invoice as payable by that Scheduling Coordinator or CRR Holder for value not later than 10:00 a.m. on the Payment Date.

**11.29.12 CAISO's Responsibilities.**

On the due date for payment of amounts shown in an Invoice, the CAISO shall ascertain whether all amounts required to be remitted to the CAISO Clearing Account have been credited to it. If any such amount has not been so credited, it shall ascertain which Scheduling Coordinators or CRR Holder have failed to pay the amount owed by them and it may take steps to recover any overdue amount.

**11.29.13 Non-payment by a Scheduling Coordinator or CRR Holder.**

**11.29.13.1 Notification and Interest.**

If a Scheduling Coordinator or CRR Holder becomes aware that a payment for which it is responsible will not be remitted to the CAISO Clearing Account on time, it shall immediately notify the CAISO of the fact

and the reason for the non-payment. If the Scheduling Coordinator or CRR Holder fails to pay any sum to the CAISO when due and after and the CAISO draws upon any and all available Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder, the Scheduling Coordinator or CRR Holder shall pay Interest on the overdue amount for the period from the Payment Date to the date on which the payment is remitted to the CAISO Clearing Account, together with any related transaction costs incurred by the CAISO. The CAISO shall apply all such Interest payments on the default amount on a pro rata basis to CAISO Creditors in relation to amounts past due in the order of the creation of such debts.

**11.29.13.2 Payment Default.**

Subject to Section 11.29.13.6, if by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes that all or any part of any amount due to be remitted to the CAISO Clearing Account by any Scheduling Coordinator or CRR Holder will not or has not been remitted and there are insufficient funds in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account (the amount of insufficiency being referred to as the "default amount"), the CAISO shall take the following actions to enable the CAISO Clearing Account to clear not later than the close of banking business on the relevant Payment Date.

**11.29.13.3 Enforcing the Financial Security of a Defaulting Scheduling Coordinator or CRR Holder.**

Subject to Section 11.29.13.6, the CAISO shall make reasonable endeavors to enforce the defaulting Scheduling Coordinator's or CRR Holder's Financial Security (if any) to the extent necessary to pay the default amount. If it is not practicable to obtain clear funds in time to effect payment to CAISO Creditors on the same day the CAISO shall proceed in accordance with Sections 11.29.13.4 or 11.29.17.1 as applicable.

**11.29.13.4 Use of CAISO Reserve Account.**

If there are funds standing to the credit of the CAISO Reserve Account (including the proceeds of drawings under banking facilities described in Section 11.29.9.6.2) the CAISO shall debit the CAISO Reserve Account with the default amount in order to clear the CAISO Clearing Account and effect payment to the CAISO Creditors.

**11.29.13.5 Action against a Defaulting Scheduling Coordinator or CRR Holder.**

The CAISO shall as soon as possible after taking action under 11.29.13.4 take any steps it deems appropriate against the defaulting Scheduling Coordinator [need to add "or CRR Holder"] to recover the default amount (and any Interest as set out in Section 11.29.13.3) including enforcing any Financial Security, exercising its rights of recoupment or set-off and/or bringing proceedings against the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 11.29.21.1.

**11.29.13.6 Default to be Remedied Promptly.**

In the event that the CAISO reasonably believes that an outstanding amount which has not been paid by 10:00 am on the relevant Payment Date, is likely to be paid no later than close of banking business on the next Business Day then the CAISO may, but shall not be obliged to, delay enforcing that CAISO Debtor's Financial Security or taking other measures to recover payment until after the close of banking business on the next Business Day but Interest shall nonetheless accrue pursuant to Section 11.29.13.1.

**11.29.13.7 Set-Off.**

The CAISO is authorized to recoup, set off and apply any amount to which any defaulting CAISO Debtor is or will be entitled, in or towards the satisfaction of any of that CAISO Debtor's debts arising under the CAISO Settlement and billing process. Each CAISO Creditor and each CAISO Debtor expressly acknowledges the following application of funds: first to the current month's Grid Management Charge, and then as described in 11.29.13.8 unless otherwise specified in accordance with Section 11.29.17.

**11.29.13.8 Order of Payments.**

Unless otherwise specified in accordance with Section 11.29.17, the CAISO shall apply payments received in respect of amounts owing to CAISO Creditors to repay the relevant debts in the order of the creation of such debts.

**11.29.13.9 Interest Accruing while Enforcing the Financial Security.**

If the CAISO has debited the CAISO Reserve Account and it subsequently succeeds in enforcing the Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder, the CAISO shall be entitled to withdraw from such Financial Security in addition to the default amount, all costs incurred and Interest accrued to the CAISO as a result of debiting the CAISO Reserve Account from the date of such debit to the date of enforcement of the said Financial Security.

**11.29.13.10 Application of Funds Received.**

Amounts credited to the CAISO Clearing Account in payment of a default amount (as set out in Section 11.29.9.6.2.1) or as a result of enforcing the defaulting CAISO Debtor's Financial Security shall be applied to the CAISO Reserve Account pursuant to Section 11.29.9.6.2.1 to reduce amounts outstanding under any CAISO banking facilities used to fund the CAISO Reserve Account on the relevant Payment Date and the balance (if any) shall be applied to reimburse pro rata any CAISO Creditors whose payments were reduced pursuant to Section 11.29.17.1.

**11.29.14 [NOT USED]**

**11.29.15 [NOT USED]**

**11.29.16 Prohibition on Transfers.**

The CAISO shall at no time instruct the CAISO Bank to transfer any sum from a CAISO Account to another account (not being a CAISO Account) unless that account is a Settlement Account or the amount is owed to the CAISO under this CAISO Tariff.

**11.29.17 Alternative Payment Procedures.**

**11.29.17.1 Pro Rata Reduction to Payments.**

If it is not possible to clear the CAISO Clearing Account on a Payment Date because of an insufficiency of funds available in the CAISO Reserve Account or by enforcing any Financial Security provided by a defaulting Scheduling Coordinator or CRR Holder, the CAISO shall (1) first pay in full every CAISO Creditor whose net amounts receivable on the relevant Payment Date is less than \$5,000; and (2) second, reduce payments to all remaining CAISO Creditors proportionately to the net amounts payable to them on the relevant Payment Date to the extent necessary to clear the CAISO Clearing Account through a shortfall allocation. The CAISO shall account for such reduction in the CAISO ledger accounts as amounts due and owing by the non-paying CAISO Debtor to each CAISO Creditor whose payment was so reduced. The provisions of this section shall not apply to non-payment of any penalty amount that a Scheduling Coordinator or CRR Holder has disputed and FERC has specifically authorized the Scheduling Coordinator or CRR Holder to net its payment to the CAISO by the amount of the penalty in question in accordance with Section 37.9.3, in which case the non-payment amount will be allocated exclusively to the CAISO penalty trust account and not allocated to CAISO Creditors.

**11.29.17.2 Payment of Defaulted Receivables.**

Collections of defaulted receivables (other than Interest) will be distributed pro rata to CAISO Creditors for the month of default.

- (1) If the total collected in that closing related to the past due Trading Month is less than \$5,000, then the funds shall accumulate in an interest-bearing account until either: (a) the account exceeds \$5,000, (b) there have been no distributions from the account for six months, or (c) all defaults for that month have been collected exclusive of any bankruptcy defaults.

- (2) If all CAISO Creditors for that Trading Month have been paid, then the proceeds will be paid pro rata to the CAISO Creditors in the oldest unpaid Trading Month.
- (3) This provision is also applicable to the amounts netted against CAISO Creditor balances related to prior defaulted receivables.
- (4) All defaulted receivables disbursed under this Section shall be disbursed in accordance with the timeframes set forth in Section 11.29.9.6.1.

**11.29.18 [NOT USED]**

**11.29.19 Payment Errors.**

**11.29.19.1 Overpayments.**

If for any reason, including the negligence of the CAISO Bank or the CAISO, a CAISO Creditor receives an overpayment on any Payment Date, the CAISO Creditor shall within two (2) Business Days from the date of receipt of the funds into its Scheduling Coordinator or CRR Holder Settlement Account, notify the CAISO of the amount of the overpayment and shall forthwith pay the overpayment into a CAISO Account specified by the CAISO.

**11.29.19.2 Repayment of Overpayment.**

If prior to a CAISO Creditor notifying the CAISO of the overpayment, the CAISO receives notice (from the CAISO Bank or otherwise) of the overpayment, the CAISO shall within two (2) Business Days notify the recipient of the overpayment. The CAISO shall be responsible for payment to those entitled to the sum which has been overpaid.

**11.29.19.3 Overpayment Held In Trust.**

Until a CAISO Creditor refunds the overpayment to the CAISO, the CAISO Creditor shall be deemed to hold the amount of such overpayment on trust for any CAISO Creditor which may have been underpaid in consequence of such overpayment, pro rata to the amount of the underpayment.

**11.29.19.4 Interest on Overpayment.**

- (a) If an overpayment is repaid by a CAISO Creditor in accordance with Section 11.29.19.1, the CAISO shall be entitled to interest on the amount of the overpayment at the prime rate of the bank where the Settlement Account of the overpaid CAISO Creditor is located from the date the overpayment was received to the time that the repayment is credited to the relevant CAISO Account.
- (b) If the overpayment (or any part of it) is not repaid by a CAISO Creditor in accordance with Section 11.29.19.1, the CAISO shall be entitled to Interest on the amount of the overpayment from the end of the two day period referred to in that section until the repayment is credited to the relevant CAISO Account and the CAISO will be entitled to treat the overpayment (and any Interest accruing thereon) as a default amount to which Section 11.29.13.2 will apply.

**11.29.19.5 Treatment of Amounts Outstanding as a Result of an Overpayment.**

The CAISO shall apply the amount of any overpayment repaid (including interest received) to credit any underpaid CAISO Creditors pro rata to the amounts of their underpayments on the same day of receipt, or if not practicable, on the following Business Day.

**11.29.19.6 Underpayments.**

If for any reason, including the negligence of the CAISO Bank or the CAISO, a CAISO Creditor receives on the relevant Payment Date an underpayment, the CAISO Creditor shall within two (2) Business Days from receipt into its Settlement Account, notify the CAISO of the amount of the underpayment, and the CAISO after consultation with the CAISO Bank, shall use all reasonable endeavors to identify such entity as shall have received any corresponding overpayment and promptly correct the underpayment. If, by



reason of negligence, the CAISO holds or has under its control after five (5) Business Days from receipt in the CAISO Clearing Account amounts which it ought properly to have paid to CAISO Creditors, such CAISO Creditors shall be entitled to interest on such amounts, for such period as the CAISO improperly holds or has such amounts under its control.

**11.29.20 Defaults.**

Each CAISO Creditor shall give notice to the CAISO before instituting any action or proceedings in any court against a CAISO Debtor to enforce payments due to it.

**11.29.21 Proceedings to Recover Overdue Amounts.**

**11.29.21.1 Proceedings Brought by the CAISO.**

Without prejudice to the right of any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO to bring such proceedings as it sees fit in connection with matters related to the recovery of amounts owed to it, the CAISO may bring proceedings against any Scheduling Coordinator or CRR Holder on behalf of those Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs who have indicated to the CAISO their willingness for the CAISO first so to act, for the recovery of any amounts due by that Scheduling Coordinator or CRR Holder, if the CAISO has first reached agreement with the Scheduling Coordinators, CRR Holders, Black Start Generators, or Participating TOs as to the appropriate remuneration, is indemnified to its reasonable satisfaction, and receives such Financial Security as it may reasonably request against all costs, claims, expenses (including legal fees) and liabilities which it will or may sustain or incur in complying with such instructions.

**11.29.21.2 Evidence of Unpaid Amount.**

The CAISO shall, on request, certify in writing the amounts owed by a CAISO Debtor that remain unpaid and the CAISO Creditors to whom such amounts are owed and shall provide certified copies of the

relevant Initial Settlement Statement T+38BD and the Initial Settlement Statement Reissue and Recalculation Settlement Statements, Invoices, Payment Advices, and other documentation on which the CAISO's certificate was based to the CAISO Debtor and the relevant CAISO Creditors. A CAISO certificate given under this Section 11.29.21.2 may be used as prima facie evidence of the amount due by a CAISO Debtor to CAISO Creditors in any legal proceedings.

**11.29.22 Data Gathering and Storage.**

**11.29.22.1 Required Capabilities.**

The CAISO shall ensure that the Settlement process shall contain, at a minimum, the following data gathering and storage capabilities:

- (a) the accurate, time-sequenced, end-to-end traceability of the Settlements process so that Scheduling Coordinators, CRR Holders and Participating TOs can fully verify their Settlement Statements;
- (b) the ability to specify and accept data that is specifically needed for audit trail requirements; and
- (c) the archiving of Meter Data, Settlement runs and other information used to prepare Settlement Statements to be consistent with the time frame required to re-run the Settlement process by state laws and the rules of the Local Regulatory Authority.

**11.29.22.2 Data Dissemination.**

Data shall not be disseminated by the CAISO except as permitted in this CAISO Tariff.

**11.29.23 Communications.**

The Initial Settlement Statement T+38BD, any Initial Settlement Statement Reissue, the Recalculation Settlement Statements and Invoices, and Payment Advices will be considered issued to CAISO Creditors or CAISO Debtors when released by the CAISO's secure communication system. Communications on a Payment Date relating to payment shall be made by the fastest practical means including by telephone. If there is a failure of a communication system and it is not possible to communicate by electronic means, then the CAISO or CAISO Creditor or CAISO Debtor, as the case may be, shall communicate by facsimile but only if the recipient is first advised by telephone to expect the facsimile. Methods of communication between the CAISO and Market Participants may be varied by the CAISO giving not less than ten (10) days notice to Market Participants on the CAISO's secure communication system.

**11.29.24 CAISO Payments Calendar.**

**11.29.24.1 Preparation.**

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

- (a) The date by which Scheduling Coordinators are required to provide Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;
- (b) The date on which the CAISO will issue Initial Settlement Statements and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (c) The date by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Initial Settlement Statements pursuant to Section 11.29.8.2;

- (d) The date on which the CAISO will issue the Initial Settlement Statement Reissue and Recalculation Settlement Statements for T+51BD, T+59BD and T+76BD, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (e) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;
- (f) The dates and times on which CAISO Creditors will receive payments from the CAISO Clearing Account of amounts owing to them for that Trading Day; and
- (g) In relation to Reliability Must-Run Charges and RMR Payments, the details set out in paragraph 3 of Appendix N, Part J.

The CAISO will make a draft of the CAISO Payments Calendar available on the CAISO Website to Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners any of which may submit comments and objections to the CAISO within two weeks of the date of posting of the draft on the CAISO Website. No later than October 31<sup>st</sup> in each year, the CAISO will publish the final CAISO Payments Calendar for the following calendar year, after considering the comments and objections received from Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners. The final CAISO Payments Calendar will be posted on the CAISO Website, and will show for the period from 1 January to 31 December in the next succeeding year (both dates inclusive), the dates on which Settlement Statements shall be published by the CAISO and the Payment Dates on which the CAISO will pay the Participating TOs the Wheeling revenues allocated to them pursuant to Section 26.1.4.3.

**11.29.24.2 Distribution.**

Any CAISO Payments Calendar prepared pursuant to this Section 11.29.24 shall be distributed promptly to each Scheduling Coordinator, each Participating TO, the CAISO Bank, the CAISO Audit Committee and the CAISO Governing Board and shall be published on the CAISO Website.

**11.29.24.3 Final Calendar Binding.**

The final CAISO Payments Calendar shall be binding on the CAISO and on Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners.

**11.29.24.4 Calendar Content and Format.**

The CAISO may change the content or format of the CAISO Payments Calendar. The CAISO may also produce a summary outline of the Settlement and billing cycles.

**11.29.24.5 Update the Final Payments Calendar.**

If, as a result of an amendment to the CAISO Tariff approved by FERC, the final CAISO Payments Calendar developed in accordance with Section 11.29.24 is rendered inconsistent with the timing set forth in this CAISO Tariff, the CAISO shall update the final CAISO Payments Calendar to make it consistent with the CAISO Tariff as approved by FERC on the date on which the CAISO Tariff amendment goes into effect. The CAISO shall simultaneously send out a Market Notice to Market Participants that the final CAISO Payments Calendar has been revised.

**11.30 Auditing.**

All of the data, information, and estimates the CAISO uses to calculate Settlement amounts shall be subject to the auditing requirements of Section 22.1. The CAISO shall calculate these amounts using the software referred to in Section 11.29.5.4 except in cases of system breakdown when it shall apply the procedures set out in 11.29.10.1 (Emergency Procedures).

**11.31 HASP Intertie Schedules Decline Charges.**

The Decline Potential Charge – Imports shall apply to any HASP Intertie Schedule for an Energy import when the HASP Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver). The Decline Potential Charge – Exports shall apply to any HASP Intertie Schedule for an Energy export when the HASP Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver). For any Settlement Interval, the Decline Potential Charge – Imports or Decline Potential Charge – Exports, as the case may be, shall equal the MWh quantity of the import or export not delivered multiplied by the greater of \$10/MWh or fifty percent (50%) of the HASP Intertie LMP. The Decline Potential Charge – Imports and Decline Potential Charge – Exports will be calculated for each HASP Intertie Schedule that is not delivered, provided that only the Decline Monthly Charge – Imports and Decline Monthly Charge – Exports shall be payable by the Scheduling Coordinator as described in Section 11.31.1.

**11.31.1 Decline Monthly Charge – Imports.**

The Decline Monthly Charge – Imports shall be applied to each Scheduling Coordinator on the Settlement Statements issued for the last Trading Day of each Trading Month, and shall be the sum of the Scheduling Coordinator's Decline Potential Charges – Imports for each Settlement Interval during that Trading Month multiplied by a ratio. The ratio will represent the portion of the Scheduling Coordinator's declined HASP Intertie Schedules for Energy imports that exceed the applicable exemption threshold during the Trading Month.

- (a) The ratio will be calculated as follows:
  - (i) the Scheduling Coordinator's total MWh quantity of HASP Intertie Schedules for Energy imports that were not delivered during that Trading Month minus the applicable exemption threshold, divided by
  - (ii) the Scheduling Coordinator's total MWh quantity of HASP Intertie Schedules for Energy imports that were not delivered during the Trading Month.

- (b) The applicable exemption threshold is the greater of the following:
  - i) the Decline Threshold Quantity – Imports/Exports; or
  - ii) the total MWh quantity of HASP Intertie Schedules for Energy imports during the Trading Month multiplied by the Scheduling Coordinator's Decline Threshold Percentage – Imports/Exports.

Notwithstanding the foregoing, the Decline Monthly Charge – Imports shall equal zero if either:

- a) The percentage of the MWh quantity of HASP Intertie Schedules for Energy imports that the Scheduling Coordinator did not deliver during the Trading Month is less than the Decline Threshold Percentage – Imports/Exports; or
- b) The total MWh quantity of HASP Intertie Schedules for Energy imports that the Scheduling Coordinator did not deliver in the applicable Trading Month is less than the Decline Threshold Quantity – Imports/Exports.

**11.31.2 Decline Monthly Charge – Exports.**

The Decline Monthly Charge – Exports shall be applied to each Scheduling Coordinator on the Settlement Statements issued for the last Trading Day of each Trading Month, and shall be the sum of the Scheduling Coordinator's Decline Potential Charges – Exports for each Settlement Interval during that Trading Month multiplied by a ratio. The ratio will represent the portion of the Scheduling Coordinator's declined HASP Intertie Schedules for Energy exports that exceed the applicable exemption threshold during the Trading Month.

- (a) The ratio will be calculated as follows:
  - (i) the Scheduling Coordinator's total MWh quantity of HASP Intertie Schedules for Energy exports that were not delivered during that Trading Month minus the applicable exemption threshold, divided by
  - (ii) the Scheduling Coordinator's total MWh quantity of HASP Intertie Schedules for Energy exports that were not delivered during the Trading Month.
  
- (b) The applicable exemption threshold is the greater of the following:
  - (i) the Decline Threshold Quantity – Imports/Exports; or
  - (ii) the total MWh quantity of HASP Intertie Schedules for Energy exports during the Trading Month multiplied by the Scheduling Coordinator's Decline Threshold Percentage – Imports/Exports.

Notwithstanding the foregoing, the Decline Monthly Charge – Exports shall equal zero if either:

- a) The percentage of the MWh quantity of HASP Intertie Schedules for Energy exports that the Scheduling Coordinator did not deliver during the Trading Month is less than the Decline Threshold Percentage – Imports/Exports; or
- b) The total MWh quantity of HASP Intertie Schedules for Energy exports that the Scheduling Coordinator did not deliver in the applicable Trading Month is less than the Decline Threshold Quantity – Imports/Exports.



**11.31.3 Allocation of Import/Export Decline Monthly Charges Collected.**

On the Settlement Statements issued for the last Trading Day of the applicable Trading Month, each Scheduling Coordinator shall receive a credit for its share of the total of all Decline Monthly Charges – Imports and Decline Monthly Charges – Exports assessed to Scheduling Coordinators for the applicable Trading Month. The credits shall be allocated according to the proportion of each Scheduling Coordinator's Measured CAISO Demand to total Measured CAISO Demand for the CAISO Balancing Authority Area during the Trading Month.