

Note to Stakeholders: All draft changes are purely for discussion purposes only.

* Additional Incremental Changes are reflected in gray highlight *

* Previous Incremental Changes are reflected in yellow highlight *

NRG requests the CAISO explain why it is excluding Opportunity Cost adders in Section 11.5.6.1

et seq and the 10% adder in Section 39.7.1.6. Is it because the amount of compensation paid to

the RMR owner is fixed, and market revenues only serve to offset the fixed cost payments?

NRG comments are highlighted in blue.

6.5.3 Day-Ahead Market Communications

* * * * *

- **6.5.3.1.3** Between 5:00 a.m. and 10:00 a.m., the CAISO will provide feedback to Scheduling Coordinators about their validated ETC and TOR quantities, and calculated Default Energy Bids curves provided by Up Cost Bid curves for RMR Units, as provided by Independent Entities.
- **6.5.3.1.4** After the close of the DAM bidding at 10:00 a.m., the CAISO will send a message to the Scheduling Coordinators regarding the outcome of the Bid validation.
- **6.5.3.1.5** By 1:00 p.m., the CAISO will publish the result of the DAM and the resource will be flagged if it is being dispatched under its RMR Contract. Any such Dispatch shall be deemed an RMR Dispatch Notice under the RMR Contract.
- **6.5.3.1.6** After the results of the DAM are published by 1:00 p.m., the CAISO performs the Inter-SC Trade of Energy post-market validation and communicates the results back to the applicable Scheduling Coordinator.
- 6.5.3.1.7 The results of the Day-Ahead Market will be published by 1:00 p.m. and will include:
 - (a) Unit Commitment status for resources committed in the IFM;
 - (b) Day-Ahead Schedules and prices;
 - (c) Day-Ahead AS Awards and prices;
 - (d) RUC Awards and RUC Capacity and resource-specific RUC Prices;
 - (e) RUC Start-Up Instructions;



- (f) Start-Up Instructions resulting from the ELC Process;
- (g) Post-market summary of Day-Ahead and Real-Time Energy Schedules, and Ancillary Service Awards, RMR Dispatches, and CCR results of RMR Units;
- (h) Day-Ahead final resource Bid mitigation results; and
- (i) Day-Ahead finally qualified Load following capacity.

6.5.3.1.8 All Expected Energy results will be published at one (1) day after the Trading Day and will include post-market Energy accounting results for Settlement calculations.

* * * * *

6.5.5.1.2 Every five (5) minutes for Target T+10, the CAISO will send Dispatch Instructions via the secure communication system. The Dispatch Instruction will be flagged if a resource is being dispatched under its RMR Contract.

* * * * *

* * * * *

7.7.2 Market Participant Responsibilities in System Emergencies.

- (a) Response to CAISO Dispatch Instructions. All Market Participants shall respond immediately to CAISO Dispatch Instructions during System Emergencies.
- (b) Responsibilities of UDCs and MSS Operators During a System Emergency
 - (1) Compliance with Directions and Procedures. In the event of a System

 Emergency, UDCs and MSS Operators shall comply with all directions from the

 CAISO concerning the avoidance, management, and alleviation of the System

 Emergency and shall comply with all procedures concerning System

 Emergencies set forth in this CAISO Tariff, the Business Practice Manuals, and



- the Operating Procedures. and shall comply with all procedures concerning

 System Emergencies set forth in the CAISO Tariff, Business Practice Manuals

 and Operating Procedures.
- (2) Communications. During a System Emergency, the CAISO shall communicate with the UDCs and MSS Operators through their respective control centers and in accordance with procedures established in individual UDC and MSS Operating Agreements.
- (3) Notifications of End-Use Customers. Each UDC and MSS Operator will notify its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the CAISO pursuant to the provisions of the Electrical Emergency Plan.
- (c) Responsibilities of Generating Units, System Units and System Resources During

 System Emergencies
 - In General. All Generating Units and System Units that are owned or controlled by a Participating Generator are (without limitation to the CAISO's other rights under this CAISO Tariff) subject to control by the CAISO during a System Emergency and the CAISO shall have the authority to instruct a Participating Generator to bring its Generating Unit on-line or off-line or to increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the CAISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.
 - (2) **Prerequisite for Dispatch Instructions.** The CAISO shall, where reasonably practicable, use Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent, or threatened System Emergency prior to issuing instructions to a



Participating Generator under this subsection, except that the CAISO need not take such action if it determines such action is unlikely to be effective.

(3) RMR Condition 2 Units.

- (A) Prerequisite for Dispatch Instructions. The CAISO shall only instruct an RMR Unit whose owner has selected Condition 2 of its RMR Contract to start-up and change its output if the CAISO has reasonably used all other available and effective resources to prevent a threatened System Emergency without declaring that a System Emergency exists.
- (B) Compensation. If the CAISO dispatches a Condition 2 RMR Unit pursuant to subparagraph (A), it shall compensate that unit in accordance with Section 11.5.6.3 and allocate the costs in accordance with Section 11.5.6.3.2.
- Qualifying Facilities. A Scheduling Coordinator that represents a QF subject to an Existing QF Contract that is not subject to a PGA or Net Scheduled PGA will make reasonable efforts to require such QFs to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

* * * * * *

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 Available Payment

Scheduling Coordinators shall receive RUC Availability Payments for all eligible capacity awarded in the RUC process. Resource Adequacy Capacity and RMRRM Capacity and capacity from RMR Units

dispatched under its RMR Contract in the DAM are not eligible for RUC Availability Payments in the DAM.



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.

* * * *

11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.



11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance
Energy from Exceptional Dispatches used for System Emergency Conditions, for a
Market Disruption, to Mitigate Overgeneration or to Prevent or Relieve Imminent
System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, 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) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration condition; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price less Opportunity Costs; A1] or (c) the Default Energy Bid price less Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental



Resource as a result of an Exceptional Dispatch for System Emergency conditions, for a Market

Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System

Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price less

Opportunity Costs; (c) the Default Energy Bid price less Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System

Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System

Emergency

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, 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 FMM or RTD 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.

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency for RMR Resource is the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 and one of the following two costs: (1) the RMR Resource's Energy Bid Price less Opportunity Cost or (2) the Default Energy Bid Price less Opportunity Costs.

11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy 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 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by RMR Resource as a result of an Exceptional Dispatch for to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the applicable FMM or RTD LMP; (b) the Energy Bid price less Opportunity Costs; (c) the Default Energy Bid price less Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; 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 FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price less opportunity cost; (c) the Default Energy Bid price less Opportunity Costs. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; 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.

11.5.6.2.1 [NOT USED]

11.5.6.2.2 [NOT USED]



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 34.11.3 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 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD 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, The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 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 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following two costs: (1) the resource's Energy Bid Cost less Opportunity Costs; or (2) the Default Energy Bid cost less Opportunity Costs, 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 FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy 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 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource 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 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price less Opportunity Costs; (c) the Default Energy Bid price



less Opportunity Costs. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price less Opportunity Costs; (c) Default Energy Bid price less Opportunity Costs. All costs for decremental FMM Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement described in Sections 11.5.1.1 and 11.5.1.2.

* * * *

11.5.6.3 [Not Used] Settlement for Instructed Imbalance Energy 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

Energy Price (\$/MWh)=(AX3 + BX2 + CX + D) * P * E

X + Variable O&M RateEquation 1b

Energy Price (\$/MWh)=A * (B + CX + DeFX) * P * E

X + Variable O&M RateWhere:

- 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 in accordance with Section 11.5.4.2.
 - (b) Start-Up Costs for Condition 2 RMR Units providing service outside the RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

* * * *

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 Cost, IFM Transition Cost, IFM Minimum Load Cost,



IFM Pump Shut-Down Cost, IFM Energy Bid Cost, IFM Pumping Cost, and IFM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific IFM Bid Cost rules described in Section 11.8.2.1, the CAISO will apply the rules described in Section 11.8.1.3 to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost and Minimum Load Cost in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental IFM Start-Up, Minimum Load, and Transition Costs to provide Energy Scheduled in the Day-Ahead Schedule or awarded RUC or Ancillary Service capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the IFM rules specified in Section 31.3. For RMR Resources the CAISO shall calculate IFM Bid Cost as the algebraic sum of the IFM Start-Up Cost less Opportunity Costs and Major Maintenance Costs, IFM Transition Cost less Opportunity Costs, IFM Minimum Load Cost less Load Opportunity Costs and Major Maintenance Costs, IFM Energy Bid Cost less Opportunity Costs, 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 be equal to the Start-Up Costs submitted by the Scheduling Coordinator to the CAISO for the IFM divided by the number of Settlement Intervals within 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 CAISO will determine the IFM Start-Up Costs for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration. 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.



- (be) 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.
- 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.
- 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 when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO IFM Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether the resource's metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.
- 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 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.
- (fg) The Start- Up Costs for a Bid Cost Recovery Eligible Resource that is a Short Start Unit committed by the CAISO in the IFM and that further receives a Start-Up Instruction from the CAISO in the Real-Time Market to start within the same CAISO IFM Commitment Period, will be qualified for the CAISO IFM Commitment Period instead of being qualified for the CAISO RTM Commitment Period; and Start-Up Costs for subsequent Start-Ups



will be further qualified as specified in Section 11.8.4.1.1(h).

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, and as modified pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour subject to the rules described below.

- (a) For each Settlement Interval, only the IFM Minimum Load Cost in a CAISO IFMCommitment Period is eligible for Bid Cost Recovery.
- (b) 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: or (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.
- (c) If the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs less Minimum Load Opportunity Cost less Minimum Load Major Maintenance Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.
- (d) If a Multi-Stage Generating Resource is committed by the CAISO and receives a DayAhead Schedule and subsequently is committed by the CAISO to a lower MSG
 Configuration where its Minimum Load capacity as registered in the Master File in the
 Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's
 Minimum Load as registered in the Master File, the resource's IFM Minimum Load Costs
 are subject to the Real-Time Performance Metric for each case specified in Section



- 11.8.4.4. If the CAISO commits an RMR Multi-Stage Generating Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs less Minimum Load Opportunity Cost less Minimum Load Major Maintenance Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.
- (e) If the conditions in Sections 11.8.2.1.2 (c) and (d) do not apply, then the IFM Minimum Load Cost for any Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is determined to be Off during the applicable Settlement Interval. For the purposes of determining IFM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its (i) Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and (ii) the Tolerance Band, and the Metered Energy is greater than zero (0) MWh. Otherwise, such resource is determined to be Off.
- (f) For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that the IFM is the commitment period, then the calculation of the IFM Minimum Load Costs will depend on whether the IFM CAISO Committed MSG Configuration is determined to be On. If it is determined to be On, then, the IFM Minimum Load Costs will be based on the Minimum Load Costs of the IFM committed MSG Configuration. For the purposes of determining IFM Minimum Load Cost for a Multi-Stage Generating Resource, a Bid Cost Recovery Eligible Resource is determined to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its IFM MSG Configuration Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Tolerance Band, and the Metered Energy is greater than zero (0) MWh.
- (g) The IFM Minimum Load Costs calculation is subject to the Shut-Down State Variable and is disqualified as specified in Section 11.17.2.

Otherwise, such resource is determined to be Off.



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 that is preceded by a previous commitment by the IFM to pump, in which actual shut down occurs 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 through Meter Data). The IFM Pump Shut-Down Cost for an IFM Shut-Down period shall be zero if: (1) it is followed by an IFM or RFM Self-Commitment Period in generation mode; (2) the Shut-Down is due to an Outage reported through the CAISO's outage management system as described in Section 9; or (3) the Shut-Down is delayed by the RTM past the IFM Shut-Down period in question or cancelled by the RTM before the Shut-Down process has started.

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. The IFM Pumping 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.

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 used in the IFM, if any, from the



higher of the Bid Cost Recovery Eligible Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, 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 calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM Energy Bid Cost for RMR Resources, shall be the integral of the relevant Energy Bid used in the IFM less Opportunity Costs from the higher of the RMR Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, 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.

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 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. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7,



and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For any Settlement Interval, the IFM AS Bid Cost for an RMR Resource shall be Zero.

* * * *

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 Transition Cost, RUC Minimum Load Cost and RUC Availability Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RUC Bid Cost rules described in Section 11.8.3.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost, and Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental RUC Start-Up, Minimum Load Costs, and Transition Costs to provide RUC awarded capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RUC optimization rules in specified in Section 31.5. For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for an RMR Resource as the algebraic sum of the RUC Start-Up Cost less Opportunity Costs less Major Maintenance Costs, RUC Transition Cost less Opportunity Costs, RUC Minimum Load Cost less Opportunity Costs and Major Maintenance Costs.

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 CAISO will determine the RUC Start-Up Cost for a Multi-Stage



Generating Resource based on the MSG Configuration committed by the CAISO in RUC.

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.
- (be) 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.
- 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.
- (de) 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.
- The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates that the resource is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum



Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.

(fg) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO 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 Bid Cost Recovery Eligible Resource, as adjusted pursuant to Section 30.7.10.2, if applicable, 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; (21) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (32) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.1.7.2.

11.8.3.1.3 RUC Availability Bid Cost

The RUC Availability Bid Cost is calculated as 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. The CAISO will determine the RUC Availability Bid Cost based on the Multi-Stage Generating Resource Generating Unit level. The RUC Availability Bid Cost for a Bid Cost for an RMR Resource for a Settlement Interval is zero.

* * * *

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

Transition Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost and RTM AS

Bid Cost. For each Settlement Interval, the CAISO shall calculate RMT Bid Cost for each RMR

Resource, as the algebraic sum of the RTM Start-Up Cost less Opportunity Costs and Major Maintenance

Costs, RTM Minimum Load Cost less Opportunity Costs and Major Maintenance Costs, RTM Transition

Cost less Opportunity Costs, RTM Energy Bid Cost less Opportunity Costs, 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 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 CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RTM. 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.
- (be) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.11.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- 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.
- If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable RealTime 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.
- The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Interval that falls within the CAISO Real-Time Market Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section



- 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based on the MSG Configuration that the CAISO has committed in the Real-Time Market.
- 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 Real-Time Market Commitment Period.
- For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

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, as adjusted pursuant to Section 30.7.10.2, if applicable, 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 the 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; (23) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (34) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services



testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master Fille, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

11.8.4.1.3 RTM Pump Shut-Down Cost

The RTM Pump Shut-Down Cost for each Settlement Interval is the relevant Pump Shut-Down Cost submitted by the Scheduling Coordinator only for Pumped-Storage Hydro Units and Participating Load, divided by the number of Settlement Intervals in which such resource was committed by the Real-Time Market in a Trading Hour with scheduled pumping operation and in which an actual Shut-Down occurs and the resource does not actually operate in pumping mode or serve Load in that Settlement Interval (as detected through Meter Data). The RTM Pump Shut-Down Cost for a Real-Time Market Shut-Down event shall be zero if: (1) it is followed by a RTM Self-Commitment Period in generation mode or offline mode; or (2) the Shut-Down is due to an Outage reported through the CAISO's outage management system as described in Section 9.

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 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. The RTM Pumping Bid Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the 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; (23) the Bid Cost Recovery Eligible Resource is not actually in pumping mode in that Settlement Interval; (34) that Settlement Interval is included in an IFM or RUC Commitment Period; or (5) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing or precommercial operation testing.

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 RTD Instructed Imbalance Energy portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a rerated Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance



Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level. For RMR Resources, the CAISO will determine the RTM Energy Bid Cost based on the relevant Energy Bid less Opportunity Costs.

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). For a Multi-Stage Generating Resource the CAISO will determine the RTM AS Bid Cost based on the Generating Unit level. The Real-Time Market AS Bid Cost shall also include Mileage Bid Costs. For each Settlement Interval, the Real-Time Mileage Bid Cost shall be the product of Instructed Mileage associated with a Real-Time Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price divided by the number of Settlement Intervals for the Real-Time Market in a Trading Hour. The CAISO will determine and calculate the Real Time Market Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For an RMR Resource, the RTM AS Bid Cost shall be zero.

* * * *

11.10.1.4 Voltage Support



The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of any commitment costs, Instructed Imbalance Energy [payments?] [A2][A3] as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any the opportunity costs, if any, due to an Exceptional Dispatch that of limitsing Energy output to enable reactive energy production in response to a CAISO instruction. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM LMP or RTD LMP minus the higher of the Energy Bid price less Opportunity Costs or the Default Energy Bid price less Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts due for the Settlement Period.-FMM-Exceptional Dispatches or RTD-Exceptional Dispatches for incremental or decremental Energy needed for Voltage-Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be paid and settled in accordance with Section 11.5.6. RMR Units providing Voltage Support are not eligible for an opportunity cost pursuant to compensated in accordance with the RMR Contract rather than this Section 11.10.1.4.

* * * *

11.10.9.2 Rescission of Payments for Unavailable Ancillary Service Capacity

Payments to the Scheduling Coordinator representing the Generating Unit, Participating Load, Proxy

Demand Resource, 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, Proxy

Demand Resource, 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, Proxy Demand Resource, System Unit or System Resource has supplied Uninstructed Imbalance Energy in that Settlement Interval.

* * * *

11.13 Settlements and Billing of RMR Charges and Payments

11.13.1 Daily RMR Capacity Payment Objectives

The CAISO will calculate a daily RMR capacity payment for each RMR Resource based on the FERC-accepted RMR Contract for capacity and costs set forth in the applicable RMR Contract using the form of proform agreement effective as of the 2020 RMR Contract Year. 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 Daily Bid Cost Calculation

11.13.2.1 Facility Trust Account

For each Trading Day, the CAISO shall calculate IFM Bid Cost Recovery Amount described in Section 11.8.2, RUC Bid Cost Recovery Amount described in Section 11.8.3, and RTM Bid Cost Recovery

Amount described in Section 11.8.4 for each RMR Unit while subtracting Major Maintenance Cost and

Opportunity Costs, calculated pursuant to the CAISO Tariff and any Opportunity Costs pursuant to Article 6 of the RMR Agreement and Section of the CAISO Tariff 30.4.1.1.6. 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 at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire, and, at its option, may also establish and maintain a Settlement Account for transfers via ACH, 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 Daily Calculation of Additional Costs RMR Payments Calendar

For each Trading Day, the CAISO will calculate any additional Start-Up, Minimum Load, and Energy Costs associated with an RMR Resource responding to a CAISO-issued Exceptional Dispatch pursuant to Section 34.11. 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;



- 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 Daily RMR Settlement Information Provided by RMR Owners to the CAISO

Scheduling Coordinators on behalf of RMR Resources are entitled to payments for the Daily Bid Cost Calculation calculated pursuant to Section 11.13.2, plus any costs calculated pursuant to Section 11.13.3. The sum of any daily IFM Market Revenue in excess of IFM Bid Cost plus any daily RUC Market Revenues in excess of RUC Bid Cost plus any RTM Market Revenues in excess RTM Bid Costs will offset the Daily RMR Capacity payment calculated pursuant to Section 11.13.1. In addition, any FMM Exceptional Dispatch Settlement in excess FMM Exceptional Bid Cost less Opportunity Costs plus any RTD Exceptional Dispatch Settlement in excess RTD Exceptional Dispatch Cost less Opportunity Costs will offset the Daily RMR Capacity payment calculated pursuant to Section 11.13.1. 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 Daily RMR Coast Allocation Validation of RMR Charges and RMR Refunds

The CAISO shall allocate each RMR Resource settlement A4]to the relevant Scheduling Coordinators on behalf of Load-Serving Entities within the TAC Areas specified in the RMR Contract. These RMR Costs will be allocated to each Scheduling Coordinator in pro-ration of its Load-Serving Entities' TAC Area metered Demand to total TAC Area metered Demand. 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 Fedwire transfer instructions or, if applicable, ACH 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 ewed 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 Fedwire or, if chosen by the RMR Owner or Responsible Utility, via ACH. 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 by Fedwire transfer or ACH.

11.13.7.3 Payment by RMR Owners and Responsible Utilities.

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

Subject to Section 41.6, each Responsible Utility shall ensure that the amount shown on the relevant CAISO Invoice as payable by the Responsible Utility shall be received into the RMR Owner Facility Trust Account 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 has not been received, 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 11.29.10.5 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.



* * * *

11.18.6 Submission of Emissions Cost Invoices by RMR Owner

Scheduling Coordinators on behalf of RMR Resources for Generators eligible for Bid Cost Recovery that incur Emissions variable Ccosts during a CAISO Commitment Period that are not recoverable pursuant the CAISO market settlement 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.

* * * *

11.29.24 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 Actual Settlement

 Quality Meter Data or Scheduling Coordinator Estimated 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 T+3B and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (c) The date on which the CAISO will issue the Recalculation Settlement Statements T+12B;



- T+55B, T+9M, T+18M, T+33M, and T+36M, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (d) The dates 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 Recalculation Settlement Statements T+12B, T+55B, T+9M, T+18M and T+33M.
- (e) The date and time by which CAISO Debtors are required to have made payments into theCAISO Clearing Account in payment of Invoices for that Trading Day;
- (f) The dates and times on which the CAISO Clearing Account will remit payments to the CAISO Creditors of amounts owing to them for that Trading Day; and
- (g) In relation to Reliability Must-Run Charges and RMR Payments compensation, the details are set out in Section 11.13.3 and 41 of the CAISO Tariff.

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 that 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 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 January 1 to December 31 in the next succeeding year (both dates inclusive), the dates that Settlement Statements will be published by the CAISO and the Payment Dates that the CAISO will pay the Participating TOs the Wheeling revenues allocated to them pursuant to Section 26.1.4.3.

* * * *

12.7 [Not Used] Credit Obligation of New Responsible Utilities for RMR Costs

If a Responsible Utility first executed the TCA after April 1, 1998 (a New Responsible Utility) and if:



- (i) the senior unsecured debt of the New Responsible Utility is rated or becomes rated at less than A- from Standard & Poor's ("S&P") or A3 from Moody's Investment Services ("Moody's"), and
- (ii) Such ratings do not improve to A- or better from S&P or A3 or better from Moody's within 60 days,

the New Responsible Utility shall issue and confirm to the CAISO an irrevocable and unconditional letter of credit in an amount equal to three times the highest monthly payment invoiced by the CAISO to the New Responsible Utility (or the prior Responsible Utility) in connection with services under Reliability Must-Run Contracts in the last 3 months for which invoices have been issued. The letter of credit must be issued by a bank or other financial institution whose senior unsecured debt rating is not less than A from S&P and A2 from Moody's. The letter of credit shall be in such form as the CAISO may reasonably require from time to time by notice to the New Responsible Utility and shall authorize the CAISO or the RMR Owner to draw on the letter of credit for deposit solely into the RMR Owner Facility Trust Account in an amount equal to any amount due and not paid by the Responsible Utility under the CAISO Invoice. The security provided by the New Responsible Utility pursuant to this Section is intended to cover the New Responsible Utility's outstanding liability for payments it is liable to make to the CAISO under this Section, including monthly payments, any reimbursement for capital improvement, termination fees and any other payments to which the CAISO is liable under Reliability Must-Run Contracts.

* * * * *

31.2 Day-Ahead MPM Process

After the Market Close of the DAM, and after the CAISO has validated the Bids pursuant to Section 30.7, the CAISO will perform the MPM process, which is a single market run that occurs prior to the IFM Market Clearing run. The Day-Ahead MPM process determines which Bids need to be mitigated using the applicable Default Energy Bids in the IFM and when RMR Proxy Bids should be considered in the IFM for RMR Units. The Day-Ahead MPM process optimizes resources to meet Demand reflected in Demand



Bids, including Export Bids and Virtual Demand Bids, and to procure one hundred (100) percent of Ancillary Services requirements based on Supply Bids submitted to the DAM. Virtual Bids and Bids from Demand Response Resources, Participating Load, and Non-Generator Resources are considered in the MPM process, but are not subject to Bid mitigation. Bids from Participating Load resources that are not subject to Bid mitigation will also be considered in the MPM process. Bids from resources comprised of multiple technologies that include Non-Generator Resources will remain to be subject to all applicable market power mitigation under the CAISO Tariff, including Local Market Power Mitigation. The mitigated or unmitigated Bids and RMR Proxy Bids identified in the MPM process for all resources that cleared in the MPM are then passed to the IFM. The CAISO performs the MPM process for the DAM for the twenty-four (24) hours of the targeted Trading Day.

* * * :

31.2.2 [Not Used] Bid Mitigation for RMR Units

For purposes of the MPM process, Condition 1 RMR Units will be treated like non-RMR Units with respect to any capacity in excess of the Maximum Net Dependable Capacity specified in the RMR Contract. For up to the Maximum Net Dependable Capacity specified in the RMR Contract for Condition 1 RMR Units, the portion of the market Bid at and below the Competitive LMP at the RMR Unit's Location will be retained in the IFM. To the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero (0), and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, those Bid prices above the Competitive LMP will be set to the higher of the RMR Proxy Bid or the Competitive LMP. If any Bid prices are set to the level of the RMR Proxy Bid through this process, any incremental dispatch of the resource based on the RMR Proxy Bid will be flagged as an RMR Dispatch in the Day-Ahead Schedule and the resource shall be considered to have received a Dispatch Notice pursuant to the RMR Contract. Condition 1 RMR Units that have not submitted Bids and Condition 2 RMR Units will not be considered in the MPM unless the CAISO issues a manual RMR Dispatch, in which



case the dispatch level specified in the manual RMR Dispatch will be protected in the MPM. If a Condition 2 RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity under the RMR Contract will be considered in the MPM. Any incremental dispatch based on RMR Proxy Bids will be flagged as an RMR Dispatch in the Day-Ahead Schedule and the resource shall be considered to have received a Dispatch Notice pursuant to the RMR Contract. For a Condition 1 RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero (0), and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, the resource will be flagged as an RMR dispatch in the Day-Ahead Market if the resource has a Day-Ahead Schedule at a level higher than the dispatch level determined by the Competitive LMP.

31.2.3 Bid Mitigation for Non-RMR Units

If the non-competitive Congestion component of an LMP calculated in an MPM process is greater than zero (0), then any resource at that Location that is dispatched in that MPM process is subject to Local Market Power Mitigation. Bids on behalf of any such resource, to the extent that they exceed the Competitive LMP at the resource's Location, will be mitigated to the higher of the resource's Default Energy Bid, as specified in Section 39, or the Competitive LMP at the resource's Location. To the extent a Multi-Stage Generating Resource is dispatched in the MPM process and the non-competitive Congestion component of the LMP calculated at the Multi-Stage Generating Resource's Location is greater than zero, for purposes of mitigation, all the MSG Configurations will be mitigated similarly and the CAISO will evaluate all submitted Energy Bids for all MSG Configurations based on the relevant Default Energy Bids for the applicable MSG Configuration. The CAISO will calculate the Default Energy Bids for Multi-Stage Generating Resources by submitted MSG Configuration. Any market Bids equal to or less than the Competitive LMP will be retained in the IFM.

* * * * *



31.3.1.4 Eligibility to Set the Day-Ahead LMP

All Generating Units, Participating Loads, non-Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Resources, System Units, or Constrained Output Generators subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates, MSG Transitions, Forbidden Operating Regions, or other temporal constraints are eligible to set the LMP, provided that (a) the Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the Participating Load, non-Participating Load, Proxy Demand Resources, Reliability Demand Response Resources, non-Resource-Specific System Resource, or System Unit is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, (c) the resource is constrained by a boundary of a Forbidden Operating Region or is Ramping through a Forbidden Operating Region, or (d) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A Constrained Output Generator will be eligible to set the hourly LMP if any portion of its Energy is necessary to serve Demand.

* * * * *

31.5.1.2 RUC Availability Bids

Scheduling Coordinators may only submit RUC Availability Bids for capacity (above the Minimum Load as registered in the Master File) for which they are also submitting an Energy Bid (other than a Virtual Bid) to participate in the IFM. Any available Resource Adequacy Capacity, RMR Capacity[A5], and CPM Capacity will be optimized at \$0/MW in RUC. For Multi-Stage Generating Resources that fail to submit a \$0/MW per hour for the Resource Adequacy Capacity, the CAISO will insert the \$0/MW per hour for the



resource's Resource Adequacy Capacity at the MSG Configuration level up to the minimum of the Resource Adequacy Capacity or the PMax of the MSG Configuration. Scheduling Coordinators may submit non-zero RUC Availability Bids for the portion of a resource's capacity that is not Resource Adequacy Capacity or CPM Capacity.

31.5.1.3 [Not Used] RMR Generation Resources

If a resource is determined to have an RMR Generation requirement for any Trading Hour of the next day, either by the MPM process or by the CAISO through a manual RMR Dispatch Notice, and if any portion of the RMR Generation requirement has not been cleared in the IFM, the entire portion of the RMR Generation requirement will be represented as a RMR Generation Self-Schedule in the RUC.

31.5.1.4 Eligibility to Set the RUC Price

All resources that are eligible for RUC participation as described in Section 31.5.1.1 with RUC Bids that are unconstrained due to Ramp Rates or other temporal constraints, including MSG Transitions, are eligible to set the RUC Price, provided that (a) the RUC Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the eligible resource other than a Generating Unit or Resource-Specific System Resource is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch or (c) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the RUC Price. Resources identified as MSS Load following resources are not eligible to set the RUC Price.

* * * * * *

31.5.6 Eligibility for Compensation

All RUC Capacity is eligible for the RUC Availability Payment except for: (i) RUC Capacity from RMR



CapacityUnits that has been designated as RMR Dispatch and included in RUC as a Self-Schedule; (ii)

Resource Adequacy Capacity; and (iii) RUC Capacity that corresponds to the resource's Minimum Load, which is compensated through the Bid Cost Recovery as described in Section 11.8. Resources not committed in the IFM that are committed in RUC, including RMR Units that were not designated for RMR Dispatches and Resource Adequacy Resources, are also eligible for RUC Cost Compensation, which includes Start-Up, Transition Costs, and Minimum Load Cost compensation, and Bid Cost Recovery, subject to the resource actually following its Dispatch Instructions as verified by the CAISO pursuant to procedures set forth in the Business Practice Manuals.

34.1.5.3 Hour-Ahead Scheduling Process MPM

For HASP mitigation, a single mitigated Bid for the entire Trading Hour is calculated using the minimum Bid price of the four mitigated Bid curves at each Bid quantity level. For RMR Units, RMR Proxy Bids resulting from the MPM process will be utilized in all RTM optimization processes for each Trading Hour.

34.1.5.4 Real-Time Dispatch MPM

The RTD MPM process produces results for each five (5) minute interval of a Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each five (5) minute interval, using the methodology set forth in Sections 31.2.2 and 31.2.3 above. The input Bids to the MPM for the first of the three (3) RTD runs corresponding to a particular RTUC interval are the final Bids as mitigated pursuant to Section 34.1.5.2 for the RTD intervals corresponding to the applicable financially binding Fifteen Minute Market run. If a Bid is mitigated in the MPM process for the first five (5) minute interval for an applicable fifteen-minute (15) RTUC interval, the mitigated Bid will be utilized for all the corresponding RTD intervals in that fifteen-minute (15) RTUC interval. If a Bid is not mitigated in the first five (5) minute interval, the CAISO will still mitigate that Bid in subsequent five (5) minute intervals of the applicable RTUC interval if the MPM runs for the subsequent intervals determine that mitigation is needed. For each fifteen-minute (15) RTUC interval, a bid that is mitigated is maintained through the rest of the RTD intervals corresponding to the same RTUC interval as the original mitigated RTD interval. The input Bids to the RTD MPM process for



the second of the three (3) RTD intervals corresponding to the RTUC interval will be the final mitigated bids used in the first RTD intervals. The input bids to the RTD MPM mitigation process for the third of the three RTD interval corresponding to the particular RTUC interval will be the final mitigated Bids used in the second RTD interval.

34.1.5.5 [Not Used] Reliability Must Run Resources

For a Condition 1 RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.2 above. If a Condition 2 RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 1 and Condition 2 RMR Units, when mitigation is triggered, a RMR Proxy Bid is calculated using the same methodology described above for non-RMR Units. For a Condition 1 RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, the resource will be flagged as an RMR dispatch if it is dispatched at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 RMR Units may be issued manual RMR dispatches at any time to address local reliability needs or to resolve non-competitive constraints.

* * * * *

34.10 Dispatch of Energy from Ancillary Services

The CAISO may issue Dispatch Instructions to Participating Generators, Participating Loads, Proxy

Demand Resources, (via communication with the Scheduling Coordinators of Demand Response

Providers) System Units and System Resources contracted to provide Ancillary Services (either procured through the CAISO Markets, Self-Provided by Scheduling Coordinators, or through Exceptional



Dispatchdispatched in accordance with the RMR Contract) for the Supply of Energy. During normal operating conditions, the CAISO may Dispatch those Participating Generators, Participating Loads, Proxy Demand Resources, System Units and System Resources that have contracted to provide Spinning and Non-Spinning Reserve, except for those reserves designated as Contingency Only, in conjunction with the normal Dispatch of Energy. Contingency Only reserves are Operating Reserve capacity that have been designated, either by the Scheduling Coordinator or the CAISO, as available to supply Energy in the Real-Time only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency. During normal operating conditions, the CAISO may also elect to designate any reserve not previously identified as Contingency Only by Scheduling Coordinator as Contingency Only reserves. In the event of an unplanned Outage, a Contingency or a threatened or actual System Emergency, the CAISO may dispatch Contingency Only reserves. If Contingency Only reserves are dispatched through the RTCD, which as described in Section 34.5.2 only Dispatches in the event of a Contingency, such Dispatch and pricing will be based on the original Energy Bids. If Contingency Only reserves are dispatched in response to a System Emergency that has occurred because the CAISO has run out of Economic Bids when no Contingency event has occurred, the RTED will Dispatch such Contingency Only reserves using maximum Bid prices as provided in Section 39.6.1 as the Energy Bids for such reserves and will set prices accordingly. If a Participating Generator, Participating Load, System Unit or System Resource that is supplying Operating Reserve is dispatched to provide Energy, the CAISO shall replace the Operating Reserve as necessary to maintain NERC and WECC reliability standards, including any requirements of the NRC. If the CAISO uses Operating Reserve to meet Real-Time Energy requirements, and if the CAISO needs Operating Reserves to satisfy NERC and WECC reliability standards, including any requirements of the NRC, the CAISO shall restore the Operating Reserves to the extent necessary to meet NERC and WECC reliability standards, including any requirements of the NRC through either the procurement of additional Operating Reserve in the RTM or the Dispatch of other Energy Bids in SCED to allow the resources that were providing Energy from the Operating Reserve to return to their Dispatch Operating Target. The Energy Bid Curve is not used by the AGC system when Dispatching Energy from Regulation. For Regulation Up capacity, the upper portion of



the resource capacity from its Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve. For a resource providing Regulation Up or Operating Reserves the remaining Energy Bid Curve shall be allocated to any RTM AS Awards in the following order from higher to lower capacity where applicable: (a) Spinning Reserve; and (b) Non-Spinning Reserve. For resources providing Regulation Up, the applicable upper Regulation Limit shall be used as the basis of allocation if it is lower than the upper portion of the Energy Bid Curve. The remaining portion of the Energy Bid Curve, if there is any, shall constitute a Bid for RTM Energy. For Regulation Down capacity, the lower portion of the resource capacity from its applicable Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve.

* * * * *

34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

* * * * * *

34.12.2 Decreasing Supply

The scheduling priorities as defined in the RTM optimization to meet the need for decreasing Supply as reflected from higher to lower priority are as follows:



- (a) Non-Participating Load increase;
- (b) Reliability Must Run (RMR) Schedule (Day-Ahead manual pre-dispatch or Manual RMR

 Dispatches or Dispatches that are flagged as RMR Dispatches following the MPM-RRD

 process):
- (c) Transmission Ownership Right (TOR) Self-Schedule;
- (d) Existing Rights (ETC) Self-Schedule;
- (e) Regulatory Must-Run and Regulatory Must-Take (RMT) Self-Schedule;
- (f) Participating Load increase;
- (g) Day-Ahead Supply Schedule; and
- (h) Self-Schedule Hourly Block

These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures as necessary to ensure reliable operations.

* * * * *

39.7.1.6 Default Energy Bids for RMR Units

The available capacity in excess of the Maximum Net Dependable Capacity (MNDC) specified in the RMR Contract up to the maximum generation capacity (PMax) is subject to Local Market Power Mitigation. The Scheduling Coordinator for the RMR Unit must rank order its preferences between the Variable Cost Option, the LMP Option, and the Negotiated Rate Option, which shall be the default rank order if no rank order is specified by the Scheduling Coordinator. These preferences will be used to determine the Default Energy Bids for the capacity for each RMR Unitbetween the MNDC and PMax.

RMR Proxy Bids for RMR Units based on contractually specified costs are used in lieu of Default Energy Bids for the contractual RMR Unit capacity between the minimum generating capacity (PMin) and the MNDC. The CAISO or Independent Entity will concatenate these two calculation methodologies (for calculating RMR Proxy Bids and Default Energy Bids for RMR Units) and will adjust them for monotonicity without lowering any price on either curve to create a single Energy Bid Curve to be used in the MPM



eligible to receive the ten percent adder under the Variable Cost Option pursuant to Section 39.7.1.1 or ather [A6] Bid Adder pursuant to Section 39.8 for contractual RMR Unit capacity between PMin and MNDC.

* * * * *

39.8.1 Bid Adder Eligibility Criteria

To receive a Bid Adder, a Generating Unit must: (i) have a Mitigation Frequency that is greater than eighty (80) percent in the previous twelve (12) months; and (ii) must not have a contract to be a Resource Adequacy Resource for its entire Net Qualifying Capacity, or be designated under the CPM for its entire Eligible Capacity, or be subject to an obligation to make capacity available under this CAISO Tariff. If a Generating Unit is designated under the CPM for a portion of its Eligible Capacity, the provisions of this section apply only to the portion of the capacity not designated. Scheduling Coordinators for Generating Units seeking to receive Bid Adders must further agree to be subject to the Frequently Mitigated Unit option for a Default Energy Bid. Run hours are those hours during which a Generating Unit has positive metered output. Generating Units that received RMR Dispatches and/or incremental Bids dispatched out of economic merit order to manage local Congestion in an hour prior to the effective date of this Section will have that hour counted as a mitigated hour in their Mitigation Frequency. After the first twelve (12) months from the effective date of this Section, the Mitigation Frequency will be based entirely on a Generating Unit being mitigated under the MPM procedures in Sections 31 and 33.

* * * *

41. Procurement of RMR Generation Resources

41.1 Procurement of Reliability Must-Run Generation-Resources by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a resource owner Generator



which that operates a Generating Unit or other resource and/or is capable of providing a reliability service, giving the CAISO the right to call on the Generating Unit or resource Generator to generate Energy, and/or provide Ancillary Services, Black Start, Voltage Support or similar or other reliability services to maintain, only as provided in this Section 41.1, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero power plant to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the CAISO Controlled Grid-is maintained, including meeting system, local, and flexible capacity reliability [A7]needs.

41.2 Designation of Generating Unit-Resources as Reliability Must-Run Unit Resources

The CAISO will, subject to any existing power purchase contracts of a Generating Unit, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit as a Reliability Must-Run Unit. The CAISO will also have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a resource for Reliability Must-Run service that is needed to provide Ancillary Services or other reliability services. A Generating Unit-resource so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run service Generation for negotiation with the CAISO. A proforma Reliability Must-Run Contract applicable to resources that receive RMR designations is attached as Appendix G. Such rates shall be authorized by FERC. or the Local Regulatory Authority, whichever authority is applicable.

41.2.1 Formal Withdrawal Notice Applicable to Generating Units

If an owner of a Generating Unit plans to withdraw it from the CAISO markets, it [A8]must submit a formal written notice to the CAISO indicating its intent to retire or mothball the unit. The written notice must include a signed affidavit by an executive officer of the entity that owns or controls the company who has the legal authority to bind the company attesting that it intends to take the Generating Unit out of service by retiring or mothballing it. The notice and affidavit will require the unit owner to certify as follows:

[] It is retiring the Generating Unit in accordance with the BPM for Generator Management effective [month], [day], [year]. The Generating Unit does not have a resource adequacy contract [A9]for [check one or both] the current year and/or the upcoming



year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to retire is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for resource adequacy purposes, or the Generating Unit obtains some other contract.

It is retiring the Generating Unit in accordance with the BPM for Generator Management effective
[month], [day], [year]. The Generating Unit does not have a resource
adequacy contract for- [check one or both] the current year and/or the upcoming
year, it is retiring the Generating Unit for reasons other than it is uneconomic for the unit to
remain in service during such year(s).
Owner is retiring the Generating Unit for the following reason(s) (state with specificity the reason
for retiring the unit):
The decision to retire the Generating Unit is definite. Note: CAISO may designate the
Generating Unitresource [A10] for RMR service if needed for reliability.
State with specificity any legal, regulatory, or other reason(s) that might present an obstacle to
providing RMR service:
It is mothballing the Generating Unit effective [month], [day],
[year]. The Generating Unit does not have a resource adequacy contract A11] for [check one or
both] the current year and/orthe upcoming year, it is uneconomic for the
Generating Unit to remain in service for such year(s), and the decision to retire is definite unless
the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party,
a third-party contracts with the Generating Unit for resource adequacy [A12] purposes or the
Generating Unit obtains some other contract.



contracted with the Generating Unit for resource adequacy purposes, or the Generating Unit obtained some other contract (this must occur before the effective date of the retirement).

State with specificity the reason for rescinding the retirement notice:

It is terminating the Generating Unit's mothball status because the CAISO procured the

Generating Unit, the Generating Unit was sold to an unaffiliated third-party, a third-party

contracted with the Generating Unit for resource adequacy purposes, the Generating Unit

obtained some other contract, or it is economic for the Generating Unit to return to service.

State with specificity the reason for returning from mothball status: [A13]

Failure to provide thisa complete and timely notice may result in the CAISO requesting submission of a revised notice with deficiencies cured. rejecting the request and not studying the need for the Generating Unit under Section 41.3. The Generating Unit may be required to submit a revised notice with deficiencies cured as identified by the CAISO. A form of notice and affidavit will be included in the Business Practice Manual.

41.2.2 Processing Retirement/Mothball Notices

The CAISO will process retirement/mothball notices as follows:

Adequacy Compliance Year and is planning to retire or mothball its Generating Unit, the unit owner may submit its written notice at any time during the year, and the CAISO will inform the owner of the study results after it completes the study in Section 41.3. If the owner of a non-Resource Adequacy ResourceGenerating Unit desires an earlier determination of need, it can submit its written notice to the CAISO before the 90-day deadline specified in the Participating Generator Agreement for terminating the agreement or removing a resource from the agreement. Under Section 41.3, the CAISO will study whether the Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year or the by the end of the upcoming Resource Adequacy



Compliance Year. If the CAISO finds that the a retiring Generating Unit is needed for reliability in either of these timeframes, the CAISO may designate grant the Generating Unit as needed for RMR service. designation for the remainder of the current Resource Adequacy Compliance Year. If the CAISO finds a mothballing Generating Unit is needed for reliability in the current year, the CAISO may grant the Generating Unit an RMR designation for the remainder of the current Resource Adequacy Compliance Year.

designation for the remainder of the current Resource Adequacy Compliance Year. If the Generating Unit is not currently a Resource Adequacy Resource in the currentupcoming Resource Adequacy Compliance Year and the unit owner is planning to retire or mothball its Generating Unit, the unit owner may submit a notice by the deadline established in the applicable Business Practice Manual, which will be in the first quarter of the current Resource Adequacy Compliance Year. The CAISO will study the Generating Unit and post the results of the reliability study to its website by the deadline established in the applicable Business Practice Manual, which will be by the end of the second quarter of the current Resource Adequacy Compliance Year. The CAISO will allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and will allow LSEs the opportunity to procure capacity from the needed Generating Unit. Generating Units that are not Resource Adequacy Resources in the current Resource Adequacy Compliance Year may also submit a notice to be studied under this sub-section and the prior sub-section. For notices submitted pursuant to this section, tThe CAISO will not commence the RMR procurement process for any Generating Unit the CAISO finds to be needed until September 1. Any new RMR designations identified in the CAISO's reliability study report will be conditional until the deadline for LSEs to submit their annual Resource Adequacy showings to the CAISO passes so LSEs have an opportunity to procure the Generating Unit. Under Section 41.3, the CAISO will study whether the Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year and may study whether the Generating Unit is needed for reliability by the end of the following Resource Adequacy Compliance



Year. If the CAISO finds that the Generating Unit is need for reliability in either the upcoming Resource Adequacy Compliance Year or by the end of the following Resource Adequacy Compliance Year, the CAISO may grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year. If the CAISO finds a mothballing Generating Unit is needed for reliability in the current year, the CAISO may [A14]grant the Generating Unit an RMR designation for the remainder of the current Resource Adequacy Compliance Year.

- (e) If the unit owner of a Resource Adequacy Resource provides notice after the deadline specified in the applicable Business Practice Manual, the CAISO will inform the resource of the study results 60 days prior to expiration of the Resource Adequacy contract or 90 days from the date of the notice, whichever is later.
- (cd) If multiple Generating Units file the requisite notice with the CAISO and can meet the reliability need identified by the CAISO, but the CAISO does not need all of the Generating Units to meet the reliability need, the CAISO will ask each unit owner to submit a proposed annual cost-based RMR price for its Generating Unit plusand a total cost for Planned Capital Items pursuant to the rate schedules including in the pro forma RMR Contract. It the Generating Unit that would receive an RMR Contract -based on cost-effectiveness criteria faces use limitations such that the unit, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need identified by the CAISO, then the CAISO may at its reasonable discretion, and giving due regard for meeting cost-effectiveness considerations, instead grant the designation to another unit that fully meets the reliability need. In exercising this discretion, the CAISO will not unduly discriminative against units with use-limitations. If more than one Generating Unit remain that can meet such criteria, then the CAISO will determine which Generating Unit(s) receives an RMR designation by selecting the Generating Unit(s) with the lowest combined proposed costs for RMR service including Planned Capital Items for the next RMR Contract Year provided that if the total costs of two or more Generating



Units are within 10% of each other, then the CAISO will grant the designation in its discretion based on the following criteria: (1) relative effectiveness of the Generating Units in meeting local and/or zonal constraints or other CAISO system needs, including flexible capacity needs; and (2) relative operating characteristics of the Generating Units including dispatch ability, ramp rate, and load following capability. A designated Generating Unit will not be able to propose to FERC – and will not be compensated by the CAISO for any costs higher than – its proposed annual fixed cost revenue requirementcost-based RMR price, including any Planned Capital Items provided to the CAISO, respectively. The RMR Owner will still be allowed to recover any costs for items not covered in its proposal, as permitted by the RMR Contract.

41.3 Reliability Studies and Determination of RMR Units Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria, including system, local, and flexible capacity reliability needs. The CAISO will then determine which Generating Units resources it requires to continue to be Reliability Must-Run Units, which Generating Units resources it no longer requires to be Reliability Must-Run Units and which Generating Units resources it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO.

When making this determination, the CAISO will be evaluating whether there are any more cost-effective options that are available or may be made available in order to avoid the need for a Reliability Must-Run Contract. None of the Generating Units owned by Local Publicly Owned Electric Utilities are planned to be designated as Reliability Must-Run Units by the CAISO as of the CAISO Operations Date but are expected to be operated in such a way as to maintain the safe and reliable operation of the interconnected transmission system comprising the CAISO Balancing Authority Area. However, in the future, Local Publicly Owned Electric Utilities may contract with the CAISO to provide Reliability Must-Run Generation.

41.4 [Not Used] Reliability Must-Run Contracts

A pro forma of the Reliability Must-Run Contract is attached as Appendix G. From the CAISO Operations



Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, transfer any such unit to one of the alternative forms of conditions under specific circumstances. The CAISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the CAISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The CAISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the CAISO Controlled Grid.

41.5 RMR Dispatch

41.5.1 Day-Ahead and RTM RMR Dispatch

Reliability Must Run units will be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed under Section 40.6 or Section 40.10.6, as applicable to specific types of Resource Adequacy Resources identified in Resource Adequacy Plans and Flexible RA Capacity resources identified in Resource Flexible RA Capacity Plans. Reliability Must-Run will meet the Day-Ahead availability requirements specified in in Section 40.6, the Real-Time availability requirements specified in Section 40.6.2, and the Day-Ahead and Real-Time availability requirements specified under Section 40.10.6.1 for the highest Flexible Capacity Category for which the unit qualifies under Section 40.10.3. Also in accordance with those requirements, Reliability Must-Run Units that meet the definition of Short Start Units, will be obligated to meet the availability requirements of Section 40.6.2, Reliability Must-Run Units that meet the definition of Long Star Units will have the rights and obligations specified in Section 40.6.2. If the CAISO has not received an Economic Bid or Self-Schedule for capacity from a Reliability Must-Run Unit, the CAISO will utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8. In addition to Energy Bids, Reliability Must-Run Units will submit Ancillary Service Bids for their capacity to the extent the unit is certified to provide Ancillary Service. RMR units will be treated as Listed Local RA Capacity for purposes of substitution under the tariff. RMR Dispatches will be determined in accordance with the RMR Contract, the MPM process addressed in Sections 31 and 33 and through manual RMR Dispatch Notices to meet Applicable Reliability Criteria.



The CAISO will notify Scheduling Coordinators for RMR Units of the amount and time of Energy requirements from specific RMR Units in the Trading Day prior to or at the same time as the Day-Ahead Schedules and AS and RUC Awards are published, to the extent that the CAISO is aware of such requirements, through an RMR Dispatch Notice or flagged RMR Dispatch in the IFM Day-Ahead Schedule. The CAISO may also issue RMR Dispatch Notices after Market Close of the DAM and through Dispatch Instructions flagged as RMR Dispatches in the Real-Time Market.

The Energy to be delivered for each Trading Hour pursuant to the RMR Dispatch Notice an RMR

Dispatch in the IFM or Real-Time shall be referred to as the RMR Energy. Scheduling Coordinators may submit Bids in the DAM or the RTM for RMR Units operating under Condition 1 of the RMR Contract in accordance with the bidding rules applicable to non-RMR Units. A Bid submitted in the DAM or the RTM for a Condition 1 RMR Unit shall be deemed to be a notice of intent to substitute a market transaction for the amount of MWh specified in each Bid for each Trading Hour pursuant to Section 5.2 of the RMR

Contract. In the event the CAISO issues an RMR Dispatch Notice or an RMR Dispatch in the IFM or Real-Time Market for any Trading Hour, any MWh quantities cleared through the MPM shall be considered as a market transaction in accordance with the RMR Contract. RMR Units operating as Condition 2 RMR

Units may not submit Bids until and unless the CAISO issues an RMR Dispatch Notice or issues an RMR

Dispatch in the IFM, in which case a Condition 2 RMR Unit shall submit Bids in accordance with the RMR

Contract in the next available market for the Trading Hours specified in the RMR Dispatch Notice or Day-Ahead Schedule.

41.5.1.1 Must-Offer Report

No later than 60 days after the end of the month, the CAISO will prepare and provide to the Department of Market Monitoring a report detailing each RMR resource's performance relative to the must-offer obligations applicable to the resource.

41.5.2 RMR Payments

RMR Units operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch

Notice will be paid in accordance with the RMR Contract and Section 11.13.

41.5.3 RMR Units and Provisions of Ancillary Services Requirements and other Reliability



Services

The CAISO may call upon RMR Units-resources for Ancillary Services or any other reliability service that the RMR resource is contracted to provide in any amounts and at any time that the CAISO has determined is necessary at any time after the issuance of Day-Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC-imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in RTM if, and only if: (i) Bids in the RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that the Scheduling Coordinators were not attempting to exercise market power.

* * * * *

41.7 Individualized Non-Availability Charges and Availability Incentive Payments Responsibility



for Reliability Must-Run Charge

Except as otherwise provided in Section 41.8, the costs incurred by the CAISO under each Reliability Must-Run Contract shall be payable to the CAISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO. Where costs incurred by the CAISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the CAISO will file the allocation under Section 205 of the Federal Power Act. The provisions of Section 40.9 applicable to resources providing local and/or system Resource Adequacy Capacity and Flexible RA Capacity apply to Reliability Must-Run Units. Reliability Must-Run Units will face a resource-specific Availability Incentive Mechanism Price under Section 40.9.6. The resourcespecific price will be the higher of: (a) the price that the resource is being paid by the CAISO (\$/kWmonth) under the Reliability Must-Run Contract. ; and (b) the Resource Adequacy Availability Incentive Mechanism rate. Availability Incentive Mechanism payments to Reliability Must-Run Units will be capped at the general Availability Incentive Mechanism rate. Reliability Must-Run Units can provide RA Substitute Capacity based on the same rules applicable to Resource Adequacy Resources under Section 40.9.

41.8 <u>Allocating Resource Adequacy Credits for RMR Designations Responsibility for RMR</u> Charges Associated with SONGS

The CAISO will provide allocate year-ahead Resource Adequacy eliability Must-Run credits (local, system, and flexible, whichever —if applicable) to the Scheduling Coordinators of LSEs that serve load in the TAC Area(s) in which the need for the Reliability Must-Run Contract arose equal to the LSE's pro rata share of the RMR Contract capacity, which shall be based upon each LSE's annual peak demand forecast calculated under Section 40.2.2.3 for the calendar year in which the RMR agreement will be in effect and broken down on a monthly basis compared to the corresponding total forecasted



[monthly?] [A15] peak demand the percentage of year ahead CEC forecasted load of each LSE in the TAC Areas(s) to total forecasted load in the TAC Areas(s). -, at the CAISO coincident forecasted peak, for the period for which the RMR Contract is projected to be in effect.

The CAISO will allocate month-ahead Reliability Must-Run credits (local, system and flex — if applicable) to the Scheduling Coordinators for LSEs that serve load in the TAC Area(s) in which the need for the Reliability Must-Run Contract arose based upon the percentage of month ahead CEC forecasted load of each LSE in the TAC Area(s) to total forecasted load in the TAC Areas(s), at the CAISO coincident forecasted peak, for each RMR Contract the months for which the Reliability Must-Run Contract is projected to be in effect.

If the CAISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the CAISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.

41.9 <u>Allocation of Reliability Must-Run Contract Costs Exceptional Dispatch of Condition 2</u> RMR Units

The CAISO will allocate Reliability Must-Run costs not recovered through market revenues to the Scheduling Coordinators for LSEs that serve load in the TAC Area(s) in which the need for the Reliability Must-Run Contract arose based upon the percentage of actual load of each LSE in the TAC Area(s) to the total load in the TAC Area(s) as recorded in the CAISO settlement system for the actual days of any settlement month period for which the Reliability Must-Run Contract was in effect.

The CAISO may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an Exceptional Dispatch under this CAISO Tariff for reasons other than as prescribed in the RMR Contract under the following conditions:

(1) The CAISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Congestion and no other Generating Unit that is available is capable of meeting the identified requirement;



41.9.1 [Not Used] Notification Required Before Condition 2 RMR Unit Dispatch

Before dispatching a Condition 2 RMR Unit in accordance with this Section, the CAISO must notify
Market Participants of (a) the situation for which the CAISO is contemplating dispatching a Condition 2
RMR Unit in accordance with this Section, and (b) the date and time the CAISO requires the Condition 2
RMR Unit so dispatched to be operating. The CAISO shall provide such notice as far in advance as
practical and prior to directing the Condition 2 RMR Unit to Start-Up

Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, Start-Ups and service
hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant
to this Section 41.9.1 through an Exceptional Dispatch outside of the RMR Contract shall not be used to
determine future "Annual Service Limits" as defined in the RMR Contract. Payment for Dispatches

* * * * *

43A.2 Capacity Procurement Mechanism Designation

pursuant to this Section 41.9.1 is governed by Section 11.

The CAISO shall have the authority to designate Eligible Capacity to provide CPM Capacity services under the CPM to address the following circumstances, as discussed in greater detail in Section 43A:

- Insufficient Local Capacity Area Resources in an annual or monthly Resource Adequacy
 Plan:
- 2. Collective deficiency in Local Capacity Area Resources;
- Insufficient Resource Adequacy Resources in an LSE's annual or monthly Resource
 Adequacy Plan;
- 4. A CPM Significant Event;
- 5. A reliability or operational need for an Exceptional Dispatch CPM; and
- 6. Capacity at risk of retirement within the current RA Compliance Year that will be needed for reliability by the end of the calendar year following the current RA Compliance Year;



and

67. A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans.

* * * * *

43A.2.6 [Not Used] Capacity at Risk of Retirement Needed for Reliability

The CAISO shall have the authority to designate CPM Capacity to keep a resource in operation that is at risk of retirement during the current RA Compliance Year and that will be needed for reliability by the end of the calendar year following the current RA Compliance Year. The CAISO may issue this risk of retirement CPM designation in the event that all of the following requirements apply:

- (1) the resource was not contracted as RA Capacity nor listed as RA Capacity in any LSE's annual Resource Adequacy Plan during the current RA Compliance Year;
- the CAISO did not identify any deficiency, individual or collective, in an LSE's annual

 Resource Adequacy Plan for the current RA Compliance Year that resulted in a CPM designation for the resource in the current RA Compliance Year;
- (3) CAISO technical assessments project that the resource will be needed for reliability purposes, either for its locational or operational characteristics, by the end of the calendar year following the current RA Compliance Year;
- (4) no new generation is projected by the CAISO to be in operation by the start of the subsequent RA Compliance Year that will meet the identified reliability need;
- (5) the resource owner submits to the CAISO and DMM, at least 180 days prior to terminating the resource's PGA or removing the resource from PGA Schedule 1, a request for a CPM designation under this Section 43A.2.6 including an offer price consistent with Section 43A.4.1.1 and the affidavit of an executive officer of the company who has the legal authority to bind such entity, with the supporting financial information



and documentation discussed in the BPM for Reliability Requirements, that attests that it will be uneconomic for the resource to remain in service in the current RA Compliance

Year and that the decision to retire is definite unless CPM procurement occurs; and

(6) the Scheduling Coordinator for the resource has offered all Eligible Capacity from the resource into all CSPs for the current RA year.

If the CAISO determines that all of the requirements have been met, prior to issuing the CPM designation, the CAISO shall prepare a report that explains the basis and need for the CPM designation. The CAISO shall post the report on the CAISO's Website and allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and no less than thirty (30) days for an LSE to procure Capacity from the resource. If an LSE does not, within that period, procure sufficient RA Capacity to keep the resource in operation during the current RA Compliance Year, the CAISO may issue the risk of retirement CPM designation; provided that the CAISO determines that the designation is necessary and that all other available procurement measures have failed to procure the resources needed for reliable operation. The CAISO will not issue CPM designations in order to circumvent existing procurement mechanisms that could adequately resolve reliability needs.

43A.3.7 [Not Used] Term - Capacity at Risk of Retirement Needed for Reliability

A CPM designation for Capacity at risk of retirement under Section 43A.2.6 shall have a minimum commitment term of one (1) month and a maximum commitment term of one (1) year, based on the number of months for which the capacity is to be procured within the current RA Compliance Year. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year. The CAISO shall rescind the CPM designation for any month during which the resource is under contract with an LSE to provide RA Capacity.

* * * * * *



43A.4 Selection of Eligible Capacity Under the CPM through Competitive Solicitation Processes (CSP) and General Eligibility Rules

In accordance with Good Utility Practice, the CAISO shall designate and compensate Eligible Capacity as CPM Capacity based on the results of either the Annual CSP, the Monthly CSP, or the Intra-monthly CSP.

The CAISO shall designate CPM Capacity through the Annual CSP to meet designations triggered under sections 43A.2.1.1, 43A.2.2, or 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in an annual Resource Adequacy Plan), and 43A.2.7(a) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in an annual Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Monthly CSP to meet designations triggered under sections 43A.2.1.2, 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in a monthly Resource Adequacy Plan), or 43A.2.7(b) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in a monthly Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Intra-monthly CSP to meet designations triggered under sections 43A.2.4 or 43A.2.5.

The selection criteria in this Section 43A.4 shall not, however, apply to making a risk-of-retirement CPM designation under Section 43A.2.6.

* * * * * *

A Scheduling Coordinator for a resource may offer a price in excess of the CPM Soft Offer Cap. The resource owner whose capacity is offered in excess of the CPM Soft Offer Cap must justify in a filing to FERC a price above the CPM Soft Offer Cap, which shall be determined in accordance with the following methodology: (fixed operation & maintenance costs, plus ad valorem taxes, plus administrative & general costs, plus 20 percent (20%) of the foregoing amount), provided such costs will be converted to a



fixed \$kW-year amount. for determining the Annual Fixed Revenue Requirement of an RMR unit as set forth in Schedule F to the pro forma RMR Agreement in Appendix G of the CAISO Tariff. For a resource whose sales are under FERC jurisdiction that is providing CPM Capacity to be compensated at a rate higher than the CPM Soft Offer Cap, the resource owner must make a limited resource-specific filing before FERC to determine the just and reasonable capacity price for the resource as calculated under this formula. per Schedule F to the pro forma RMR Agreement in Appendix G of the CAISO Tariff. The resource owner must serve its filing on the CAISO within five business days of submitting its filing to FERC.

If the sales from the resource are not under the jurisdiction of FERC, the resource owner shall make a non-jurisdictional filing with FERC to determine the just and reasonable capacity price for the going forward costs for the resource as calculated in accordance with the following methodology: (fixed operation & maintenance costs, plus ad valorem taxes, plus administrative & general costs, plus 20 percent (20%) of the foregoing amount), provided such costs will be converted to a fixed \$/kW-year amount. per Schedule F to the pro forma RMR Agreement in Appendix G of the CAISO Tariff. The resource owner must serve its filing on the CAISO within five business days of submitting its filing to FERC.

A resource owner may make a cost justification filing at FERC either before it offers a resource into the competitive solicitation process or after having capacity designated as CPM Capacity. If the resource owner has not made the cost justification filing before the capacity was designated as CPM Capacity, then the resource owner must make its cost justification filing with FERC within 30 days of the CPM designation. If the resource owner fails to make such cost justification filing within 30 days, then the CAISO shall deem the effective CPM Capacity price for the resource to be the CPM Soft Offer Cap. The resource owner may not propose – and shall not be compensated based upon – an offer price higher than the price submitted in its bid to the CAISO for the designated capacity.

A FERC-approved resource-specific CPM Capacity price shall remain in effect for the remainder of the calendar year in which it is approved and for the subsequent two calendar years, unless superseded by a subsequent FERC-approved CPM Capacity price during that period. Although a FERC-approved



resource-specific CPM Capacity price will be denoted in units of \$/kW-year, that \$/kW-year figure will be divided by 12 so that compensation will be in terms of \$/kW-month.

A resource that has obtained the appropriate FERC authorization in response to the cost justification filing described in this Section 43A.4.1.1.1 for a rate higher than the CPM Soft Offer Cap is not precluded from submitting a bid into the competitive solicitation process that is below the FERC-authorized rate and, if selected pursuant to such a bid, will be compensated based on that lower bid.

* * * * * *

43A.5.4 Individualized Non-Availability Charges and Availability Incentive Payments

The provisions of Section 40.9 applicable to Resource Adequacy Resources apply to CPM Capacity.

Capacity accepting a designation as CPM Capacity will face a resource-specific Availability Incentive Mechanism Price under section 40.9.6. The resource-specific price will be the higher of: (a) the price that the resource was paid by the CAISO (\$/kW-month) as a result of receiving the designation; and (b) the RA Availability Incentive Mechanism rate. Availability Incentive Mechanism payments to a resource designated under the CPM will be capped at the general Availability Incentive Mechanism rate.

For a resource requesting a resource-specific CPM Capacity price pursuant to Section 43A.4.1.1.1, the CAISO shall use that resource-specific CPM capacity price for calculating the Availability Incentive Mechanism only if that resource-specific CPM capacity price has been approved in time for inclusion on the Recalculation Settlement Statement T+55B. Otherwise, for resources that have sought a resource-specific CPM Capacity price pursuant to Section 43A.4.1.1.1, the CAISO shall use the CPM Soft Offer Cap price for calculating the Availability Incentive Mechanism price.

43A.6 Reports

The CAISO shall publish the following reports and notices.

43A.6.1 CPM Designation Market Notice

The CAISO shall issue a Market Notice within two (2) Business Days of a CPM designation under Sections 43A.2.1 through 43A.2.76. CPM designations as a result of Exceptional Dispatches shall be



subject to the reporting requirement set forth in Section 34.9.4. The Market Notice shall include a preliminary description of what caused the CPM designation, the name of the resource(s) procured, the preliminary expected duration of the CPM designation, the initial designation period, and an indication that a designation report is being prepared in accordance with Section 43A.6.2. For Exceptional Dispatch CPM designations, the market notice shall additionally indicate whether the designation was made to address an Exceptional Dispatch CPM System Reliability Need or an Exceptional Dispatch CPM Non-System Reliability Need, specify the quantity of the Exceptional Dispatch CPM capacity that was procured and the Exceptional Dispatch CPM Term, and identify the engineering assessment the CAISO used to determine the quantity of capacity needed from the resource to address the reliability issue.

43A.6.2 Designation of a Resource Under the CPM

The CAISO shall post a designation report to the CAISO Website and provide a Market Notice of the availability of the report within the earlier of thirty (30) days of procuring a resource under Sections 43A.2.1 through 43A.2.76 or ten (10) days after the end of the month; provided that where the CAISO makes a designation under Sections 43A.2.1.1, 43A.2.1.2, 43A.2.2.2.7, 43A.2.3, 43A.2.7, or 43A.2.7 that takes effect on the first day of the succeeding month, the CAISO will post the designation report by the earlier of 30 days after the CAISO selects the resource it will be designating or the tenth day of the month in which the designation takes effect. The designation report shall include the following information:

- (1) A description of the reason for the designation (LSE procurement shortfall, Local Capacity Area Resource effectiveness deficiency, or CPM Significant Event), and an explanation of why it was necessary for the CAISO to utilize the CPM authority);
- (2) The following information would be reported for all backstop designations:
 - (a) the resource name;
 - (b) the amount of CPM Capacity or Flexible Capacity CPM designated (MW),
 - (c) an explanation of why that amount of CPM Capacity or Flexible Capacity CPM was designated,
 - (d) the date CPM Capacity was designated,
 - (e) the duration of the designation; and



- (f) the accepted offer price of the resource, or if the resource has a request pending with FERC to exceed the CPM Soft Offer Cap, then the CPM Soft Offer Cap along with a notation that the resource has a pending request with FERC to be compensated above the CPM Soft Offer Cap.
- (3) If the reason for the designation is a CPM Significant Event, the CAISO will also include:
 - (a) a discussion of the event or events that have occurred, why the CAISO has procured CPM Capacity, and how much has been procured;
 - (b) an assessment of the expected duration of the CPM Significant Event;
 - (c) the duration of the initial designation (thirty (30) days); and
 - (d) a statement as to whether the initial designation has been extended (such that the backstop procurement is now for more than thirty (30) days), and, if it has been extended, the length of the extension.
- (4) If the reason for the designation is Exceptional Dispatch CPM Capacity, the CAISO will also include additional information about the CAISO's determination of the quantity and term of the designation, which supplements the information included in the market notice issued pursuant to Section 43A.6.1.

* * * * *

43A.8.7 [Not Used] Allocation of CPM Costs for Resources at Risk of Retirement

If the CAISO makes any CPM designations under Section 43A.2.6 for resources at risk of retirement needed for reliability, the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs that serve Load in the TAC Area(s) in which the need for the CPM designation arose based on the percentage of actual Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Load in the TAC Area(s) as recorded in the CAISO Settlement system for the actual days during any Settlement month period over which the designation has occurred.



* * * * *

43A.9 Crediting of CPM Capacity

The CAISO shall credit CPM designations to the resource adequacy obligations of Scheduling Coordinators for Load Serving Entities as follows:

- (a) To the extent the cost of CPM designation under Section 43A.2.1.1 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.1, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards (1) the LSE's Local Capacity Area Resource obligation under Section 40.3.2 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1 and (2) the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1.
- (b) To the extent the cost of CAISO designation under Section 43A.2.2 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.3, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.2.
- (c) To the extent the cost of CPM designation under Section 43A.2.3 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.4, and the designation is for greater than one month under Section 43A.3.4, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.3.
- (d) To the extent the cost of CPM designation under Section 43A.2.6 is allocated to a



Scheduling Coordinator on behalf of a LSE under Section 43A.8.7, and the designation is for greater than one month under Section 43A.3.7, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.6.

- (e) The credit provided in this Section shall be used for determining the need for the additional designation of CPM Capacity under Section 43A.2 and for allocation of CPM costs under Section 43A.8.
- (ef) For each Scheduling Coordinator that is provided credit pursuant to this Section, the CAISO shall provide information, including the quantity of capacity procured in MW, necessary to allow the CPUC, other Local Regulatory Authority, or federal agency with jurisdiction over the LSE on whose behalf the credit was provided to determine whether the LSE should receive credit toward its resource adequacy requirements adopted by such agencies or authorities.
- (fg) To the extent the cost of Flexible Capacity CPM designation under Section 43A.2.7 is allocated to a Scheduling Coordinator for an LSE under Section 43A.8.8, and the designation is for greater than one month under Section 43A.3.8, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Flexible Capacity requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the Flexible Capacity CPM designated under Section 43A.2.7.

* * * *

Appendix A

Master Definitions Supplement



* * *

- Adjusted RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.

* * * *

- CAISO Invoice

The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice.

* * * *

- Condition 1 RMR UnitResource

A resource operating pursuant to Condition 1 of itsan RMR Contract.

* * * *

- Condition 2 RMR Unit

A resource operating pursuant to Condition 2 of its RMR Contract.

* * * *

- Estimated RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.

* * * *

- Excess Cost Payments

The payments made by the CAISO for costs associated with Exceptional Dispatches for 1) emergency conditions, to avoid Market Disruption and avoid an imminent System Emergency as provided in Section 11.5.6.1.1; 2) transmission-related modeling limitations as provided in Section 11.5.6.2.3; 3) Condition 2 RMR Units as provided in Section 11.5.6.3.2; and 43) emergency Energy as provided in Section 11.5.8.1.1.

* * * *



- Facility Trust Account

For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.

* * * *

- Final Invoice

The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.

* * * *

- Manual RMR Dispatch

An RMR Dispatch Notice issued by the CAISO for a reliability service available pursuant to an RMR contract. other than as a result of the MPM process.

* * * *

- Market Power Mitigation - RRD

The two-optimization run process conducted in both the Day-Ahead Market and the RTM that determines the need for the CAISO to employ market power mitigation measures or Dispatch RMR Units.

* * * *

- Maximum Net Dependable Capacity (MNDC)

A term defined in and used in association with an RMR Contract.

* * * *

- Prior Period Change

Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.

* * * *

- Prior Period Change Worksheet

A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary



change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.

* * * *

- Reliability Must-Run Charge (RMR Charge)

The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.

Reliability Must-Run Capacity (RMR Capacity) - see comment above

Resource Adequacy Contract - see comment above

* * * *

- Responsible Utility

The utility which is a party to the Transmission Control Agreement in whose PTO Service Territory the Reliability Must-Run Unit is located or whose PTO Service Territory is contiguous to the PTO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.

* * * *

- Responsible Utility Facility Trust Account

A segregated commercial bank account under the Facility Trust Account containing funds held in trust for the Responsible Utility under an RMR Contract.

* * * *

-Revised Adjusted RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run Invoice based on the CAISO's validation and actual data for the billing month.

* * * *

- Revised Estimated RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability

Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on



the CAISO's validation of the Estimated Reliability Must-Run Invoice.

* * * *

- RMR Default Amount

Any amount due to be received into the relevant Facility Trust Account from the RMR Owner or the Responsible Utility in accordance with an RMR Contract.

* * * *

- RMR Invoice

Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised

Adjusted RMR Invoice under an RMR Contract.

* * * *

- RMR Owner Facility Trust Account

The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.

* * * *

- RMR Payments Calendar

The payment calendar issued by the CAISO pursuant to Section 11.13.

* * * *

- RMR Proxy Bid

For Condition 1 RMR Units, for Energy, an amount calculated based on the hourly variable costs as defined in Schedule C of the applicable RMR Contract in the form of a monotonically increasing function consistent with the bidding rules in Section 30. For Condition 2 RMR Units, for Energy, the Energy Bid defined in Schedule M of the RMR Contract. For Condition 1 and 2 RMR Units, for Start-Up costs, the amount set forth in Schedule D of the applicable RMR Contract; and for Minimum Load costs, an amount calculated based on unit specific performance parameters as set for the applicable RMR Contract and the gas price calculated in accordance with Schedule C of the applicable RMR Contract.

* * * *



- RMR Refund

Any amounts which RMR Owners are obligated to pay to the CAISO and the CAISO is obligated to pay to the Responsible Utilities under the RMR Contracts, or resulting from any order by the FERC, for deposit into the Responsible Utility Facility Trust Account.

* * * *

- RMR Security

The form of security provided by a Responsible Utility to cover its liability under Section 11.13.