30. BIDS, INCLUDING SELF-SCHEDULES, SUBMISSION FOR ALL CAISO MARKETS

30.1 Bids, Including Self-Schedules.

Scheduling Coordinators shall submit Bids to participate in the CAISO Markets, as well as any Self-Schedules, ETC Self-Schedules, TOR Self-Schedules, or Self-Provision of Ancillary Services. Bids submitted in the DAM apply to the 24 hours of the next Trading Day (23 or 25 hours on the Daylight Savings transition days) and are used in both the IFM and RUC. Scheduling Coordinators may submit Bids for the DAM as early as 7 days ahead of the targeted Trading Day. Bids submitted in the HASP apply to a single Trading Hour and are used in the HASP and the RTM. Bidding rules for each type of resource are contained in this Section 30 and additional specifications regarding bidding practices are contained in the Business Practice Manuals posted on the CAISO Website. Bids will consist of various components described in this Section 30 through which the Scheduling Coordinator provides information regarding the parameters and conditions pursuant to which the Bid may be optimized by the CAISO Markets.

30.2 Bid Types.

There are three types of Bids: Energy Bids, Ancillary Services Bids, and RUC Availability Bids. Each Bid type can be submitted as either an Economic Bid or a Self-Schedule (except for RUC Availability Bids, which cannot be self-scheduled). Economic Bids specify prices for MW amounts of capacity or MWh amounts of Energy. Self-Schedules do not have any prices associated for MW or MWh. Energy Bids, including both Economic Bids and Self-Schedules, may be either Supply Bids or Demand Bids. Ancillary Services Bids and RUC Availability Bids are Supply Bids only. Ancillary Services may be self-provided by providing a Submission to Self-Provide an Ancillary Service and having that submission accepted by the CAISO. Rules for submitting the three types of Bids vary by the type of resource to which the Bid applies as described in Section 30.5 and as further required in each CAISO Markets process as specified in Sections 31, 33, and 34.

30.3 [NOT USED]

30.4 Election for Start-Up and Minimum Load Costs.

Generating Units, Non-Dynamic and Dynamic System Resources may elect on a semi-annual basis either of the two options provided below for specifying their Start-Up and Minimum Load Costs to be used in the CAISO Markets Processes. Unless the Scheduling Coordinator has submitted Bid-based Start-Up and Minimum Load Costs, the CAISO will assume the cost-based option as the default option.

(1) Cost-based. This option uses fuel-cost adjusted formulas for Start-Up and Minimum Load Costs based on the resource's actual performance parameters. The Start-Up and Minimum Load Costs values contained in the resource's Bids as utilized in the CAISO Markets Processes will be these formulaic values adjusted for fuel-cost variation on a daily basis. Resources will not be able to Bid alternative values for Start-Up and Minimum Load Costs. In the event that a unit does not provide sufficient data for the CAISO to determine its costs, the CAISO will assume that the unit's Start-Up and Minimum Load Costs are zero.

(2) Bid-based. The resource may submit values of its choosing for Start-Up and Minimum Load Costs without regard to the resource's performance parameters or underlying costs. The SU and ML cost values contained in the resource's Bids as utilized in the CAISO Markets Processes will be these pre-specified values and will be fixed for six months. Resources will not be able to Bid alternative values for Start-Up and Minimum Load Costs.

30.5 Bidding Rules.

30.5.1 General Bidding Rules.

(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than 7 days prior to the Trading Day;

(b) Bid prices submitted by Scheduling Coordinator for Energy accepted and cleared in the IFM and scheduled in the Day-Ahead Schedule cannot be decreased. Bid prices for Energy submitted but not scheduled in the Day-Ahead Schedule may be increased or decreased in the HASP. Incremental Bid prices for Energy associated with Day-Ahead AS or RUC Awards in Bids submitted to the HASP may be revised. Scheduling Coordinators may revise ETC Self-Schedules for Supply only in the HASP to the extent such a change is consistent with TRTC Instructions provided to the CAISO by the PTO in accordance with Section 16 of this CAISO Tariff. Scheduling Coordinators may revise TOR Self-Schedules for Supply only in the HASP to the extent such a change is consistent with TRTC provided to

the CAISO by the Non-Participating TO in accordance with Section 17. Energy associated with awarded Ancillary Services capacity cannot be offered in the HASP or Real-Time Market;

(c) Scheduling Coordinators may submit Energy, AS and RUC Bids in the DAM that are different for each Trading Hour of the Trading Day;

(d) Bids for Energy or capacity that are submitted to one CAISO Market, but are not accepted in that market are no longer a binding commitment and Scheduling Coordinators may submit Bids in a subsequent CAISO Market at a different price; and

(e) The CAISO shall be entitled to take all reasonable measures to verify that Scheduling Coordinators meet the technical and financial criteria set forth in Section 4.5.1 hereof and the accuracy of information submitted to the CAISO pursuant to this Section 30.

30.5.2 Supply Bids.

30.5.2.1 Common Elements for Supply Bids.

In addition to the resource-specific Bid requirements of this Section, all Supply Bids must contain the following components: Scheduling Coordinator ID Code; Resource ID; Resource Location; PNode or Aggregated Pricing Node as applicable; Energy Bid Curve; Self-Schedule component; Ancillary Services Bid; RUC Availability Bid; the Market to which the Bid applies; Trading Day to which the Bid applies; Priority Type (if any). Supply Bids offered in the CAISO Markets must be monotonically increasing.

30.5.2.2 Supply Bids for Participating Generators.

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for Participating Generators shall contain the following components: Start-Up Bid, Minimum Load Bid, Ramp Rate, minimum and maximum Operating limits; Distribution Curve; Must-Take/Must-Run Generation; Contingency Flag; and Contract Reference Number (if any). Combined-cycle Generation Units may only be registered under a single Resource ID.

30.5.2.3 Supply Bids for Participating Loads.

In addition to the common elements listed in Section 30.5.2.1, Scheduling Coordinators submitting Supply Bids for Participating Loads shall contain the following components: Pumping and Participating Load, Minimum Load Bid, Load Distribution Curve, Ramp Rate, Energy Limit, Demand Reduction Initiation, and Participating Load and Pump Shut-Down Costs for resources registered as Pumped Storage Hydro Units.

30.5.2.4 Supply Bids for System Resources.

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for System Resources shall also contain: the relevant Ramp Rate; Start-Up Bid; and Minimum Load Bid. Start-Up Bids

and Minimum Load Bids for System Resources, except for Dynamic or Non-Dynamic System Resources must be zero. Dynamic or Non-Dynamic Resource-Specific System Resources may submit non-zero Start-Up and Minimum Loads Bids. Dynamic and Non-Dynamic Resource Specific System Resources must register resource specific information in the Master-File in a similar manner as Generating Units and are eligible to participate in the Day-Ahead Market on an equivalent basis as Generating Units and are not obligated to participate in RUC or the RTM if the resource did not receive a Day Ahead Schedule unless the resource is a Resource Adequacy Resource. If the Resource Specific System Resource is a Resource Adequacy Resource, the resource is obligated to make itself available to the CAISO market as prescribed by Section 40.6. Dynamic Resource-Specific System Resources are also eligible to participate in the HASP and RTM on an equivalent basis as Generating Units. Non-Dynamic Resource-Specific System Resources will be treated like other System Resources in the HASP and RTM. The quantity (in MWh) of Energy categorized as Interruptible Imports (non-firm imports) can only be submitted through Self-Schedules in the Day-Ahead Market and cannot be incrementally increased in the HASP or RTM. Bids submitted to the Day-Ahead Market for ELS Resources will be applicable for two days after they have been submitted and cannot be changed the day-after they have been submitted.

30.5.2.4.1 Intertie Block Bids.

Intertie Block Bids must contain the same energy Bid price for all hours of the period for which the Intertie Block Bid is submitted. Intertie Block Bids may only be submitted in the DAM.

30.5.2.5 Supply Bids for Metered Subsystems.

Consistent with the bidding rules specified in this Section 30.5, Scheduling Coordinators that represent MSS Operators may submit Bids for Energy and Ancillary Services, including Self-Schedules and Submissions to Self-Provide an Ancillary Service, to the DAM. All Bids to supply Energy by MSS Operators must identify each Generating Unit on an individual unit basis. The CAISO will not accept aggregated Generation Bids without complying with the requirements of Section 4.9.12 of the CAISO Tariff. All Scheduling Coordinators that represent MSS Operators must submit Demand Bids at the

relevant MSS LAP. Scheduling Coordinators that represent MSS Operators must comply with Section 4.9 of the CAISO Tariff. Scheduling Coordinators that represent MSS Operators that have opted out of RUC participation pursuant to Section 31.5 must Self-Schedule one hundred (100) percent of the Demand Forecast for the MSS. For an MSS that elects Load following, the MSS Operator shall also self-schedule

or bid Supply to match the Demand Forecast. All Bids for MSSs must be identify each Generating Unit on an individual unit basis or a System Unit. For an MSS that elects Load following consistent with Section 4.9.9, the Scheduling Coordinator for the MSS Operator must include the following additional information with its Bids: the Generating Unit(s) that are Load following; the range of the Generating Unit(s) being reserved for Load following; whether the quantity of Load following capacity is either up or down; and, if there are multiple Generating Units in the MSS, the priority list or distribution factors among the Generating Units. The CAISO will not dispatch the resource within the range declared as Load-following capacity, leaving that capacity entirely available for the MSS to dispatch. The CAISO uses this information in the IFM runs and the RUC to simulate MSS Load following. The Scheduling Coordinator for the MSS Operator may change these characteristics through the Bid submission process in the HASP.

30.5.2.6 Ancillary Services Bids.

There are four distinct Ancillary Services: Regulation-Up, Regulation-Down, Spinning Reserve and Non-Spinning Reserve. Participating Generators are eligible to provide all Ancillary Services. Dynamic System Resources are eligible to provide Operating Reserves and Regulation. Non-Dynamic System Resources are eligible to provide Operating Reserves only. No System Resource, including Dynamic and Non-Dynamic Resource Specific System Resources, can be used for self-provision of Ancillary Services. All System Resources, including Dynamic and Non-Dynamic Resource Specific System Resources, will be charged the Shadow Price as prescribed in Section 11.10 of the CAISO Tariff. Participating Loads are eligible to provide Non-Spinning Reserve only. A Scheduling Coordinator may submit Ancillary Services Bids for Regulation-Up, Regulation-Down, Spinning, and Non-Spinning Reserve for the same capacity by providing a separate price in $/MW per hour as desired for each Ancillary Service. The Bid for each Ancillary Services is a single Bid segment. Only resources certified by the CAISO as capable of providing Ancillary Services are eligible to provide Ancillary Services. In addition to the common elements listed in Section 30.5.2.1, all Ancillary Services Bid components of a Supply Bid must contain the following: (1) the type of Ancillary Service for which a Bid is being submitted; (2) an Energy Bid associated with capacity Bid before the close of the Real-Time Market (submitting an Energy Bid associated with a Ancillary Service Bid in the Day-Ahead Market is optional); (3) Ramp Rate (Operating Reserve Ramp Rate and regulating ramp rate, if applicable); (4) Distribution Curve for Physical Scheduling Plant or System Unit; and (5) maximum operating level (MOLmax) and minimum operating level (MOLmin). A Submission to Self Provide an Ancillary Service shall contain all of the requirements of a Bid for Ancillary Services with the exception of Ancillary Service Bid price information. In addition, Scheduling Coordinators must comply with the Ancillary Services requirements of Section 8.5 of the CAISO Tariff.

30.5.2.6.1 Regulation Up or Down Bid Information.

In the case of Regulation Up or Down, the Ancillary Services Bid must also contain: (a) the upward and downward range of generating capacity over which the resource is willing to provide Regulation within a range from a minimum of 10 minutes to a maximum of 30 minutes; and (b) the bid price of the capacity

reservation, stated separately for Regulation Up and Regulation Down ($/MW). In the case of Regulation Up or Down from Dynamic System Resources, the Ancillary Services Bid must also contain: (a) the Scheduling Point (the name), (b) Interchange ID code of the selling entity, (c) external Control Area ID, (d) Schedule ID (NERC ID number), and (e) the Contract Reference Number, if applicable.

30.5.2.6.2 Spinning Reserve Capacity Bid Information.

In the case of Spinning Reserve capacity, the Ancillary Services Bid must also contain: (a) MW of additional capability synchronized to the system, immediately responsive to system frequency, and available within 10 minutes; (b) Bid price of capacity reservation, and (c) an indication whether the capacity reserved would be available to supply Imbalance Energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Spinning Reserve capacity from System Resources, the Ancillary Services Bid must also contain: (a) Interchange ID code of the selling entity, (b) Schedule ID (NERC ID number, and (c) a Contract Reference Number, if applicable.

30.5.2.6.3 Non-Spinning Reserve Capacity.

In the case of Non-Spinning Reserve, the Ancillary Service Bid must also contain: (a) the MW capability available within 10 minutes; (b) the Bid price of the capacity reservation; (c) time of synchronization following notification (min); and (d) an indication whether the capacity reserved would be available to supply Imbalance Energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Non-Spinning Reserve Capacity from System Resources, the Ancillary Services Bid must also contain: (a) Interchange ID code of the selling entity, (b) Schedule ID (NERC ID number); and (c) a Contract Reference Number, if applicable. In the case of Non-Spinning Reserve Capacity from Load within the CAISO Control Area, the Ancillary Service Bid must also contain: (a) a Load identification name and Location Code, (b) Demand reduction available within 10 minutes, (c) time to interruption following notification (min), and (d) maximum allowable curtailment duration (hr).

30.5.2.6.4 For Self-Provided Ancillary Services.

Scheduling Coordinators electing to self-provide Ancillary Services shall supply the information referred to in this Section 30.5 in relation to each Ancillary Service to be self-provided, excluding the capacity price information, but including the name of the trading Scheduling Coordinator in the case of Inter-Scheduling Coordinator Ancillary Service Trades. The portion of the single Energy Bid that corresponds to the high end of the resource's operating range, shall be allocated to any awarded or self-provided Ancillary Services in the following order from higher to lower capacity: (a) Regulation Up; (b) Spinning Reserve; and (c) Non-Spinning Reserve. For resources providing Regulation Up, the upper regulating limit shall be

used if it is lower than the highest operating limit. The remaining portion of the Energy Bid (i.e. that portion not associated with capacity committed to provide Ancillary Services) shall constitute a Bid to provide Energy.

30.5.2.7 RUC Availability Bids.

Scheduling Coordinators may submit RUC Availability Bids for specific Generating Units in the DAM. Capacity that does not have Bids for Supply of Energy in the IFM will not be eligible to participate in the RUC process. The RUC Availability Bid component a is MW-quantity of non-RA Capacity in $/MW per hour, and $0/MW for RA Capacity.

30.5.3 Demand Bids.

Each Scheduling Coordinator representing Demand shall submit Bids indicating the hourly quantity of Energy in MWh that it intends to purchase in the IFM for each Trading Hour of the Trading Day. Scheduling Coordinators must submit Demand Bids, including Self Schedules, for CAISO Demand at Load Aggregation Points except as provided in Section 30.5.3.2. Scheduling Coordinators must submit must submit a zero RUC Availability Bid for the portion of their qualified RA Capacity. If submitting Self-Schedules at Scheduling Points for export in the IFM, the Scheduling Coordinator shall indicate whether or not the export is served from Generation from Resource Adequacy Capacity, and if submitting Self-Schedules at Scheduling Points for export in HASP the Scheduling Coordinator shall indicate whether or not the export is served from Generation from Resource Adequacy Capacity or RUC Capacity.

30.5.3.1 Demand Bids Components.

Demand Bids must have the following components: Scheduling Coordinator ID code; a Demand Bid Curve that is a monotonically decreasing staircase function of no more than 10 segments defined by 11 ordered pairs of MW and $/MWh; Location Code for the LAP or PNode, as applicable; and hourly scheduled MWh within the range of the Bid curve, including any zero values, for each Settlement Period of the Trading Day.

30.5.3.2 Exceptions to Requirement for Submission of Demand Bids and Settlement at the LAP.

The following are exceptions to the requirement that Demand Bids be submitted and settled at the LAP:

(a) ETC or TOR Self-Schedules submitted consistent with the submitted TRTC Instructions;

(b) Participating Load Bids for Supply and Demand may be submitted and settled at a PNode; and

(c) Export Bids are submitted and settled at Scheduling Points, which do not constitute a LAP.

30.6 [NOT USED].

30.7 Bid Validation.

The CAISO shall validate submitted Bids pursuant to the procedures set forth in this Section 30.7 and the rules set forth in the Business Practice Manuals.

30.7.1 Scheduling Coordinator Access.

Each Scheduling Coordinator will be provided access to the CAISO's secure communication system to submit, modify and cancel Bids prior to the close of both the DAM and HASP, as specified in Section 30.5.1. The CAISO shall provide information regarding submitted Bids including, but not be limited to, the following: (i) notification of acceptance; (ii) notification of validation; (iii) notification of rejection; (iv) notification of status; (v) notification of submission error(s); and (vi) default modification or generation of Bids as further provided below, if any, on behalf of Scheduling Coordinators.

30.7.2 Timing of CAISO Validation.

Once a Bid is submitted to the CAISO Markets, the Bid is available for validation, which is conducted in multiple steps. All validation processes and default modifications are performed after Bids are submitted but prior to the Market Close for the relevant Trading Day or Trading Hour. Clean Bids will be generated after Market Close.

30.7.3 DAM Validation.

30.7.3.1 Validation Prior to Market Close and Master File Update.

The CAISO conducts Bid validation in three steps:

Step 1: The CAISO will validate all Bids after submission of the Bid for content validation which determines that the Bid adheres to the structural rules required of all Bids as further described in the Business Practices Manuals. If the Bid fails any of the content level rules the CAISO shall assign it a rejected status and the Scheduling Coordinator must correct and resubmit the Bid.

Step 2: After the Bids are successfully validated for content, but prior to the Market Close of the DAM, the Bids will continue through the second level of validation rules to verify that the Bid adheres to the applicable CAISO Market rules and if applicable, limits based on Master File data. If the Bid fails any

level two validation rules, the CAISO shall assign the Bid as invalid and the Scheduling Coordinator must either correct or resubmit the Bid.

Step 3: If the Bid successfully passes validation in Step 2, it will continue through the third level of validation where the Bid will be analyzed based on its contents to identify any missing Bid components that must be either present for the Bid to be valid consistent with the market rules contained in Article III of this CAISO Tariff and as reflected in the Business Practice Manuals. At this stage the Bid will either be automatically modified for correctness and assigned a status of conditionally modified or modified, or if it can be accepted as is, the Bid will be assigned a status of conditionally valid, or valid. Some examples of when a Bid will be automatically modified and assigned a status of modified or conditionally modified Bids, include but are not limited to, extension of: (1) a Self-Schedule to the first Energy Bid point in cases where the total Self-Schedule quantity specified in a Bid is lower than the first Energy Bid quantity of the Energy Bid curve; or (2) an Energy Bid Curve range where the Energy Bid Curve submitted does not cover other commodities such as RUC or Ancillary Services for the same resource. Throughout the Bid evaluation process, the Scheduling Coordinator shall have the ability to view the Bid and may choose to either cancel the Bid, modify and re-submit the Bid, or leave the modified, conditionally modified or valid, conditionally valid Bid as is to be processed in the designated CAISO Market.

30.7.3.2 Master File Data Update.

Once a day the Master File data is updated with changes to the Master File that were submitted at least seven (7) Business Days in advance, after which all conditional Bids must be re-validated prior to the trading period when the Bid will take effect. After this re-validation takes place, the status of all conditionally modified and conditionally valid Bids may be changed to modified or valid, if the Bid period is for the next relevant DAM.

30.7.3.3 Validation Prior to Market Close and After Master File Update.

Prior to the Market Close of the DAM, after the Master File data has been updated, all Bids must be re-validated using the same process as described in Section 30.7.3.1 to produce either Valid Bids or Modified Bids. Throughout this process the Scheduling Coordinator shall have the ability to view the Bid and may choose to re-submit (at which point the Bid would undergo the Bid validation process described

in this Section 30.7 again), cancel, or modify the Bid. Valid or Modified Bids that are not re-submitted or cancelled become Clean Bids after the Market Close of the DAM. Modified Bids will reflect the full capability of the resource as defined in the Master File.

30.7.3.4 Validation after Market Close.

To the extent that Scheduling Coordinators fail to enter a Bid for resource that is required to bid in the full range of available Capacity consistent with the Resource Adequacy provisions of Section 40, the CAISO will create a Bid for the Scheduling Coordinator, which is referred to as the Generated Bid. This does not apply to Load-following MSSs. The Generated Bid will be created only after the Market Close for the DAM and will be based entirely on data in the Master File. The Scheduling Coordinator may view Generated Bids, but may not modify such Bids. The CAISO will provide notice to the Scheduling Coordinator of the use of a Generated Bid prior to Market Clearing of the IFM.

30.7.4 HASP and RTM Validation.

The HASP and RTM Bids will follow the same validation process implemented in the DAM except that the CAISO will not validate the Bid before and again after the Master File Data update. HASP and RTM Bids are only validated based on the current Master File Data on the relevant Trading Day.

30.8 Validation of ETC Self-Schedules.

ETC Self-Schedules shall be validated pursuant to the procedures set forth in Section 16.6.

30.9 Validation of Ancillary Services Bids.

Throughout the validation process described in Section 30.7, the CAISO will verify that each Ancillary Services Bid conforms to the content, format and syntax specified for the relevant Ancillary Service. If the Ancillary Services Bid does not so conform, the CAISO will send a notification to the Scheduling Coordinator notifying the Scheduling Coordinator of the errors in the Bids as described in Section 30.7. When the Bids are submitted, a technical validation will be performed to verify that the bid quantity of Regulation, Spinning Reserve, or Non-Spinning Reserve does not exceed the available capacity for Regulation, or Operating Reserves on the Generating Units, System Units, Participating Loads and external imports/exports bid. The Scheduling Coordinator will be notified within a reasonable time of any validation errors. For each error detected, an error message will be generated by the CAISO in the

Scheduling Coordinator's notification screen, which will specify the nature of the error. The Scheduling Coordinator can then look at the notification messages to review the detailed list of errors, make changes, and resubmit if it is still within the CAISO's timing requirements. The Scheduling Coordinator is also notified of successful validation.

30.10 Format and Validation of Operational Ramp Rates.

The submitted operational ramp rate expressed in megawatts per minute (MW/min) as a function of the operating level, expressed in megawatts (MW), must be a staircase function with up to four segments. There is no monotonicity requirement for the operational ramp rate. The submitted operational ramp rate shall be validated as follows:

(a) The range of the submitted operational ramp rate must cover the entire capacity of the resource, from the minimum to the maximum operating capacity, as registered in the Master File for the relevant resource.

(b) The operating level entries must match exactly (in number, sequence, and value) the corresponding minimum and maximum operational ramp rate breakpoints, as registered in the Master File for the relevant resource.

(c) If a Scheduling Coordinator does not submit an operational ramp rate for a generating unit for a day, the CAISO shall use the maximum ramp rate for each operating range set forth in the Master File as the ramp rate for that unit for that same operating range for the Trading Day.

(d) The last ramp rate entry shall be equal to the previous ramp rate entry and represent the maximum operating capacity of the resource as registered in the Master File. The resulting operational ramp rate segments must lie between the minimum and maximum operational ramp rates, as registered in the Master File.

(e) The submitted operational ramp rate must be the same for each hour of the Trading Day, i.e., the operational ramp rate submitted for a given Trading Hour must be the same with the one(s) submitted earlier for previous Trading Hours in the same Trading Day.

(f) Outages that affect the submitted operational ramp rate must be due to physical constraints, reported in SLIC and are subject to CAISO approval. All approved changes to the submitted operational

ramp rate will be used in determination of Dispatch Instructions for the shorter period of the balance of the Trading Day or duration of reported Outage.

(g) If an operational ramp rate is derated in SLIC, the ramp rate will only be to four segments. Ramping capability through Forbidden Regions are not affected by derates entered in SLIC.

(h) For all CAISO Dispatch Instructions of Reliability Must Run resources the operational ramp rate will be the ramp rate declared in the Reliability Must Run Contract Schedule A.

30.11 Format and Validation of Startup and Shutdown Times.

For a Generating Unit, the submitted Start Up time expressed in minutes (min) as a function of down time expressed in minutes (min) must be a staircase function with up to 3 segments defined by a set of 1 to 4 down time and Start Up time pairs. The Start Up time is the time required to start the resource if it is offline longer than the corresponding down time. The last segment will represent the time to start the unit from a cold start and will extend to infinity. The submitted Start Up time function shall be validated as follows:

(a) The first down time must be 0 min.

(b) The down time entries must match exactly (in number, sequence, and value) the corresponding down time breakpoints of the maximum Start Up time function, as registered in the Master File for the relevant resource.

(c) The Start Up time for each segment must not exceed the Start Up time of the corresponding segment of the maximum Start Up time function, as registered in the Master File for the relevant resource.

(d) The Start Up time function must be strictly monotonically increasing, i.e., the Start Up time must increase as down time increases.

For Participating Load, a single Shut Down time in minutes is the time required for the resource to Shut Down after receiving a Dispatch Instruction.

30.12 Format and Validation of Start Up and Shut Down Costs.

For a Generating Unit, the submitted Start Up Cost expressed in dollars ($) as a function of down time expressed in minutes must be a staircase function with up to 3 segments defined by a set of 1 to 4 down time and Start Up Cost pairs. The Start Up Cost is the cost incurred to start the resource if it is offline

longer than the corresponding down time. The last segment will represent the cost to start the resource from cold Start Up and will extend to infinity. The submitted Start Up Cost function shall be validated as follows:

(a) The first down time must be 0 min.

(b) The down time entries must match exactly (in number, sequence, and value) the corresponding down time breakpoints of the cost-based Start Up Cost function, as registered in the Master File for the relevant resource.

(c) The Start Up Cost for each segment must not be negative and must not exceed the Start Up Cost of the corresponding segment of the cost-based Start Up Cost function, as registered in the Master File for the relevant resource. For gas-fired resources, the cost-based startup cost function shall be derived from the startup fuel function, as registered in the Master File for the relevant resource, and the applicable gas price index as approved by FERC.

(d) The Start Up Cost function must be strictly monotonically increasing, i.e., the Start Up Cost must increase as down time increases.

For Participating Loads, a single Shut Down Cost in $ is the cost incurred to Shut Down Cost the resource after receiving a Dispatch Instruction. The submitted Shut Down Cost must not be negative.

30.13 Format and Validation of Minimum Load Costs.

For a Generating Unit, the submitted Minimum Load Cost expressed in dollars per hour ($/hr) is the cost incurred for operating the unit at minimum load. The submitted Minimum Load Cost must not be negative and must not exceed the cost-based Minimum Load Cost, as registered in the Master File for the relevant resource.

For Participating Loads, the submitted Minimum Load Cost ($/hr) is the cost incurred while operating the resource at reduced consumption after receiving a Dispatch Instruction. The submitted Minimum Load Cost must not be negative.

30.14 Prohibition on Bidding Across Out-of-Service Transmission Paths at Scheduling Points.

Scheduling Coordinators shall not submit any Bids or ETC Self-Schedules at Scheduling Points using a transmission path for any Settlement Period for which the Operating Transfer Capability for that path is zero MW. The CAISO shall reject Bids or ETC Self-Schedules submitted at Scheduling Points where the Operating Transfer Capability on the transmission path is zero MW. If the Operating Transfer Capability of a transmission path at the relevant Scheduling Point is reduced to zero after Day-Ahead Schedules have been issued, then, if time permits, the CAISO shall direct the responsible Scheduling Coordinators to reduce all MWh associated with the Bids on such zero-rated transmission paths to zero in the HASP. As necessary to comply with Applicable Reliability Criteria, the CAISO shall reduce any non-zero HASP Bids across zero-rated transmission paths to zero after the Market Close for the HASP.

31 Day-Ahead Market.

The DAM consists of the following functions performed in sequence: the MPM-RRD, IFM, and RUC. Scheduling Coordinators may submit Bids for Energy, Ancillary Services and RUC Capacity for an applicable Trading Day. The CAISO shall issue Schedules for all Supply and Demand, including Participating Load, pursuant to their Bids as provided in this Section 31.

31.1 Bid Submission and Validation in the Day-Ahead Market.

Scheduling Coordinators submit a single Bid to be used in the DAM, which includes the MPM-RRD, the IFM and RUC. Scheduling Coordinators may submit Bids for the DAM as early as seven (7) days ahead of the targeted Trading Day and up to Market Close of the DAM for the target Trading Day. The CAISO will validate all Bids submitted to the DAM pursuant to the procedures set forth in Section 30.7. Scheduling Coordinators must submit Bids for participation in the IFM for RA Capacity as required in Section 40. Bids for Ancillary Services that are not Submissions to Self-Provide an Ancillary Service in the DAM must also contain a Bid for Energy.

31.2 Market Power Mitigation and Reliability Requirement Determination (MPM-RRD).

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-RRD procedures in a series of processing runs that occur prior to the IFM Market-Clearing run. The MPM process determines which Bids need to be mitigated in the IFM. The RRD process determines RMR requirements for RMR Units. The MPM-RRD process optimizes resources using the same optimization used in the IFM, but instead of using Demand Bids as in the IFM the MPM-RRD process optimizes resources to meet one hundred percent of the CAISO Demand Forecast and Export Bids to the extent the Export Bids are selected in the MPM-RRD process, and meet one hundred percent of Ancillary Services requirements based on Supply Bids submitted to the DAM. The pool of resources committed in the MPM-RRD process is then passed to the IFM to constitute the pool of resources available for commitment in the IFM. The CAISO performs the MPM-RRD for the DAM for the 24 hours of the next Trading Day.

31.2.1 The Reliability and Market Power Mitigation Runs.

The first run of the MPM-RRD procedures is the Competitive Constraint Run (CCR), in which only limits on transmission lines pre-designated as competitive are enforced. The only RMR units considered in the

CCR are Condition 1 RMR units that have provided market Bids for the DAM. The second run is the All Constraints Run (ACR), during which the all transmission constraints are enforced. All RMR units, Condition 1 and Condition 2, are considered in the ACR. The resources committed in the ACR form the pool of resources that is available for commitment in the IFM.

31.2.2 Bid Mitigation.

The CAISO shall compare the resource dispatch levels derived from CCR and ACR and will mitigate Bids as follows.

31.2.2.1 RMR Units.

For a Condition 1 Unit that is dispatched in the CCR, the Bid used in the ACR for the entire portion of the unit's Bid above the CCR dispatch level and below the Maximum Net Dependable Capacity specified in the RMR Contract will be set to the lower of the RMR Proxy Bid, or the DAM Bid, but not lower than the unit's highest Bid price that cleared the CCR. If a Condition 1 Unit is dispatched in the CCR and receives a greater dispatch in the ACR, the entire portion of the unit's Bid curve above the CCR dispatch level and below the Maximum Net Dependable Capacity specified in the RMR Contract, will be set to the lower of the RMR Proxy Bid or the DAM Bid, but not lower than the unit's highest Bid price that cleared the CCR for purposes of being considered in the IFM. For purposes of the MPM-RRD, RMR Condition 1 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 Condition 1 RMR Units, the market Bid at and below the CCR dispatch level will be retained in the IFM. For Condition 2 RMR Units and for Condition 1 RMR Units that either did not submit DAM Bids or submitted DAM Bids but were not dispatched in the CCR, the CAISO will use the RMR Proxy Bid in the ACR to determine the Energy required from RMR Units for each Trading Hour. If the dispatch level produced through the ACR for a Condition 1 RMR Unit is not greater than the dispatch level produced through CCR, the Unit's original, unmitigated DAM Bid will be retained in its entirety. For a Condition 1 RMR Unit, if the dispatch level produced through the ACR is greater than the dispatch level produced through the CCR, and for a Condition 2 RMR Unit that is dispatched through the ACR, the resource will be flagged as an RMR Dispatch in the Day-Ahead Schedule and shall constitute a Dispatch Notice pursuant to the RMR Contract.

31.2.2.2 Non-RMR Units.

If the dispatch level produced through the ACR is greater than the dispatch level produced through CCR, then the resource is subject to Local Market Power Mitigation, in which case the entire portion of the unit's Bid curve that is above the CCR dispatch level will be mitigated to the lower of the Default Energy Bid as specified in Section 39, or the DAM Bid, but no lower than the unit's highest Bid price that cleared the CCR.

31.3 Integrated Forward Market.

After the MPM-RRD and prior to RUC, the CAISO shall perform the IFM. The IFM performs Unit Commitment and Congestion Management, clears the Energy Bids as modified and in the MPM-RRD, taking into account transmission limits and technical and inter-temporal operating constraints, and ensures that adequate Ancillary Services are procured in the CAISO Control Area to meet 100 percent of the CAISO Forecast of CAISO Demand requirements. The IFM utilizes a set of integrated programs that: (1) determine Day-Ahead Schedules and AS Awards, and related LMPs and ASMPs; and (2) optimally commits resources that are bid in to the DAM. The IFM utilizes a SCUC algorithm based on multi-part supply Bids (including a Start-Up Bid, Minimum Load Bid, and Energy Bid Curve), and a capacity reservation Bid for Ancillary Services as well as Self-Schedules submitted by Scheduling Coordinators. The IFM also provides for the optimal management of Use-Limited Resources. The ELS Resources committed through the ELC Process conducted two days before the day the IFM process is conducted for the next Trading Day as described in Section 31.7 of the CAISO Tariff are binding and the IFM process will model such capacity as capacity that is under a contractual obligation to provide.

31.3.1 Market Clearing and Price Determination.

31.3.1.1 The IFM produces: (1) a set of hourly Day-Ahead Schedules, AS Awards, and AS Schedules for all participating Scheduling Coordinators that cover each Trading Hour of the next Trading Day; and (2) the hourly LMPs for Energy and the ASMPs for Ancillary Services to be used for settlement of the IFM. The CAISO will publish the LMPs at each PNode as calculated in the IFM. In determining

Day-Ahead Schedules, AS Awards, and AS Schedules the IFM optimization will minimize total bid costs based on submitted and mitigated Bids while respecting the operating characteristics of resources, the operating limits of transmission facilities, and a set of scheduling priorities that are described in Section 31.4. In performing its optimization, the IFM first tries to complete its required functions utilizing

Economic Bids without adjusting Self-Schedules, and adjusts Self-Schedules only if it is not possible to balance Supply and Demand and manage Congestion with available Economic Bids.

31.3.1.2 Reduction of LAP Demand.

To the extent the CAISO cannot resolve a non-competitive transmission constraint utilizing effective Economic Bids such that Load at the LAP level in the pre-IFM Pass 2 (ACR) would otherwise be adjusted to relieve the constraint, the CAISO will take the following actions in sequence:

1) Step 1: Schedule the Energy from Self-provided Ancillary Service Bids from capacity that is obligated to offer an Energy Bid under a must-offer obligation such as RMR or Resource Adequacy. Since the otherwise Self-Provided Ancillary Services capacity in question is under a must offer obligation, the associated Energy Bid prices will be either: (a) submitted Energy Bids; or (b) Default Energy Bids to the extent an Energy Bid was not submitted for the Self-Provided Ancillary Services capacity, but not lower than any Energy Bids from the same resource that may have cleared Pre-IFM Pass 1 (ACR).

2) Step 2: In case the measure in Step 1 is insufficient to avoid adjustment of Load at the LAP level, the CAISO will evaluate the validity of the binding transmission constraint and if it is determined that the constraint can be relaxed based on the operating practices, will relax the constraint consistent with operating practices. The CAISO will use the following rules in relaxing the transmission constraints in this step 2:

(a) No constraints on WECC Rated Paths or interties with adjacent Control Areas would be relaxed.

(b) Only the transmission constraints that can be mitigated in the Real-Time Market or Real-Time operation are candidates for constraint relaxation. The criteria used to assess whether or not the constraint can be mitigated in Real-Time can include, but are not limited to, the following: (1) there is a Submission to Self-Provide an Ancillary Service for Operating Reserves from non-RA Resources or non-RMR Units within the transmission constrained Load pocket constrained by the transmission path in question; provided, however, such Submissions to Self-Provide an Ancillary Service cannot be used in Step 1, but is available in Real-Time; (2) Scheduling Coordinators have submitted Self-

Schedules for Participating Load in the constrained Load pocket; or (3) there are non-RA Resources and non-RMR Units within the constrained Load pocket that did not participate in the Day-Ahead Market but can be called upon under their Participating Generator Agreement before CAISO curtails firm Load.

(c) Candidate constraints will be relaxed by assigning a high penalty for constraint violation (as opposed to enforcing them as hard constraints) in this Step 2. Such penalty will be lower than the penalty for curtailing firm (Price Taker) Load.

(d) The higher of the facility rating or the pre-IFM flows through the facility with relaxed constraints in this Step 2 will be used as hard limits in IFM.

(e) To avoid unwarranted price impact in IFM, a constraint violation penalty equal to three times the prevailing Energy Bid cap as specified in Section 39.6 will be applied to the constraints relaxed in Step 2 between their operating limit and the relaxed limit determined.

(f) The information relating to the relaxed constraints will be forwarded to CAISO Operator together with the necessary mitigating measures.

3) Step 3: In case the measures in Step 1 and Step 2 are insufficient, the CAISO may “soften” the LDF constraints on a Node or sub-LAP basis, i.e., adjust Load at individual Nodes or, in aggregate, a group of Nodes to relieve the constraint in such a way that minimizes the quantity of load curtailed. The adjustment to Load at individual Nodes shall be facilitated by adjustment and renormalization of applicable LDFs.

31.3.2 Congestion and Transmission Losses Cost Determination.

Except for those transactions exempt from such charges as specified in Section 11.2.1.5, Scheduling Coordinators will be responsible for MCC and MCL as specified in Section 27.1. The CAISO will determine the Marginal Losses Surplus it has collected and will allocate such revenues to Scheduling Coordinators as described in Section 11.2.1.6.

31.3.3 Metered Subsystems.

In clearing the IFM, the CAISO will not enforce constraints within each MSS. The Full Network Model (FNM) includes a full model of MSS transmission networks used for power flow calculations and constraint management in the IFM and RTM. Network constraints (i.e. circuit ratings, thermal ratings, etc.) within the MSS, or at the its boundaries, shall be monitored but not enforced in the CAISO's FNM. If overloads are observed in the forward markets are internal to the MSS or at the MSS boundaries and are attributable to MSS operations, the CAISO shall communicate such events to the Scheduling Coordinator for the MSS and coordinate any manual re-dispatch required in Real-Time. If, independent of the CAISO, the Scheduling Coordinator for the MSS is unable to resolve Congestion internal to the MSS or at the MSS boundaries in Real-Time, the CAISO will use Exceptional Dispatch Instructions on Resources that have been Bid into the HASP and RTM to resolve the congestion. Such costs will be allocated pursuant to the provisions specified in Section 11.5.6.2.5.2. The CAISO and MSS Operator shall develop specific procedures for each MSS to determine how network constraints will be handled. The Scheduling Coordinator for the MSS shall be responsible for payment of Marginal Losses for transactions at any points of interconnection between the MSS and the CAISO Controlled Grid, and for the delivery of Energy to the MSS or from the MSS in accordance with the CAISO Tariff. For MSS Operators that elect Load following, the CAISO shall exclude the effect of Transmission Losses in the relevant MSS in the CAISO's calculation of loss sensitivity factors used to calculate LMPs.

31.4 Uneconomic Adjustments in the IFM.

All Self-Schedules are respected by SCUC to the maximum extent possible and are protected from curtailment in the Congestion Management process to the extent that there are Economic Bids that can relieve Congestion. If all Economic Bids in the IFM are exhausted, resource Self-Schedules between the resource's Minimum Load and the first Energy level of the first Energy Bid point will be subject to uneconomic adjustments based on the scheduling priorities listed below. Through this process, imports and exports may be reduced to zero, Demand Bids may be reduced to zero, price taker Demand (LAP load) may be reduced, and generation may be reduced to a lower operating (or regulating) limit (or lower

regulating limit plus any qualified Regulation Down Award or Self-Provision of Ancillary Services, if applicable). Any schedules below the Minimum Load level are treated as fixed schedules and are not subject to uneconomic adjustments for Congestion management. The provisions of this section shall apply only to the extent they do not conflict with any MSS Agreement. The scheduling priorities for the IFM from highest priority (last to be adjusted) to lowest priority (first to be adjusted) are as follows:

a) Reliability Must Run (RMR) pre-dispatch reduction;

b) Day-Ahead TOR (balanced demand and supply reduction);

c) Day-Ahead ETCs (balanced demand and supply reduction); Different ETC Priority Levels will be observed based upon global ETC priorities provided to the CAISO by the responsible PTOs;

d) Other Self Scheduled CAISO Demand reduction subject to Section 31.3.1.2 and Self-Scheduled exports at Scheduling Points explicitly sourced by non-Resource Adequacy Capacity;

e) Self-Scheduled exports at Scheduling Points not explicitly sourced by non-Resource Adequacy Capacity;

f) Day-Ahead Ahead Regulatory Must Run and Regulatory Must Take reduction;

g) Other Self Scheduled Supply reduction; and

h) Economic Demand and Supply Bids.

31.5 Residual Unit Commitment.

The CAISO shall perform the RUC process after the IFM. In the event that the IFM did not commit sufficient resources to meet CAISO Demand Forecast and account for other factors such as load forecast error, as described in the Business Practice Manuals, the RUC shall commit additional resources and identify additional RUC Capacity to ensure sufficient on-line resources to meet Demand for each hour of the next Trading Day. RUC Capacity is selected by a SCUC optimization that uses the same FNM used in the IFM to help ensure the deliverability of Energy from the RUC Capacity.

31.5.1 RUC Participation.

31.5.1.1 Capacity Eligible for RUC Participation.

RUC participation is voluntary for Capacity that has not been designated as RA Capacity. Scheduling Coordinators may make such Capacity available for participation in RUC by submitting a RUC Availability Bid, provided the Scheduling Coordinator has also submitted an Energy Bid for such Capacity into the IFM. Capacity from Non-Dynamic System Resources that has not been designated RA Capacity is not eligible to participate in RUC. Capacity from resources including System Resources that has been

designated as qualified RA Capacity must participate in RUC. System Resources eligible to participate in RUC will be considered on an hourly basis; that is, RUC will not observe any multi-hour block constraints that may have been submitted in conjunction with Energy Bids to the IFM. RMR Capacity will be considered in RUC in accordance with Section 31.5.1.3. MSS resources may participate in RUC in accordance with Section 31.5.2.3. COG resources are accounted for in RUC, but may not submit or be paid RUC Availability Payments. The ELS Resources committed through the ELC Process conducted two days before the day the RUC process is conducted for the next Trading Day as described in Section 31.7 of the CAISO Tariff are binding and the RUC process will model such capacity as capacity that is under a contractual obligation to provide.

31.5.1.2 RUC Availability Bids.

Scheduling Coordinators may only submit RUC Availability Bids for Capacity (above the minimum load) for which they are also submitting an Energy Bid to participate in the IFM. The RUC Availability Bid for the RA Capacity submitted by a Scheduling Coordinator must be $0/MW per hour for the entire RA Capacity. If the Scheduling Coordinator fails to submit a $0/MW per hour for RA Capacity, the CAISO will insert the $0/MW per hour for the full amount of RA Capacity for a given resource. Scheduling Coordinators may submit non-zero RUC Availability Bids for the portion of a resource's Capacity that is not RA Capacity.

31.5.1.3 RMR Resources.

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

31.5.2 Metered Subsystem RUC Obligation.

MSS Operators are permitted to make an annual election to opt-in or opt-out of RUC participation. MSS Operators that elect to Load-follow are automatically considered to opt-out of the RUC participation. Prior

to the deadline for the annual CRR Allocation and Auction process, as specified in Section 36, an MSS Operator that has selected not to Load-follow shall notify the CAISO of its RUC participation option for the following CRR cycle.

31.5.2.1 MSS Operator Opts-In to RUC Procurement.

If the MSS Operator opts-in to the RUC procurement process, the Scheduling Coordinator for the MSS will be treated like any other Scheduling Coordinator that Bids in the DAM with respect to RUC procurement by the CAISO and allocation of RUC costs. The CAISO will consider the CAISO forecast of

the MSS Demand in setting the RUC procurement target, and the Scheduling Coordinator for the MSS will be responsible for any applicable allocation of costs related to the Bid Cost Recovery for RUC as provided in Section 11.8.

31.5.2.2 MSS Operator Opts-out of RUC Procurement.

If an MSS Operator opts out of the RUC procurement process, the CAISO shall not consider the CAISO forecast of the MSS Demand in setting the RUC procurement target, and will not commit resources in RUC to serve the MSS Demand. The MSS Operator shall be responsible for meeting the Supply requirements for serving its Demand in accordance with this Section 31.5.2.2, and it will be exempt from the allocation of costs related to the Bid Cost Recovery for RUC as provided in Section 11.8. The MSS that opts out of the CAISO's RUC procurement will have two options for meeting the Supply requirements for serving its Demand, which it will select on an hourly basis depending on how it Self-Schedules its Demand in the DAM.

31.5.2.2.1 Based on CAISO Demand Forecast.

If the Scheduling Coordinator for the MSS submits hourly Demand Self-Schedules in the DAM that are greater than or equal to the CAISO Demand Forecast for the MSS Demand, the Scheduling Coordinator will have met its Supply requirement for such hours and will be exempt from the allocation of costs related to the Bid Cost Recovery for RUC as provided in Section 11.8.

31.5.2.2.2 Not Based on CAISO Demand Forecast.

If the Scheduling Coordinator for the MSS submits hourly Demand Self-Schedules in the DAM that are less than the CAISO Demand Forecast for the MSS Demand, the Scheduling Coordinator will be exempt from the RUC cost allocation but will be monitored for its compliance with the Supply requirement based on the following performance criteria. If the MSS Demand Self-Schedule in the IFM for a given Trading Hour is less than the CAISO Demand Forecast for the MSS Demand and less than the actual metered Demand of the MSS for that Trading Hour, then penalty points will be accrued as follows: (i) If the difference between the actual metered Demand and the IFM Self-Schedule in any hour is greater than the lesser of two (2) percent of the CAISO Demand Forecast for the MSS or five (5) MW, but less than the lesser of five (5) percent or ten (10) MW, then the Scheduling Coordinator for the MSS will have one (1)

penalty point against it for each occurrence; (ii) if the difference in any hour is more than the lesser of five (5) percent or ten (10) MW, but less than the lesser of ten (10) percent or twenty (20) MW, then the Scheduling Coordinator for the MSS will have two (2) penalty points against it for each occurrence; (iii) if the difference in any hour is more than the lesser of ten (10) percent or twenty (20) MW, then the Scheduling Coordinator for the MSS will have five (5) penalty points against it for each occurrence. The maximum penalty points that can be accrued during a single Trading Day for each MSS will be five (5). A total of more than twenty (20) penalty points within twelve (12) consecutive months will require the MSS to opt-in to RUC for the remainder of the CRR Cycle and for the following CRR Cycle. The provisions in this Section 31.5.2.2.2 do not apply to MSS Operator that has elected to Load-follow, and only apply to non-Load-following MSS Operators.

31.5.2.3 MSS Option to Bid RUC Capacity.

The Scheduling Coordinator for the MSS Operator may submit RUC Availability Bids for the capacity of MSS Resources and receive RUC Availability Payments and RUC Cost Compensation for such capacity selected in RUC, subject to the same bidding and operational requirements as any other resources providing RUC capacity. This capability is not affected by the MSS Operator's decision to Opt-In to or Opt-Out of RUC per Sections 31.5.2.1 and 31.5.2.2.

31.5.3 RUC Procurement Target.

The procurement target for RUC in any given Trading Hour will be determined based on the next day's hourly CAISO Forecast of CAISO Demand less the Energy scheduled in the Day-Ahead Schedule, and accounting for other factors, as appropriate, such as load forecast error and estimated incremental HASP Bids including those from PIRP resources. The adjustments listed below in Sections 31.5.3.1 to 31.5.3.6 will be made to the CAISO Forecast of CAISO Demand to account for the conditions as provided therein. Adjustments may be made on a RUC zone basis. The RUC procurement target-setting procedure is designed to meet the requirements of reliable grid operation without unnecessary over-procurement of RUC Capacity or over-commitment of resources. Additional detail on the process for setting the RUC procurement target is specified in the Business Practice Manuals.

31.5.3.1 CAISO Operator Review & Adjustment

The CAISO Operator reviews the CAISO Forecast of CAISO Demand and all calculated adjustments as provided in Sections 31.5.3.2 through 31.5.3.6. The CAISO Operator shall accept, modify, or reject such adjustments based on Good Utility Practice. If the CAISO Operator determines it must modify or reject adjustments, the CAISO Operator shall log sufficient information as to reason, Operating Hour, and specific modification(s) made to the calculated adjustments.

31.5.3.2 Demand Response Adjustments

The CAISO shall account for demand response that is clearly communicated to the CAISO as certain to be curtailed for the next Trading Day only for the two following types of demand response: 1) demand response triggered by a staged emergency event; and 2) demand response that is triggered by a price or an event known in advance. If an LSE informs the CAISO prior to close of the DAM, the CAISO Forecast of CAISO Demand used as the RUC procurement target will be reduced accordingly.

31.5.3.3 MSS Adjustment

As specified in section 31.5.2.1, MSS Operators are permitted to make an annual election to opt-in or opt-out of RUC participation. If the MSS Operator opts-in to the RUC procurement process, the CAISO considers the CAISO's forecast of the MSS Demand in setting the RUC procurement target and if an MSS Operator opts-out of the RUC procurement process, CAISO does not consider the CAISO's forecast of the MSS Demand in setting the RUC procurement target. An MSS that has elected to opt-out of RUC, or has elected to Load follow and therefore has also elected to opt-out of RUC, is required to provide sufficient resources in the Day-Ahead Market, and in the case of a Load following MSS, follow its Load within a tolerance band. To reflect these options and to prevent committing additional capacity or resources for any differences between the CAISO Forecast of CAISO Demand for the MSS and the MSS Self-Scheduled quantities in the IFM, the CAISO replaces the CAISO Forecast of CAISO Demand for such MSSs with the quantity of Demand self-scheduled by the MSS in the IFM.

31.5.3.4 Eligible Intermittent Resource Adjustment

Eligible Intermittent Resources may submit Bids, including Self-Schedules in the Day-Ahead Market and the quantity ultimately scheduled from Eligible Intermittent Resources may differ from the CAISO forecasted deliveries from the Eligible Intermittent Resources. CAISO may adjust the forecasted Demand either up or down for such differences by RUC zone for which the Eligible Intermittent Resource resides. To the extent the scheduled quantity for an Eligible Intermittent Resource in IFM is less then the quantity forecasted by CAISO, the CAISO makes a Supply side adjustment in RUC by using the CAISO forecasted quantity for the Eligible Intermittent Resource as the expected delivered quantity. To the extent the scheduled quantity for an Eligible Intermittent Resource in IFM is greater then the quantity forecasted by CAISO, CAISO makes a Demand side adjustment to the RUC zone Demand equal to the difference between the Day-Ahead Schedule and the CAISO forecasted quantity.

31.5.3.5 Real-Time Expected Incremental Supply Self-Schedule Adjustment

In order to avoid over procurement of RUC, CAISO shall, using a similar-day approach, estimate the HASP Self-Schedules for resources that usually submit HASP Self-Schedules that are greater than their Day-Ahead Schedules. The CAISO Operator may set the length of the Self-Schedule moving average window. Initially this moving average window shall be set by default to seven days; in which case the weekday estimate is based on the average of five most recent weekdays and the weekend estimate is based on the average of the two most recent weekend days. To the extent weather conditions differ significantly from the historical days, additional adjustment may be necessary. After determining the estimate of Real-Time Self-Schedules, using a similar day forecasting approach, the CAISO adjusts the CAISO Forecast of CAISO Demand of a RUC zone based on the forecasted quantity changes in Supply as a result of Self-Schedules submitted in RTM. This adjustment for forecasted Real-Time Self-Schedules may result in positive or negative adjustments. Demand adjustments to the CAISO Forecast of CAISO Demand result when there is a net forecast decrease in Real-Time Self-Schedule Supply relative to the

Day-Ahead Schedule Supply. Supply adjustments to the individual resources occur when there is a net forecast increase in Real-Time Self-Schedule Supply relative to the Day-Ahead Schedule Supply of the individual resource.

31.5.3.6 Day-Ahead Ancillary Service Procurement Deficiency Adjustment

While CAISO intends to procure 100% of its forecasted Ancillary Service reserve requirement in the IFM based on the CAISO Forecast of CAISO Demand as specified in Section 8.3.1, CAISO shall make adjustments to the CAISO Forecast of CAISO Demand used in RUC to ensure sufficient capacity is available or resources committed in cases that CAISO is unable to procure 100% of its forecasted reserve requirement in the IFM; provided, however, that the CAISO shall not procure specific Ancillary Services products in RUC, nor will the RUC optimization consider AS-related performance requirements of available capacity.

31.5.4 RUC Procurement Constraints.

In addition to the resource constraints and network constraints employed by SCUC as discussed in Section 27.4.1, the CAISO shall employ the following three constraints in RUC:

To ensure that sufficient RUC Capacity is procured to meet CAISO Forecast of CAISO Demand the CAISO will enforce the power balance between the total Supply, which includes Day-Ahead Schedules and RUC Capacity, and the total Demand, which includes the CAISO Forecast of CAISO Demand and IFM Export Schedules. The CAISO may adjust the CAISO Forecast of CAISO Demand to increase the RUC procurement target if there is AS Bid insufficiency in the IFM.

To ensure that RUC will neither commit an excessive amount of Minimum Load Energy nor procure an excessive amount of RUC Capacity from Scheduling Points the CAISO will verify that the sum of Day-Ahead Schedules, Schedules of Generation Units, net imports and Participating Loads plus the Minimum Load Energy committed by RUC is not greater than a configurable percentage of the system CAISO Forecast of CAISO Demand.

The CAISO can limit the amount of RUC Capacity it will procure from resources that could otherwise be started during the Operating Day. The CAISO will verify that the total Day-Ahead Schedules and RUC Capacity from such resources is not greater than a configurable percentage of the total available capacity of all such resources.

31.5.5 Selection and Commitment of RUC Capacity.

Capacity that is not already scheduled in the IFM may be selected as RUC Capacity through the RUC process of the DAM. The RUC optimization will select RUC Capacity and produce nodal RUC Prices by minimizing total Bid cost based on RUC Availability Bids and Start-Up and Minimum Load Bids. RUC will not consider Start-Up and Minimum Load Bids for resources already committed in the IFM. The RUC Capacity of a resource is the incremental amount of capacity selected in RUC above the resource's Day-Ahead Schedule. The resource's Day-Ahead Schedule plus its RUC Capacity comprise the resource's RUC Schedule. The CAISO will only issue RUC Start-up Instructions to resources that must start in the Day-Ahead in order to be available to meet Real-Time Demand. RUC Schedules will be provided to Scheduling Coordinators even if a RUC Start-Up Instruction is not issued at that time. RUC shall not

reverse commitments issued through the IFM. If the RUC process cannot find a feasible solution given the resources committed in the IFM, the RUC process will adjust constraints as described in Section 31.5.4 to arrive at a feasible solution that accommodates all the resources committed in the IFM, and any necessary de-commitment of IFM committed units shall be effectuated through an Exceptional Dispatch.

31.5.6 Eligibility for RUC Compensation.

All RUC Capacity is eligible for the RUC Availability Payment except for: (i) RUC Capacity from RMR Units that has been designated as RMR Dispatch and included in RUC as a Self-Schedule; (ii) RA Capacity; and (iii) RUC Capacity that corresponds to the resource's Minimum Load 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 Units, are also eligible for RUC Cost Compensation, which includes Start-Up 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.

31.6 Timing of Day-Ahead Scheduling.

31.6.1 The CAISO may at its sole discretion implement any temporary variation or waiver of the timing requirements of this Section 31 and Section 6.5.3 (including the omission of any step) if any of the following criteria are met:

(i) such waiver or variation of timing requirements is reasonably necessary to preserve System Reliability, prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.

(ii) because of error or delay, the CAISO requires additional time to fulfill its responsibilities ;

(iii) problems with data or the processing of data cause a delay in receiving or issuing Bids or publishing information on the CAISO's secure communication system;

(iv) problems with telecommunications or computing infrastructure cause a delay in receiving or issuing Day-Ahead Schedules or publishing information on the CAISO's secure communication system.

31.6.2 If the CAISO temporarily implements a waiver or variation of such timing requirements, the CAISO will publish the following information on the CAISO's secure communication system as soon as practicable:

(i) the exact timing requirements affected;

(ii) details of any substituted timing requirements;

(iii) an estimate of the period for which this waiver or variation will apply;

(iv) reasons for the temporary waiver or variation.

31.6.3 If, despite the variation of any time requirement or the omission of any step, the CAISO either fails to receive sufficient Bids or fails to clear Day-Ahead Market , the CAISO may abort the Day-Ahead Market and require all Bids to be submitted in the HASP and RTM.

31.6.4 Demand Information.

By 6:00 a.m. on the day preceding the Trading Day, each Scheduling Coordinator shall provide to the CAISO a Demand Forecast specified by UDC Service Area for which it will submit a Bid for each of the Settlement Periods of the following Trading Day. The CAISO shall aggregate the Demand information by UDC Service Area and transmit the aggregate Demand information to each UDC serving such aggregate Demand.

31.7 Extremely Long-Start Commitment Process

The CAISO shall perform the Extremely Long-Start Commitment Process (ELC Process) after the regular DAM results are posted. During the ELC Process the CAISO shall use a 48-hour simultaneous SCUC to assist it in determining the commitment of ELS Resources. ELS Resources are flagged in the Master File and are the only resources eligible to be committed in the ELC Process.

31.7.1 Execution of the Extremely Long-Start Commitment Process

Each day after the DAM results are posted, the CAISO shall conduct the ELC Process to determine commitment of ELS Resources for to be available to the CAISO Markets in the second day out. The

CAISO will use the latest CAISO Forecast of CAISO Demand available to the CAISO for the Trading Day two days ahead of the current day that the ELC Process is executed. For the purpose of conducting the ELC Process, the CAISO will set the Ancillary Services requirements for the second day out based on the CAISO Forecast of CAISO Demand and forecasted firm imports. The CAISO shall execute a 48-hour simultaneous SCUC process to inform the decisions made in the ELC Process. The result of the 48-hour simulataneous SCUC process shall be reviewed by the CAISO Operator. The CAISO Operator shall use its operator judgment consistent with Good Utility Practice to determine whether the commitment instructions to the ELS Resources for the second day in the 48-hour Time Horizon should be implemented. The ELC Process shall not dispatch Energy for the ELC Process Time Horizon and therefore the commitment instructions do not include megawatts schedules greater than the Minimum Load. The Energy and Ancillary Service requirements are re-evaluated by the IFM executed the day after the applicable ELC Process. The commitment statuses of the ELS Resources are passed to the Bid validation process for use in the DAM for theTrading Day two days after the current day when ELC Process is executed.

31.7.2 Inputs Used in the Extremely Long-Start Commitment Process

31.7.2.1 Energy Bids & Ancillary Services Bids for The First Day of the ELC Process Time Horizon

The commitment results that have been determined in the DAM for the Trading Day as reflected in the Day-Ahead Schedule and RUC Schedule issued on the current day that the ELC Process is executed, representing the first day of the 48-hour ELC Process, are modeled as self-committed. These resources are modeled as Self-Scheduled at the greater of the Day-Ahead Schedule for Energy or RMR Generation requirement, plus any RUC Awards for the purpose of running the 48-hour SCUC optimization in the ELC Process. This Self-Scheduled consideration is only for modeling purposes and does not affect eligibility for BCR of such resources for that Trading Day. The Self-Provided Ancillary Services and the Ancillary Service Awards produced by the IFM application on the current day that the ELC Process is executed are fixed in the applicable ELC Process and, therefore, the ELC Process does not procure any additional Ancillary Services for the first day of the ELC Process Time Horizon.

31.7.2.2 Energy Bids & Ancillary Services Bids for the Second Day of the ELC Process Time Horizon

For all resources that are not ELS Resources, Bids for supply of Energy and Ancillary Services submitted for the first Trading Day of the ELC Process as submitted for the DAM for the same Trading Day are replicated as a surrogate for the Bids for the second Trading Day of the ELC Process Time Horizon. For all ELS Resources, Bids submitted for the Trading Day two days ahead of the current day on which the ELC Process is executed will be used as the Bids used for the second Trading Day of the ELC Process Time Horizon.

31.7.2.3 Outages Considerations

Any resource and transmission Outages and de-rates, including Ramp Rate de-rates, are considered in the applicable commitment intervals in the two-day Time Horizon.

31.7.2.4 Initial & Boundary Conditions

The CAISO will make the following assumptions in the ELC Process regarding resources already committed:

1) A resource that is committed by the IFM in a Trading Hour in the Trading Day is considered committed in the same hour in the same Trading Day within the ELC Process Time Horizon.

2) A resource that has an RMR requirement in a Trading Hour in the Trading Day is considered committed in the same hour in the same Trading Day within the ELC Process Time Horizon.

3) A resource that has a RUC Schedule in a Trading Hour in the Trading Day is considered committed in the same hour in the same Trading Day within the ELC Process Time Horizon.

31.7.2.5 Constraints

The ELC Process optimization will enforce the same Constraints that are enforced in RUC on the day the ELC Process is executed. These include but are not limited to the following:

1) The Energy balancing constraints to meeting CAISO Forecast of CAISO Demand adjustable by RUC zones.

2) The resource Constraints including capacity, Ramp Rates, Energy Limits, Forbidden Operating Regions, Minimum Run Time and Minimum Down Time constraints, considering any Outages in the ELC Process Time Horizon.

3) The transmission Constraints including branch limits, Branch Group Limits, and Nomograms, considering any Outages in the ELC Process Time Horizon.

4) Both Self-Provided Ancillary Services and Ancillary Services Awards are fixed for the first day of the ELC Process Time Horizon. The AS requirements as used in the IFM remain the same for the first day of the ELC Process Time Horizon optimization. The Ancillary Services requirements for the second day of the ELC Process Time Horizon are specified for the ELC Process optimization using the Ancillary Services procurement process.

31.7.3 Output of Extremely Long-Start Commitment Process

The results of the ELC Process are produced by 1500 hours two days ahead of the Trading Day. The results of the ELC Process indicate the commitment decisions for ELS Resources that were made in the ELC Process the day before. These commitment decisions are binding and the DAM applications model the committed ELS Resources as resources that are under a contractual obligation to provide. The CAISO Commitment or Self-Commitment Period determination for the ELS Resources depends on the DAM results and the Clean and Generated Bids, following the same rules that apply to other resources. All commitment intervals for the ELS Resources will be classified as CAISO Commitment Periods, unless there is a Self-Schedule or Self-Provided AS for that interval.

32 [Not Used]

33. HOUR-AHEAD SCHEDULING PROCESS (HASP).

The HASP is the hour-ahead process during the Real-Time which consists of the following activities. The HASP includes a special hourly run of the Real-Time Unit Commitment (RTUC), which is also one of the component processes of the RTM. The RTUC utilizes a SCUC optimization and runs every 15 minutes, as fully described in Section 34. This Section 33 describes the special features of the specific hourly HASP run of the RTUC. The HASP combines provisions for the CAISO to issue hourly pre-dispatch instructions to System Resources that submit Energy Bids to the RTM and for the procurement of Ancillary Services on an hourly basis from System Resources, with provisions for Scheduling Coordinators to self-schedule changes to their the Day-Ahead Schedules as provided in Section 33.1, and submit Bids to export Energy at Scheduling Points. The HASP also performs the MPM-RRD procedure with respect to the Bids that will be used in the HASP optimization and in the RTM processes for the same Trading Hour.

33.1 Submission of Bids for the HASP and RTM.

Scheduling Coordinators may submit Bids that will be used for the HASP and the RTM processes starting from the time Day-Ahead Schedules have been posted until seventy-five (75) minutes prior to each applicable Trading Hour in the Real-Time. The HASP and RTM processes do not accept Demand Bids for CAISO Demand, or Self-Schedules for exports other than those utilizing ETC or TOR rights. Export Bids that are not Self-Schedules may be submitted in HASP. The rules for submitted Bids specified in Section 30 apply to Bids submitted to the HASP and RTM. After the Market Close of the HASP and the RTM the CAISO performs a validation process consistent with the provisions set forth in Section 30.7. Bids submitted to the HASP and the RTM to supply Energy and Ancillary Services will be considered in the various HASP and RTM processes, including the MPM-RRD process, the HASP optimization, the STUC, the RTUC and the RTD.

33.2 The HASP Optimization.

After the Market Close for the HASP and RTM for the relevant Trading Hour, the Bids have been validated and the MPM-RRD process has been performed, the HASP optimization determines feasible but non-binding HASP Advisory Schedules for Generating Units for each 15-minute interval of the Trading Hour, as well as binding hourly HASP Intertie Schedules and binding hourly HASP AS Awards from Non-Dynamic System Resources for that Trading Hour. The HASP may also commit resources whose Start-Up Time is within its Time Horizon. The HASP, like the other runs of the RTUC, utilizes the same SCUC optimization and FNM as the IFM, with the FNM updated to reflect changes in system conditions as appropriate, to ensure that HASP Intertie Schedules are feasible. Instead of clearing against Demand Bids as in the IFM, the HASP clears Supply against the CAISO Forecast of CAISO Demand plus submitted Export Bids, to the extent the Export Bids are selected in the MPM-RRD process. The HASP optimization also factors in forecasted unscheduled flow at the interties. The HASP optimization produces Settlement prices for hourly imports and exports to and from the CAISO Control Area reflected in the HASP Intertie Schedule and for the HASP AS Awards for System Resources.

33.3 Treatment of Self-Schedules in HASP.

Scheduling Coordinators may submit Self-Schedules for Supply of Energy to the HASP. This includes Self-Schedules by Participating Load that is submitting Bids as a negative generator. Scheduling Coordinators may not submit Self-Schedules for CAISO Demand in HASP. Scheduling Coordinators may submit Self-Schedules for exports at Scheduling Points including but not limited to exports that utilize TORs and ETC rights that have post-Day-Ahead scheduling rights, and including Self-Schedules for wheel-throughs. The HASP optimization clears Bids, including Self-Schedules, while preserving all priorities in this process consistent with Section 31.4. The HASP optimization does not adjust submitted Self Schedules unless it is not possible to balance Supply and the CAISO Forecast of CAISO Demand plus Export Bids and manage Congestion using the available Economic Bids, in which case the HASP performs non-economic adjustments to Self-Schedules. The MWh quantities of Self-Scheduled Supply

that clear in the HASP constitute a feasible dispatch for the RTM at the time HASP is run, but the HASP results do not constitute a final schedule for Generating Units because these resources may be adjusted non-economically in the RTD if necessary to manage Congestion and clear Supply and Demand. Self-Schedules submitted for Generation Units that clear in the HASP will be issued HASP Advisory Schedules. Scheduling Coordinators representing RA-PIRP resources must

submit Self-Schedules in HASP in accordance with the forecast provided by the independent Forecast Service Provider.

33.4 MPM-RRD for the HASP and the RTM.

After the Market Close of the HASP and RTM, after the CAISO has validated the Bids pursuant to section 30.7, and prior to running the HASP optimization, the CAISO conducts the MPM-RRD process, the results of which will be utilized in the HASP optimization and all RTM processes for the Trading Hour. The MPM-RRD process for the HASP and RTM produces results for each fifteen-minute interval of the Trading Hour and thus may produce up to four mitigated Bids for any given resource for the Trading Hour. 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. The Bids are mitigated only for the Bid quantities that are above the minimum quantity cleared in the CCR across all four 15-minute intervals. For a Condition 1 RMR Unit, if the dispatch level produced through the ACR is greater than the dispatch level produced through the CCR, and for a Condition 2 RMR Unit that is dispatched through the ACR, the resource will be flagged as an RMR Dispatch in the RTM and shall constitute a Dispatch Notice pursuant to the RMR Contract.

33.5 [NOT USED]

33.6 HASP Results.

The CAISO publishes the binding HASP Intertie Schedules and HASP AS Awards for System Resources, as well as HASP Advisory Schedules and HASP AS Awards for internal Generating Units no later than 45 minutes prior to the Trading Hour.

33.7 Ancillary Services in the HASP and the RTUC.

To maintain required Ancillary Services when changes in forecasts of Demand and resource outages occur after the Day-Ahead AS Awards are established, the CAISO utilizes the RTUC runs, including the HASP, to procure additional Ancillary Services needed to meet reliability criteria. The HASP meets the expected need for additional Ancillary Services for the Trading Hour by utilizing the optimal mix of Ancillary Services from System Resources and from Generating Units. Only the AS from System Resources are binding Awards, and these are for the full Trading Hour. Those Generating Units designated in the HASP to provide Ancillary Services for the same Trading Hour are given non-binding

advisory awards as a result of the HASP because the use of Generating Units to provide AS will be re-optimized by a subsequent RTUC that is run closer to the time the AS will actually be needed, as described in Section 34.2. The HASP AS Awards for System Resources are settled at hourly ASMPs that are calculated in the HASP as described in Section 33.8. All Operating Reserves procured in HASP are Contingency Only Operating Reserves.

33.8 HASP Prices for HASP Intertie Schedules and HASP AS Awards.

The RTUC will produce 15-minute LMPs for the four 15-minute intervals for the applicable Trading Hour. The 15-minute LMPs corresponding to the Scheduling Points are then used to derive a simple average hourly price for the Settlement of Hourly Intertie Schedules at each Scheduling Point. The RTUC will also produce 15-minute ASMPs for the four 15-minute intervals for the applicable Trading Hour. These 15-minute ASMPs are then used to derive an average hourly price for the Settlement of hourly HASP AS Awards. The RTUC run will also produce 15-minute Shadow Prices for each of the interties for the four 15-minute intervals for the applicable Trading Hour. These 15-minute Shadow Prices are then used to derive an average hourly price for charging Hourly Intertie AS Award providers for Congestion on the interties. HASP Intertie Schedules and HASP AS Awards are settled in accordance with Sections 11.4 and 11.10.1.2 respectively.

33.9 Cessation of the HASP.

If, despite the variation of any time requirement or omission of any step, the CAISO is unable to operate the HASP, the CAISO may abort the HASP and perform all required functions through the RTM processes.

34. REAL-TIME MARKET.

The RTM is the market conducted by the CAISO during any given operating day in which Scheduling Coordinators may provide Real-Time Imbalance Energy and Ancillary Services. The Real-Time Market consists of the Real-Time Unit Commitment (RTUC), the Short-Term Unit Commitment (STUC) and the Real-Time Dispatch (RTD) processes. The Short-Term Unit Commitment (STUC) runs once per hour at the top of the hour and utilizes the SCUC optimization to commit Medium Start, Short-Start and Fast Start Resources to meet the CAISO Demand Forecast. The CAISO shall dispatch all resources, including Participating Load pursuant to submitted Bids or pursuant to the provisions below on Exceptional Dispatch. The Time Horizon of the STUC is approximately 255 minutes, starting with the fourth 15-minute interval of the next Trading Hour and extending for the next four Trading Hours. The RTUC runs every 15 minutes and utilizes the SCUC optimization to commit Fast-Start and some Short-Start resources and to procure any needed AS on a 15-minute basis. Any given run of the RTUC will have a Time Horizon of approximately 60 to 105 minutes (four to seven 15-minute intervals) depending on when during the hour the run occurs. Not all resources committed in a given STUC or RTUC run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide energy when it is expected to be needed. The RTD uses a Security Constrained Economic Dispatch (SCED) algorithm every five minutes throughout the Trading Hour to determine optimal Dispatch Instructions to balance Supply and Demand and maintain required Ancillary Services quantities for the next binding target interval. The RTD optimization utilizes up to a 65-minute Time Horizon (13 five-minute intervals), but the CAISO issues Dispatch Instructions only for the next target five-minute Interval. The RTUC, STUC and RTD processes of the RTM use the same FNM used in the DAM and the HASP, subject to any necessary updates of the FNM pursuant to changes in grid conditions after the DAM has run.

34.1 Inputs to the Real-Time Market.

The RTM utilizes results produced by the DAM and HASP for each Trading Hour of the Trading Day, including the combined commitments contained in the Day-Ahead Schedules, Day Ahead AS Awards, RUC Awards, HASP Intertie Schedules, HASP Self-Schedules, HASP Intertie AS Awards and the MPM-RRD that is run as part of the HASP to determine reliability needs and mitigated bids for each relevant

Trading Hour. These results, plus the short-term Demand Forecast, Real-Time Energy Bids, Real-Time Ancillary Service Bids, updated FNM, State-Estimator output, resource outage and de-rate information constitute the inputs to the RTM processes.

34.2 Real-Time Unit Commitment.

The Real-Time Unit Commitment (RTUC) process uses SCUC and is run every 15 minutes to: (1) make commitment decisions for Fast-Start and Short-Start resources having Start-Up Times within the Time-Horizon of the RTUC process, and (2) procure required additional Ancillary Services and calculate ASMP used for settling procured Ancillary Service Capacity for the next 15 minute Real-Time Ancillary Service Interval. RTUC is run four times an hour, at the following times for the following Time Horizons: (1) at approximately 7.5 minutes prior to the next Trading Hour, in conjunction with the HASP run, for T-45 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-30 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T to T+60 minutes where T is the beginning of the next Trade Hour. The HASP, described in Section 33, is a special RTUC run that is performed at approximately 7.5 minutes before each hour and has the additional responsibility of: (1) pre-dispatching Energy and awarding Ancillary Services for hourly dispatched System Resources for the Trading Hour that begins 67.5 minutes later, and (2) performing the necessary MPM-RRD for that Trading Hour.

34.2.1 Commitment of Fast Start and Short Start Resources.

RTUC produces binding and advisory Start-Up and Shut-Down Dispatch instructions for Fast-Start and Short-Start resources that have Start-Up Times that would allow the resource to be committed prior to the end of the relevant Time Horizon of the RTUC run. A Start-Up Dispatch instruction is considered binding if the resource could not achieve the target start time as determined in the current RTUC run in a subsequent RTUC run as a result of the Start-Up Time of the resource. A Start-Up instruction is considered advisory if it is not binding, such that the resource could achieve its target Start Time as determined in the current RTUC run in a subsequent RTUC run based on its Start-Up Time. A Shut-Down Instruction is considered binding if the resource could achieve the target Shut-Down Time as determined in the current RTUC in a subsequent RTUC run. A Shut-Down Dispatch Instruction is considered advisory if the resource Shut-Down Instruction is not binding such that the resource could

achieve its target Shut Down time as determined in the current RTUC run in a subsequent RTUC run. A binding Dispatch Instruction that results in a change in Commitment Status will be issued, in accordance with Section 6.3, after review and acceptance of the Start-Up instruction by the CAISO Operator. An advisory Dispatch Instruction changing the Commitment Status of a resource may be modified by the CAISO Operator to a binding Dispatch Instruction and communicated in accordance with Section 6.3 after review and acceptance by the CAISO Operator. Only binding and not advisory Dispatch Instructions will be issued by the CAISO.

34.2.2 Real-Time Ancillary Services Procurement.

If the CAISO determines that additional Ancillary Services are required, other than those procured in the DAM and the HASP, the RTUC will procure Ancillary Services on a 15-minute basis as necessary to meet reliability requirements and will determine Real-Time Ancillary Service Interval ASMPs for such AS for the next Commitment Period. All Operating Reserves procured in the RTM are considered Contingency Only Operating Reserves. All Ancillary Service awarded in RTUC will be taken as fixed for the three 5-minute RTD intervals of its target 15-minute interval. In the RTUC, all resources certified and capable of providing Operating Reserves that have submitted Real-Time Energy Bids shall also submit applicable Spin or Non-Spin Reserves Bids, respectively, depending on whether the resource is online or offline. The CAISO will utilize the RTUC to procure Operating Reserves to restore its Operating Reserve requirements in cases when: (1) Operating Reserves awarded in DAM or HASP have been dispatched to provide Energy, (2) resource(s) awarded to provide Operating Reserves in the DAM or HASP or no longer capable of providing such awarded Operating Reserves, or (3) the Operator determines that additional Operating Reserves are necessary to maintain Operating Reserves within WECC/MORC criteria. All resources certified and capable of providing Regulation that have submitted Real Time Energy bids shall also submit applicable Regulation Bids. The CAISO will utilize the RTUC to procure additional Regulation capacity in real-time in cases when: (1) resource(s) awarded to provide Regulation in the DAM or HASP are no longer capable of providing such awarded Regulation, or (2) the Operator determines that additional Regulation is necessary to maintain sufficient control consistent with NERC/WECC criteria and good utility practice.

34.3 Real-Time Dispatch.

The RTD can operate in three modes: RTED, RTCD and RTMD. The RTD (RTED and RTCD mode) uses a Security Constrained Economic Dispatch (SCED) algorithm every five minutes throughout the Trading Hour to determine optimal Dispatch Instructions to balance Supply and Demand and maintain required Ancillary Service quantities for the next binding target interval. The Real-Time Economic Dispatch (RTED) will be used under most circumstances and will optimally dispatch resources based on their Energy bids, excluding Contingency Only Operating Reserves except when needed to avoid an imminent System Emergency. The Real-Time Contingency Dispatch (RTCD) will be invoked when a transmission or generation contingency occurs and will include all Contingency Only Operating Reserves in the optimization. The Real Time Manual Dispatch (RTMD) will be invoked as a fall-back mechanism only when the RTED or RTCD fails to provide a feasible dispatch. These three modes of the RTD are described in Sections 34.3.1 to 34.3.3.

34.3.1 Real-Time Economic Dispatch.

RTED mode of operation for RTD normally runs every 5 minutes starting at approximately 7.5 minutes prior to the start of the next Dispatch Interval and produces a binding Dispatch Instruction for energy for the next Dispatch Interval and advisory Dispatch Instructions for as many as twelve future Dispatch Intervals over the RTD optimization Time-Horizon of 65 minutes. After being reviewed by CAISO Operator, only binding Dispatch Instructions are communicated for the next Dispatch Interval in accordance with Section 6.3. RTED will produce a Dispatch Interval LMP for each PNode for the Dispatch Interval associated with the binding Dispatch Instructions.

34.3.2 Real-Time Contingency Dispatch.

RTCD mode of operation for RTD is run in response to a significant Contingency event, such that waiting until the next normal RTD run is not adequate and/or Operating Reserve identified as Contingency Only need to be activated in response to the event. The CAISO Operator may activate the Operating Reserve identified as Contingency Only either on a resource specific basis or for all such resources. When activating Contingency Only reserves in RTCD, the original Energy Bids associated with the resources providing Operating Reserve will be used for the RTCD. RTCD uses SCED to produce an optimized set

of binding Dispatch Instruction for a single 10 minute Dispatch Interval instead of a normal 5 minute Dispatch Interval. After being reviewed by CAISO Operator, only binding Dispatch Instructions are communicated for the next Dispatch Interval in accordance with Section 6.3. When activating a RTCD and returning to normal RTED run after a RTCD run, 5-minute Dispatch Interval LMPs will be produced for each PNode be based on the last available price from either the RTCD or normal RTED run relative to a 5-minute target Dispatch Interval.

34.3.3 Real-Time Manual Dispatch.

RTMD mode of operation for RTD is a merit-order run activated upon CAISO Operator request as a backup process in case the normal RTED process fails to converge. The RTMD run will provide the CAISO Operator a list of resources and quantity of MW available for dispatch in merit-order based on Operational Ramp-Rate but otherwise ignores transmission losses and network constraints. The CAISO Operator may Dispatch resources from the list by identifying the quantity of Imbalance Energy that is required for the System and/or directly selecting resources from the merit order taking into consideration actual operating conditions. After Dispatches have been selected, reviewed and accepted by CAISO Operator, Dispatch Instructions will be communicated in accordance with Section 6.3. While the RTMD mode is being used for Dispatch a uniform 5-minute MCP will be produced for all PNodes based on the merit order Dispatch. Until RTMD is actually run and RTMD-based Dispatch Instructions are issued after RTED fails to converge, all 5-minute Dispatch Interval LMPs will be set to the last LMP at each Node produced by the last RTED run that converged.

34.4 Short-Term Unit Commitment.

At the top of each Trading Hour, immediately after the RTUC run is completed, the CAISO performs an approximately five (5) hour Short-Term Unit Commitment (STUC) run using SCUC and the CAISO Forecast of CAISO Demand to commit Medium Start Units and Short Start Units with Start-Up Times greater than the Time Horizon covered by the RTUC. The Time Horizon for the STUC optimization run will extend three hours beyond the Trading Hour for which the RTUC optimization was run, and will replicate the Bids used in that Trading Hour for these additional hours. The CAISO revises these replicated Bids each time the hourly STUC is run, to utilize the most recently submitted Bids. A Start-Up instruction produced by STUC is considered binding if the resource could not achieve the target Start-Up

Time as determined in the current STUC run in a subsequent RTUC or STUC run as a result of the Start-Up time of the resource. A Start-Up instruction produced by STUC is considered advisory if it is not binding, such that the resource could achieve its target start time as determined in the current RTUC run in a subsequent STUC or RTUC run based on its Start-Up Time. A binding Dispatch Instruction produced by STUC that results in a change in Commitment Status will be issued, in accordance with Section 6.3, after review and acceptance of the Start-up instruction by the CAISO Operator. The STUC will only decommit a resource to the extent that resource's physical characteristics allow it to be cycled in the same Time Horizon for which it was decommitted. STUC does not produce prices for Settlement.

34.5 General Dispatch Principles.

The CAISO shall conduct all Dispatch activities consistent with the following principles:

(1) The CAISO shall issue AGC instructions electronically as often as every four seconds from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

(2) In each run of the RTED or RTCD the objective will be to meet the projected Energy requirements over the Time Horizon of that run, subject to transmission and resource operational constraints, taking into account the short term CAISO Forecast of CAISO Demand adjusted as necessary by the CAISO Operator to reflect scheduled changes to Interchange and non-Dispatchable resources in subsequent Dispatch Intervals;

(3) Dispatch Instructions will be based on Energy Bids for those resources that are capable of intra-hour adjustments and will be determined through the use of SCED except when the CAISO must utilize the RTMD;

(4) When dispatching Energy from awarded Ancillary Service capacity the CAISO will not differentiate between Ancillary Services procured by the CAISO and Ancillary Services that are Self-Scheduled;

(5) The Dispatch Instructions of a resource for a subsequent Dispatch Interval shall take as a point of reference the actual output obtained from either the State Estimator solution or the last valid telemetry measurement and the resources operational ramping capability;

(6) In determining the Dispatch Instructions for a target Dispatch Interval while at the same time achieving the objective to minimize Dispatch costs to meet the forecasted conditions of the entire Time Horizon, the Dispatch for the target Dispatch interval will be affected by: (a) Dispatch Instructions in prior intervals, (b) actual output of the resource, (c) forecasted conditions in subsequent Intervals within the Time Horizon of the optimization, and (d) operational constraints of the resource, such that a resource may be Dispatched in a direction for the immediate target Dispatch Interval that is different than the direction of change in Energy needs from the current Dispatch Interval to the next immediate Dispatch Interval;

(7) Through Start-Up instructions the CAISO may instruct resources to Start Up or Shut Down, or may reduce Load for Participating Loads, over the Time Horizon for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

(8) The CAISO shall only Start-Up resources that can start within the Time Horizon used by the RTM optimization methodology;

(9) The RTM optimization may result in resources being Shut Down consistent with their Bids and operating characteristics provided that: (1) the resource does not need to be on-line to provide Energy, (2) the resource is able to Start-Up within the RTM optimization Time Horizon, (3) the Generating Unit is not providing Regulation or Spinning Reserve, and (4) Generating Units online providing Non-Spinning Reserve may be Shut Down if they can be brought up within 10 minutes as such resources are needed to be online to provide Non-Spinning Reserves; and

(10) for resources that are both providing Regulation and have submitted Energy Bids for the RTM, Dispatch Instructions will be based on the Regulation Ramp-Rate of the resource rather than the Operational Ramp-Rate.

34.6 Dispatch Instructions for Generating Units and Participating Load.

The CAISO may issue Dispatch Instructions covering:

(a) Ancillary Services;

(b) Energy, which may be used for:

(i) Congestion relief;

(ii) provision of Imbalance Energy; or

(iii) replacement of an Ancillary Service;

(c) agency operation of Generating Units, Participating Loads or Interconnection schedules, for example:

(i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;

(ii) Generating Units that can be Dispatched for Black Start;

(iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;

(d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;

(e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions; or

(f) necessary to respond to a System Emergency or imminent emergency.

34.7 Utilization of the Energy Bids.

The CAISO uses Energy Bids for the following purposes: (i) satisfying Real-Time Energy needs; (ii) mitigating Congestion; (iii) maintaining aggregate Regulation reserve capability in Real-Time; (iv) allowing recovery of Operating Reserves utilized in Real-Time operations; (v) procuring Voltage Support required from resources beyond their power factor ranges in Real-Time; (vi) establishing LMPs; (vii) as the basis for Bid Cost Recovery; and (viii) to the extent a Real-Time Energy Bid Curve is submitted starting at minimum operating level for a Short-Start resource that is scheduled to be on-line, the RTM may Dispatch such a resource down to its minimum operating level and may issue a Shut-Down Instruction to the resource based on its Minimum Load Energy costs.

34.8 Dispatch of Energy From Ancillary Services.

The CAISO may issue Dispatch Instructions to Participating Generators, Participating Loads, System Units and System Resources contracted to provide Ancillary Services (either procured through the CAISO Markets, Self-Provided by Scheduling Coordinators, or dispatched in accordance with the RMR Contract) for the Supply of Energy. During normal operating conditions, the CAISO shall Dispatch those Participating Generators, Participating Loads, 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. The CAISO may designate any reserve not previously identified as Contingency Only by Scheduling Coordinator as Contingency Only reserves, as necessary to maintain WECC MORC requirements. In the event of an unplanned Outage, a Contingency or a threatened or actual System Emergency, the CAISO may dispatch Contingency Only reserves. In such cases the Contingency Only reserves will be dispatched 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 36.9.1 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 WECC MORC criteria. If the CAISO uses Operating Reserve to meet Real-Time Energy requirements, and if the CAISO needs Operating Reserves to satisfy MORC requirements the CAISO shall restore the Operating Reserves to the extent necessary to meet MORC requirements 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 Point. The upper portion of the Energy Bid Curve for a resource providing Regulation Up or Operating Reserves shall be allocated to any RTM AS Awards in the following order from higher to lower capacity

where applicable: (a) Regulation-Up; (b) Spinning Reserve; and (c) Non-Spinning Reserve. For resources providing Regulation-Up, the applicable upper regulating limit shall be used as the basis of allocation if it is lower than the upper portion of the energy curve. The remaining portion of the Energy Bid Curve, if there is any, shall constitute a Bid for RTM Energy.

34.9 Exceptional Dispatch.

The CAISO may perform Exceptional Dispatches for the circumstances described in this Section 34.9, which may require the issuance of forced Shut Downs or forced Start-Ups. The CAISO shall conduct all Exceptional Dispatches consistent with good utility practice. Dispatch Instructions issued pursuant to Exceptional Dispatches shall be entered manually by the Operator into the RTM optimization software so that they will be accounted for and included in the communication of Dispatch Instructions to Scheduling Coordinators. Exceptional Dispatches are not derived through the use of the RTM optimization software and are not used to establish the LMP at the applicable PNode. The CAISO will record the circumstances that have led to the Exceptional Dispatch. Imbalance Energy delivered or consumed pursuant to the various types of Exceptional Dispatch are settled according to the provisions in Section 11.5.6.

34.9.1 System Reliability Exceptional Dispatches.

The CAISO may manually dispatch Generation Units, System Units, Participating Loads, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.8, in addition to or instead of resources 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 dispatch in the Real-Time 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 submitted a Bid into the HASP.

34.9.2 Other Exceptional Dispatch.

The CAISO may also manually dispatch resources in addition to or instead of resources dispatched by the RTM optimization software to: (1) perform Ancillary Services testing; (2) perform pre-commercial operations testing for Generating Units; (3) mitigate for Overgeneration; (4) provide for Black Start; (5) provide for Voltage Support; (6) accommodate TOR or ETC Self-Schedule changes after the Market Close of the HASP; or (7) to reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC. If the CAISO dispatches an RMR Unit for Voltage Support, the RMR Unit will be compensated under its RMR Contract and not as an Exceptional Dispatch under the CAISO Tariff.

34.9.3 Transmission-Related Modeling Limitations

The CAISO may also manually Dispatch resources in addition to or instead of resources dispatched by the RTM optimization software to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of voltage support at proper levels as well as incomplete or incorrect information about the transmission network, for which the PTOs have primary responsibility.

34.10 Uneconomic Adjustments in the RTM.

All Self-Schedules are respected by the SCED and SCUC to the maximum extent possible and are protected from curtailment in the Congestion Management process to the extent that there are effective Economic Bids that can relieve Congestion. If all Economic Bids for the RTM are exhausted, all Self-Schedules between the Minimum Load and the lowest energy level of the first Energy Bid point will be subject to uneconomic adjustments based on assigned scheduling priorities. Through this process, imports and exports may be reduced to zero, Demand may be reduced to zero, and Generation may be reduced to a lower operating (or Regulating) limit (or lower Regulating limit plus any qualified Regulation

Down Award or Self-Provision of Ancillary Services, if applicable). Any schedules below the Minimum Load level are treated as fixed schedules and are not subject to uneconomic adjustments for Congestion management but may be subject to decommitment via an Exceptional Dispatch if necessary as a last resort to relieve Congestion that could not otherwise be managed.

34.10.1 Increasing Supply.

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

a) Non-Participating Load reduction or Self-Schedules for exports at Scheduling Points in HASP served by Generation from non-Resource Adequacy Capacity or from non-RUC Capacity;

b) Self-Schedules for exports at Scheduling Points in HASP not served by Generation from non-Resource Adequacy Capacity or not served by Generation from non-RUC Capacity;

c) Contingency-Only Operating Reserve if activated by Operator to provide Energy (as indicated by the Contingency flag and the Contingency condition);

d) Economic Bids submitted in the HASP or RTM.

34.10.2 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;

h) Self-Schedule submitted in HASP; and

i) Economic Bids submitted in the HASP or RTM.

These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures.

34.11 Means of Dispatch Communication.

The CAISO dispatches Regulation by AGC to Participating Generators and, for Dynamic System Resources, through dedicated communication links that satisfy the CAISO's standards for external imports of Regulation. The CAISO communicates all other Dispatch Instructions electronically, except that, at the CAISO's discretion, the CAISO may communicate Dispatch Instructions by telephone, or facsimile. Scheduling Coordinators shall confirm the Dispatch Instructions that are communicated orally by repeating them the to CAISO employee providing the Dispatch Instruction. Except in the case of deteriorating system conditions or an actual or threatened System Emergency, and except for Dispatch Instructions for Regulation, the CAISO sends all Dispatch Instructions to the Scheduling Coordinator. The recipient Scheduling Coordinator shall immediately communicate the Dispatch Instruction to the operator

of the resource. The CAISO may, with the prior permission of the applicable Scheduling Coordinator, communicate with and give Dispatch Instructions to the operators of the resource directly without having to communicate through their Scheduling Coordinator. The CAISO shall record the communications between the CAISO and Scheduling Coordinators relating to Dispatch Instructions in a manner that permits auditing of the Dispatch Instructions, and of the response of the resources, as applicable. In situations of deteriorating system conditions or System Emergency, the CAISO reserves the right to communicate directly with the resource(s) as required to ensure System Reliability. Scheduling Coordinators are required to advise the CAISO immediately if any change in resource availability that prevents the recipient of a Dispatch Instruction from performing in accordance with that Dispatch Instruction.

34.11.1 Response Required by Resources to CAISO Dispatch Instructions.

Resources must:

(a) unless otherwise stated in the Dispatch Instruction, comply with a Dispatch Instruction immediately upon receipt;

(b) respond to all Dispatch Instructions in accordance with Good Utility Practice;

(c) meet voltage criteria in accordance with the provisions in the CAISO Tariff;

(d) meet any applicable operational ramp rates;

(e) respond to Dispatch Instructions for Ancillary Services within the required time periods and (in the case of Participating Generators providing Regulation) respond to AGC from the EMS; and

(f) if a time frame is stated in a Dispatch Instruction, respond to a Dispatch Instruction within the stated time frame.

34.11.2 Failure to Conform to Dispatch Instructions.

In the event that, in carrying out the Dispatch Instruction, an unforeseen problem arises (relating to plant operations or equipment, personnel or the public safety), the recipient of the Dispatch Instruction must notify the CAISO or, in the case of a Generator, the relevant Scheduling Coordinator immediately. The relevant Scheduling Coordinator shall notify the CAISO of the problem immediately. If a resource is unavailable or incapable of responding to a Dispatch Instruction, or fails to respond to a Dispatch

Instruction in accordance with its terms, the resource shall be considered to be non-conforming to the Dispatch Instruction unless the resource has notified the CAISO of an event that prevents it from performing its obligations within 30 minutes of the onset of such event through a SLIC log entry. Notification of non-compliance via the Automated Dispatch System (ADS) will not supplant nor serve as the official notification mechanism to the CAISO. If the resource is considered to be non-conforming as described above, the Scheduling Coordinator for the resource concerned shall be subject to Uninstructed Imbalance Energy as specified in Section 11.5.2 and Uninstructed Deviation Penalties as specified in Section 11.23. This applies whether any Ancillary Service concerned are contracted or self-provided. For a non-Dynamic System Resource Dispatch Instruction prior to the Trade Hour, the Scheduling Coordinator shall inform the CAISO of its ability to conform to a Dispatch Instruction via "ADS". A decline of such a Non-Dynamic System Resource for a Dispatch Instruction received at least 40 minutes prior to the Trading Hour will be subject to Uninstructed Deviation Penalties as specific in Section 11.23. A decline of such a Non-Dynamic System resource for a Dispatch Instruction received less than 40 minutes prior to the Trading Hour will not be subject to Uninstructed Deviation Penalties.

34.12 Metered Subsystems.

Scheduling Coordinators that represent MSSs may submit Bids for Supply of Energy to the RTM, irrespective of whether the MSS is a Load following MSS. All Bids submitted for MSS generating resources for the RTM and all Dispatch Instructions shall be generating resource-specific. MSS non-Load following resources are responsible for following Dispatch Instructions. Load following MSS Operators shall provide the CAISO with an estimate of the number of MWs the applicable generating resource(s) will be generating over the next two hours in 5-minute interval resolution. The Dispatch Instructions for Load-following resources are incorporated with generation estimates provided by MSS Operators. Such MSS Load-following resources can deviate from the Dispatch Instructions in Real-Time to facilitate the following of load without being subject to the Uninstructed Deviation Penalty as further described in Section 11.23 of the CAISO Tariff. The State Estimator will estimate all MSS Load in Real-

Time and will incorporate the information provided by the Load following MSS Operator in clearing the RTM and its Dispatch Instructions.

34.13 Real-Time Bid Submission.

Bids submitted in HASP for all Generating Resources and Participating Load shall be used in the Real-Time Market. Energy Bids in the RTM must also contain a Bid for Ancillary Services to the extent the

resource is certified and capable of providing Ancillary Service in the RTM Resource Adequacy Resources required to offer their Resource Adequacy Capacity in accordance with Section 40 shall be required to submit Energy Bids for: (1) all such Resource Adequacy Capacity and (2) any Ancillary Services capacity awarded or self-provided in the Day-Ahead, the HASP or RTM. In the absence of submitted Bids, Generated Bids will be used for Resource Adequacy Resources required to offer their Resource Adequacy Capacity in accordance with Section 40. Resource Adequacy Resources not required to offer their Resource Adequacy Capacity in accordance with Section 40that were awarded or self-provided Ancillary Services capacity must submit an Energy Bid for no less than the amount of awarded or self-provided Ancillary Services capacity. Resource Adequacy Resource not required to offer their Resource Adequacy Capacity in accordance with Section 40 may voluntarily submit Energy Bids. Submitted Energy Bids shall be subject to the maximum and minimum Bid requirements and Mitigation Measures as set forth in Section 39.

34.14 Real-Time Operational Activities in the Hour Prior to the Settlement Period.

34.14.1 Confirm Interchange Transaction Schedules (ITSs).

Also in the hour prior to the beginning of the Operating Hour the CAISO will:

(a) adjust interchange transaction schedules (ITSs) as required under Existing Contracts in accordance with the procedures in the CAISO Tariff for the management of Existing Contracts;

(b) adjust ITSs as required by changes in transfer capability of transmission paths occurring after Market Close of the HASP; and

(c) agree on ITS changes with adjacent Control Area Operators.

34.15 Rules For Real-Time Dispatch of Imbalance Energy Resources.

34.15.1 Resource Constraints.

The SCED shall enforce the following resource physical constraints:

(a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their regulating range.

(b) Forbidden Operating Regions. Resources can only be ramped through these regions. The SCED shall not Dispatch resources within their Forbidden Operating Regions unless at the maximum applicable ramp rate to clear the Forbidden Operating Region in consecutive Dispatch Intervals. Resources ramping through a Forbidden Operating Region shall not set LMP at its location and cannot provide Ancillary Services.

(c) Operational Ramp Rates and Start-Up times. The submitted Operational Ramp Rate for resources that are not providing Regulation, and the submitted Regulation Ramp Rate for resources that are providing Regulation shall be used for all Dispatch Instructions. The Ramping Rate for Non-Dynamic System Resources cleared in the HASP will not be observed. Rather the ramp of the Non-Dynamic System Resource respect inter-Control Area ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate or Regulation Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up time as, if the resource is off-line, the relevant Ramp Rate function, and any prior commitments such as schedule changes across hours and previous Dispatch Instructions. The Start-Up time shall be determined from the Start-Up time function and when the resource was last shut down. The Start-Up time shall not apply if the corresponding resource is on-line or expected to start.

(d) Maximum Number of Daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of start-ups.

(e) Minimum Up and Down time. The SCED shall not Start Up off-line resources before their minimum down time expires and shall not Shut Down on-line resources before their minimum up time expires.

(f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.16.3.

(g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over

the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Intertie Schedules are financially binding and are settled pursuant to section 11.4.

(h) Daily Energy use limitation to the extent that energy limitation is expressed in a resource's Bid.

34.16 Ancillary Services in the Real-Time Market.

34.16.1 Requirement to Submit Energy Bids For Awarded or Self-Provided Ancillary Services Capacity.

Scheduling Coordinators for resources that have been awarded or self-provide Regulation Up, Spinning Reserve, or Non-Spinning Reserve capacity must submit an Energy Bid for at least all the awarded or self-provided Ancillary Services capacity.

34.16.2 Dispatch of Self-Provided Ancillary Services.

Where a Scheduling Coordinator has chosen to self-provide the whole of the additional Operating Reserve required to cover any Interruptible Imports which it has submitted through Self-Schedules in the Day-Ahead Market and has identified specific Generating Units, Participating Loads, System Units or System Resources as the providers of the additional Operating Reserve concerned, the CAISO shall Dispatch only the designated Generating Units, Participating Loads, System Units or System Resources in the event of the CAISO being notified that the On Demand Obligation is being curtailed. For all other Ancillary Services which are being self-provided the Energy Bid shall be used to determine the Dispatch, subject to the limitation on the Dispatch of Spinning Reserve and Non-Spinning Reserve set forth in Section 34.10.

34.16.3 Ancillary Services Requirements for RTM Dispatch.

The following requirements apply to the Dispatch of Ancillary Services in the RTM:

34.16.3.1 Regulation.

(a) Regulation provided from Generating Units or System Resources must meet the standards specified in this Tariff and the Part of A of Appendix K;

(b) The CAISO will Dispatch Regulation in merit order of Bid prices as determined by the EMS. Dispatch of Regulation by EMS does not set the RTM LMP.

(c) in the event of an unscheduled increase in system Demand or a shortfall in Generation output and Regulation margin drops below a predetermined value, the CAISO will use Dispatch Energy in the RTM or Dispatch Operating Reserve, to restore Regulation margin; and

(d) when scheduled Operating Reserve is used for restoration of Regulation reserve, the CAISO shall arrange for the replacement of that Operating Reserve;

34.16.3.2 Operating Reserve.

(a) Spinning Reserve:

(i) Spinning Reserve provided from Generating Units and Interconnection schedules must meet the standards specified in Part B of Appendix K;

(ii) the CAISO will Dispatch Spinning Reserve as may be required to meet the Applicable Reliability Criteria;

(iii) the CAISO may Dispatch Spinning Reserve as balancing Energy to return Regulation Generating Units to their Set Points and restore full Regulation margin; and

(iv) the CAISO will Dispatch Spinning Reserve in merit order of Energy Bid prices as determined by the SCED;

(b) Non-Spinning Reserve:

(i) Non-Spinning Reserve provided from Generating Units, Demands, and external imports of System Resources must meet the standards specified in Part C of Appendix K

(ii) the CAISO may Dispatch Non-Spinning Reserve in place of Spinning Reserve to meet Applicable Reliability Criteria;

(iii) the CAISO will Dispatch Non-Spinning Reserve in merit order of Energy Bid prices as determined by the SCED ; and

(iv) the CAISO may Dispatch Non-Spinning Reserve to replace Spinning Reserve if there is a shortfall in Spinning Reserve because of a deficiency of balancing Energy;

34.16.3.3 Replacement of Operating Reserve.

(a) if pre-arranged Operating Reserve is used to meet balancing Energy requirements, the CAISO may replace such Operating Reserve by Dispatch of additional balancing Energy available from Energy Bids submitted in the HASP for the RTM or procurement of additional reserves based on an economic optimization of a resource's RTM Ancillary Service Bid and its Energy Bid.;

(b) any additional Operating Reserve needs may also be met the same way;

(c) where the CAISO elects to rely upon Energy Bids, the CAISO shall select the resources with the lowest incremental Energy Bid price as established by SCED; and

34.16.3.4 Voltage Support.

(a) Voltage Support provided from Generating Units shall meet the standards specified in this Tariff and the Part E of Appendix K;

(b) the CAISO may Dispatch Generating Units to increase or decrease MVar output within the power factor limits of 0.9 lagging to 0.95 leading (or within other limits specified by the CAISO in any exemption granted pursuant to Section 8.2.3.3 of the CAISO Tariff) at no cost to the CAISO when required for System Reliability;

(c) may Dispatch each Generating Unit to increase or decrease MVar output outside of established power factor limits, but within the range of the Generating Unit's capability curve, at a price calculated in accordance with CAISO Tariff;

(d) If Voltage Support is required in addition to that provided pursuant to 34.16.3.4 (b) and (c), the CAISO will reduce output of Participating Generators certified in accordance with Appendix K . The CAISO will select Participating Generators in the vicinity where such additional Voltage Support is required; and

(e) the CAISO will monitor voltage levels at Interconnections to maintain them in accordance with the applicable Inter-Control Area Agreements.

34.16.4 Inter-hour Dispatch of Resources With Real-Time Energy Bids.

Dispatch Instructions associated with the ramp between the HASP Bid in one hour to the HASP Bid in the immediately succeeding operating hour shall be determined optimally by the SCED if the CAISO has Bids for either or both relevant operating hours. For any Operating Hour(s) for which Bids have been submitted Dispatch Instructions will be optimized such that the Dispatch Operating Point is within the Bid range(s). For any Operating Hour without submitted Bids, Dispatch Instructions will be optimized such that the Dispatch Operating Point conforms to the schedule within the Operating Hour. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Appendix N, Part D-1, Section 2.1.2. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Appendix N, Part D-1, Section 2.1.2. Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in one Operating Hour to a Dispatch Operating Point such that the resource cannot return to its successive Operating Hour Schedule or to an infra-marginal operating point by the beginning of the next Operating Hour is Residual Energy and shall be settled as Instructed Imbalance Energy as provided for in Appendix N, Part D-1, Section 2.1.2 and also may be eligible for recovery of its applicable Energy Bid costs in accordance with Section 11.8. Similarly, Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in a future Operating Hour to a Dispatch Operating Point different from its current Operating Point prior to the end of the current Operating Hour is also considered Residual Energy and shall be settled as Instructed Imbalance Energy as provided for in Appendix N, Part D-1, Section 2.1.2 and also may be eligible for recovery of its applicable Energy Bid costs in accordance with Section 11.8. When Ramping Energy Deviation and Residual Energy coexist within a given Dispatch Interval, the Ramping Energy Deviation shall be the portion of Instructed Imbalance Energy that is produced or consumed within the schedule-change band defined by the accepted HASP Bids of the two consecutive Settlement Periods; the Residual Imbalance Energy shall be the portion of Instructed Imbalance Energy that is produced or consumed outside the schedule-change band.

34.16.5 Inter-hour Dispatch of Resources Without Real-Time Energy Bids.

Dispatch Instructions shall be issued for each Dispatch Interval as needed to prescribe the ramp between a resource's accepted HASP Bid in one Trading Hour to its accepted HASP Bid in the immediately succeeding Operating Hour. Such Dispatch Instructions shall be based on the lesser of: (1) the applicable Operational Ramp Rate as provided for in Section 30.10 and (2) the ramp rate associated with the Standard Ramp. The Dispatch Instructions for ramping of Generating Units without Real-Time Energy Bids in both Operating Hours shall ramp the resource between hourly schedules symmetrically across hourly boundaries in 20 to 60 minutes assuming congestion can be resolve utilizing Economic Bids. The minimum 20-minute ramp is required for smooth hourly schedule changes and is consistent with inter-tie scheduling agreements between Control Areas. Resources with slower ramp rates would have longer ramps, and at the extreme, would ramp from the middle of an hour to the middle of the next hour. . Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Appendix N, Part D-1, Section 2.1.2. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Appendix N, Part D-1, Section 2.1.2.

34.17 Dispatch Information and Instructions.

34.17.1 Dispatch Information To Be Supplied by the CAISO.

Communication of Dispatch information provided by the CAISO shall be in accordance with Section 6.3

34.17.2 Dispatch Information To Be Supplied by Scheduling Coordinator

Each Scheduling Coordinator shall be responsible for the submission of Bids and Dispatch of Generation and Demand in accordance with its Day-Ahead Schedule. Each Scheduling Coordinator shall keep the CAISO apprised of any change or potential change in the current status of all Generating Units, Interconnection schedules and Inter-SC Trades. This will include any changes in Generating Unit capacity that could affect planned Dispatch and conditions that could affect the reliability of a Generating Unit. Each Scheduling Coordinator shall immediately pass to the CAISO any information which it receives from a Generator which the Generator provides to the Scheduling Coordinator pursuant to Section 36.11.1. Each Scheduling Coordinator shall immediately pass to the CAISO any information it

receives from a MSS Operator which the MSS Operator provides to the Scheduling Coordinator regarding any change or potential change in the current status of all Generating Units, System Units, Interconnection schedules and Inter-Scheduling Coordinator Energy Trades. This information includes any changes in MSS System Units and MSS Generating Unit capacity that could affect planned Dispatch and conditions that could affect the reliability of the System Unit or Generating Unit.

34.17.3 Dispatch Information To Be Supplied by UDCs.

Each UDC shall keep the CAISO informed of any change or potential change in the status of its transmission lines and station equipment at the point of interconnection with the CAISO Controlled Grid. Each UDC shall keep the CAISO informed as to any event or circumstance in the UDC's service territory that could affect the reliability of the CAISO Controlled Grid. This would include adverse weather conditions, fires, bomb threats, etc.

34.17.4 Dispatch Information To Be Supplied by PTOs.

Each PTO shall report any change or potential change in equipment status of the PTO's transmission assets turned over to the control of the CAISO or in equipment that affects transmission assets turned over to the control of the CAISO immediately to the CAISO (this will include line and station equipment, line protection, Remedial Action Schemes and communication problems, etc.). Each PTO shall also keep the CAISO immediately informed as to any change or potential change in the PTO's transmission system that could affect the reliability of the CAISO Controlled Grid. This would include adverse weather conditions, fires, bomb threats, etc.

Each PTO shall schedule all Outages of its lines and station equipment which are under the Operational Control of the CAISO in accordance with the appropriate procedures in Section 9.3. Each PTO shall coordinate any requests for or responses to Forced Outages on its transmission lines or station equipment which are under the Operational Control of the CAISO directly with the appropriate CAISO Control Center as defined in Section 7.1.

34.17.5 Dispatch Information To Be Supplied by Control Area Operators.

The CAISO and each adjacent Control Area Operator shall keep each other informed of any change or potential change in the status of the Interconnection and any changes in the Interconnection's TTC. The

CAISO and each adjacent Control Area Operator shall keep each other informed of situations such as adverse weather conditions, fires, etc., that could affect the reliability of any Interconnection. Each Control Area Operator of the Control Areas in the California area, as defined by the WECC Regional Security Plan, shall keep the CAISO informed of all information required by WECC for use by the Reliability Coordinator.

The CAISO and each adjacent Control Area Operator shall follow all applicable NERC and WECC scheduling procedures. This will include checking the Interconnection schedules for the next Settlement Period prior to the start of the Energy ramp going into that hour. The CAISO and each adjacent Control Area Operator shall check and agree on actual MWh net interchange after the hour for the previous Settlement Period. One Control Area shall change its actual number to reflect that of the other Control Area in accordance with WECC standard procedures.

The CAISO and each adjacent Control Area Operator shall exchange MW, MVar, terminal and bus voltage data with each other on a four second update basis. MWh data for the previous hour shall be exchanged once per hour. All MW and MWh data for both the CAISO Control Area and the adjacent Control Areas must originate from the same metering equipment. All provisions in Sections 4.6.1.1(i) and 4.6.1.1 (ii) refer to information and data obtained from metering used for Control Area operations and not metering used for billing and settlement.

34.18 Qualifying Facilities.

Where a Qualifying Facility ("QF") has entered into an agreement with a PTO before March 31, 1997 for the supply of Energy to the PTO (an "Existing Agreement"), the CAISO will follow the instructions provided by the parties to the Existing Agreement regarding the provisions of the Existing Agreement in the performance of its functions relating to outage coordination, and not require a QF to take any action that would interfere with the QF's obligations under the Existing Agreement. Each QF will make reasonable efforts to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

34.19 Pricing Imbalance Energy.

34.19.1 General Principles.

Instructed and Uninstructed Imbalance Energy shall be paid or charged the applicable Resource-Specific Settlement Interval LMP except for hourly pre-dispatched Instructed Imbalance Energy, which shall be settled as set forth in Appendix N, Part D, Section 2.1.2. These prices are determined using the Dispatch Interval LMPs. The Dispatch Interval LMPs shall be based on the Bid of the marginal Generating Units, System Units, and Participating Loads dispatched by the CAISO to increase or reduce Demand or Energy output in each Dispatch Interval as provided in Section 34.19.2.1.

The CAISO will respond to the Dispatch Instructions issued by the SCED to the extent practical in the time available and acting in accordance with Good Utility Practice. The CAISO will record the reasons for any variation from the Dispatch Instructions issued by the SCED.

34.19.2 Determining Real-Time LMPs.

34.19.2.1 Dispatch Interval Real-Time LMPs.

34.19.2.2 Computation.

For each Dispatch Interval, the CAISO will compute updated supply and demand curves, using the Generating Units, System Units, Dynamic System Resources and Participating Load Dispatched according to the CAISO's SCED during that time period to meet Imbalance Energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

34.19.2.3 Eligibility to Set the Real-Time LMP.

All Generating Units, Participating Loads, Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Default Energy Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that the Generating Units, Participating Loads, Dynamic System Resources, or System Unit is Dispatched within its submitted Economic Bid range. If a resource is Dispatched beyond its Economic Bid range, the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, or the resource is ramping through a Forbidden Operating Region, the resource will not be eligible to set the LMP.

Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit, a boundary of a Forbidden Operating Region or dispatched for a quantity of Energy such that its full ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval. cannot be marginal (i.e., it is constrained by the ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. Constrained Output Generation that has the ability to be committed or shut off within the two-hour Time Horizon of the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.

34.19.2.4 Real-Time LMP When Responding To A Contingency.

In cases when a Contingency occurs and the CAISO must activate its Operating Reserves, it may perform a Real-Time Contingency Dispatch (RTCD) for a target interval 10 minutes from the current time. When activating a Contingency Dispatch and returning to normal dispatch in RTM, LMPs shall be based on the last available price from either the Contingency Dispatch or normal Dispatch run relative to the 5 minute pricing target.

34.19.2.5 Price for Uninstructed Deviations for Participating Intermittent Resources.

Deviations associated with each Participating Intermittent Resource in a Scheduling Coordinator's portfolio shall be settled as provided in Section 11.12 at the monthly weighted average Dispatch Interval LMP, as calculated in accordance with Section 11.5.4.1 at each Pnode associated with the Participating Intermittent Resource, and using the monthly weighted average with weights equal to total Real-Time Generation.

35 [Not Used]

36 Congestion Revenue Rights.

36.1 Overview of CRRs and Procurement of CRRs.

The CAISO distributes CRRs through an allocation and auction process as described in this Section 36. CRR Holders and Market Participants eligible to become CRR Holders can also buy, sell, or trade CRRs bilaterally as described in Section 36.7. CRRs are Day-Ahead instruments and provide their holders with a hedge against Congestion Charges from the Day-Ahead Market and not against Congestion Charges associated with HASP Intertie LMPs or Real-Time LMPs.

36.2 Types of CRR Instruments.

CRRs can be CRR Obligations or CRR Options. Each CRR is fully specified by its type (CRR Obligation or CRR Option), its CRR Source(s), its CRR Sink(s), its MW quantity, and the Trading Hours for which it is valid. The CRR Source(s) and CRR Sink(s) determine the direction of the CRR, which is from CRR Source(s) to CRR Sink(s).

36.2.1 CRR Obligations.

A CRR Obligation entitles its holder to receive a CRR Payment if the Congestion in a given Trading Hour is in the same direction as the CRR Obligation, and requires the CRR Holder to pay a CRR Obligation Charge if the Congestion in a given Trading Hour is in the opposite direction of the CRR. The CRR Payment or CRR Obligation Charge is equal to the per-MWh cost of Congestion (which equals the MCC at the CRR Sink minus the MCC at the CRR Source) multiplied by the MW quantity of the CRR. CRR Obligations are settled pursuant to Section 11.2.4.2.2.

36.2.2 CRR Options.

A CRR Option entitles its Holder to a CRR Payment if the Congestion is in the same direction as the CRR Option, but requires no CRR Obligation Charge if the Congestion is in the opposite direction of the CRR. The CRR Payment is equal to the per-MWh cost of Congestion (which equals the MCC at the CRR Sink minus the MCC at the CRR Source, when this quantity is positive and zero otherwise) multiplied by the MW quantity of the CRR. CRR Options are settled pursuant to Section 11.2.4.2.1.

36.2.3 Point-to-Point CRRs.

A Point-to-Point CRR is a CRR Option or CRR Obligation defined from a single CRR Source to a single CRR Sink.

36.2.4 Multi-Point CRRs.

A Multi-Point CRR ("MPT-CRR") is a CRR Obligation defined by more than one CRR Source and/or more than one CRR Sink, plus a specified distribution of the total MW value of the CRR over the multiple CRR Sources and/or multiple CRR Sinks such that the total MW assigned to all CRR Sources equals the total MW assigned to all CRR Sinks equals the MW value of the CRR.

36.2.5 Monthly CRRs.

Monthly CRRs have a term of one month, are differentiated by time-of-use periods (on-peak and off-peak), and are available through the monthly CRR Allocation and CRR Auction processes in advance of each month.

36.2.6 Seasonal CRRs.

Seasonal CRRs have a term of three months, and are differentiated by the different time-of-use periods (on-peak and off-peak) for each day within a season. Seasonal CRRs are made available through the annual CRR Allocation and CRR Auction processes conducted each year prior to the year in which the Seasonal CRR applies.

36.2.7 Long Term CRRs.

Long Term CRRs have a term of ten years. Long Term CRRs are seasonal and are differentiated by the different time-of-use periods (on-peak and off-peak) for each day within a season. When Long Term CRRs are nominated and allocated they apply to the same season and time-of-use period for each year of the ten-year term and represent binding ten-year commitments by the CRR Holders that hold Long Term CRRs. Long Term CRRs are nominated and allocated to LSEs in Tier LT that is one tier in the sequence of tiers in the annual CRR Allocation process. Long Term CRRs are not available through the CRR Auction.

36.2.8 Full Funding of CRRs.

As set forth in Section 11.2.4, all CRRs will be fully funded; provided however, that full funding of CRRs will be suspended if a System Emergency as described in Section 7.7.4, an Uncontrollable Force as described in Section 14, or a Participating TO's withdrawal of facilities or Entitlements from the CAISO Controlled Grid as described in Section 36.8.7 leaves the CAISO with inadequate revenues.

36.3 CRR Specifications.

36.3.1 Quantity.

CRRs are distributed and settled in no less than one-tenth of a MW denomination.

36.3.2 Term.

CRRs are Monthly CRRs, Seasonal CRRs, Long Term CRRs or CRRs allocated to sponsors of merchant transmission as specified in Section 36.11. For CRR purposes, the applicable seasons are conventional calendar quarters as defined in the Business Practice Manual.

36.3.3 On-Peak and Off-Peak Specifications.

CRRs are defined either for on-peak or off-peak hours as specified by the CAISO in the applicable Business Practice Manuals consistent with the WECC standards at the time of the relevant CRR Allocation or CRR Auction.

36.4 Available CRR Capacity.

When the CAISO conducts its CRR Allocation and CRR Auction, the CAISO shall use the most up-to-date DC FNM which is based on the AC FNM used in the Day-Ahead Market. The Seasonal Available CRR Capacity shall be based on: (i) the DC FNM, taking into consideration any long-term scheduled transmission outages, (ii) OTC adjusted for any long-term scheduled derates, and (iii) a downward adjustment due to TOR as determined by the CAISO. The Monthly Available CRR Capacity shall be based on: (i) the DC FNM, taking into consideration any scheduled transmission outages for that month and any new transmission facilities added to the CAISO Controlled Grid that were not part of the DC FNM

used to determine the prior Seasonal Available CRR Capacity and that have already been placed in-service and energized at the time the CAISO starts the applicable monthly process, (ii) OTC adjusted for any scheduled derates for that month, and (iii) a downward adjustment due to TOR as determined by the CAISO.

36.4.1 Transmission Capacity Available for CRR Allocation and CRR Auction.

With the exception of the Tier LT allocation process, the CAISO makes available seventy-five percent (75%) of Seasonal Available CRR Capacity for the annual CRR Allocation and CRR Auction processes, and one hundred percent (100%) of Monthly Available CRR Capacity for the monthly CRR Allocation and CRR Auction processes. The CAISO makes available sixty percent (60%) of Seasonal Available CRR Capacity in the Tier LT allocation process. Available capacity at Scheduling Points shall be determined in accordance with Section 36.8.4.1 for the purposes of CRR Allocation and CRR Auction of CRRs that have a CRR Source identified at a Scheduling Point. Before commencing with the annual or monthly CRR Allocation and CRR Auction processes, the CAISO may distribute any CRRs to sponsors of merchant transmission projects in accordance with Section 36.11 and will model those as fixed injections and withdrawals on the DC FNM to be used in the allocation and auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test. Similarly, before commencing the annual or monthly CRR Allocation and CRR Auction processes, the CAISO will model any previously allocated Long Term CRRs as fixed injections and withdrawals on the DC FNM to be used in the CRR Allocation and CRR Auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test, which will ensure no degradation of previously allocated and outstanding Long Term CRRs due to the CRR Allocation and CRR Auction processes. Maintaining the feasibility of allocated Long Term CRRs over the length of their terms also is accomplished through the transmission planning process in Section 24.1.3.

36.4.2 Simultaneous Feasibility.

The annual and monthly CRR Allocation processes release CRRs to fulfill CRR nominations as fully as possible subject to a Simultaneous Feasibility Test (“SFT”). To the extent that nominations are not

simultaneously feasible, the nominations are reduced in accordance with the CRR Allocation optimization formulation until simultaneous feasibility is achieved. The CRR Allocation optimization formulation, detailed in the Business Practice Manuals, reduces allocated CRRs based on effectiveness in relieving overloaded constraints in order to minimize the total MW volume reduction of nominations while achieving simultaneous feasibility. The SFT for each CRR Allocation considers:

a. CRRs representing ETCs, Converted ETCs and any TOR capacity that was not captured in the adjustments described in Section 36.4, which the CAISO deems necessary to prevent the congestion settlement of ETCs, Converted ETCs, and TORs from causing revenue inadequacy of allocated and auctioned CRRs;

b. In the case of the monthly CRR Allocation, the CRRs already released for that month in the annual allocation and auction; and,

c. The CRRs allocated in previous allocation tiers as described in Sections 36.8.3.1 through 36.8.3.6.

In the event that transmission outages and derates modeled for the monthly CRR Allocation and CRR Auction render previously issued Seasonal CRRs infeasible, the CAISO will increase the transfer capacity on the overloaded facilities just enough to render all Seasonal CRRs issued for the month feasible without creating any additional capacity beyond what is needed for the feasibility of the Seasonal CRRs. The CAISO will announce these adjustments to the market prior to conducting the monthly CRR Allocation and CRR Auction so that Candidate CRR Holders can take these facts into consideration in preparing their nominations and bids.

36.5 CRR Holder Requirements.

Any entity that holds or intends to hold CRRs must register and qualify with the CAISO and comply with the other terms of this Section, regardless of whether they acquire CRRs by allocation, auction, or the secondary market.

36.5.1 Creditworthiness Requirements.

All CRR Holders and Candidate CRR Holders must comply fully with all Creditworthiness requirements as provided in Section 12 of the Tariff and as further developed in the applicable Business Practice Manuals.

36.5.2 Required Training.

CRR Holders and Candidate CRR Holders must attend a training class at least once prior to participating in the CRR Allocations or CRR Auctions. The CAISO may update training requirements annually or on an as-needed basis.

36.6 [NOT USED]

36.7 Bilateral CRR Transactions

36.7.1 Transfer of CRRs.

36.7.1.1 General Provisions of CRR Transfers

A CRR Holder may assign, sell, or otherwise transfer CRRs in increments of at least a tenth of a MW. Transfers must be for at least a full day term consistent with the on-peak or off-peak specification of the

CRR. The transferee may be any entity eligible to be a CRR Holder consistent with this Tariff and the applicable Business Practice Manuals. All CRRs that are so assigned, sold, or otherwise transferred by the CRR Holder continue to be subject to the relevant terms and conditions set forth in the CAISO Tariff and the applicable Business Practice Manuals.

36.7.1.2 Specific Provisions for Transfer of Long Term CRRs.

A CRR Holder that holds Long Term CRRs may sell or transfer through the Secondary Registration System MW portions and temporal segments of a Long Term CRR corresponding to the current calendar year as well as the calendar year covered by the most recently completed annual CRR Allocation. For such sales or transfers the Long Term CRR will be subject to the same limits on granularity that apply to Seasonal CRRs and Monthly CRRs, as specified in Section 36.7.1. A CRR Holder that holds Long Term CRRs may not transfer or sell through the Secondary Registration System any temporal segment of a Long Term CRR beyond the calendar year covered by the most recently completed annual CRR Allocation. For temporal segments beyond the year covered by the most recently completed annual CRR Allocation, the CRR Holder to whom a Long Term CRR was originally allocated remains the holder of record of the entire Long Term CRR for CAISO Settlement purposes, unless and until such segments of the Long Term CRR or MW portion thereof are transferred to another LSE due to Load migration as described in Section 36.8.5. Allocated Long Term CRRs represent binding ten-year commitments by a CRR Holder that holds Long Term CRRs and may not be terminated or otherwise modified by the CRR Holder prior to the end of the Long Term CRR's ten-year term.

36.7.2 Responsibility of the CAISO.

The CAISO provides Market Participants a Secondary Registration System to facilitate and track CRR bilateral transactions. The Secondary Registration System automatically posts on the CAISO Website the bilateral transactions entered by Market Participants. The bulletin board of the Secondary Registration System enables any entity that wishes to purchase or sell CRRs to post that information.

36.7.3 CRR Holder Reporting Requirement.

CRR Holders must report to the CAISO by way of the Secondary Registration System all bilateral CRR transactions consistent with the terms of this Tariff and the Business Practice Manuals. Both the transferor and the transferee of the CRRs must register the transfer of the CRR with the CAISO using the Secondary Registration System at least five (5) business days prior to the effective date of transfer of revenues associated with a CRR. The CAISO shall not transfer any Settlement related to any CRR until such time that the CRR transfer has been successfully recorded through the SRS and the transferee has met all the creditworthiness requirements as specified in section 12. Both the transferor and transferee shall submit the following information to the Secondary Registration System: (i) the effective start and end dates of the transfer of the CRR; (ii) the identity of the transferor; (iii) the identity of the transferee; (iv) the quantity of CRRs being transferred; (v) the CRR Sources and CRR Sinks of the CRRs being transferred; and (vi) time of use period of the CRR. The transferee must meet all requirements of CRR Holders, including disclosure to the CAISO of all entities with which the transferee is affiliated that are CRR Holders or Market Participants as defined in Section 36.5.

36.8 CRR Allocation to Load Serving Entities for Internal Load.

The CAISO allocates CRRs to Load Serving Entities serving load internal to CAISO Control Area (including MSS entities as described in Section 36.10). All CRRs allocated under the terms of this Section 3.8 will be CRR Obligations.

36.8.1 Structure of the Allocation Process.

The CAISO conducts an annual CRR Allocation: (i) once a year for the entire year for Seasonal CRRs; and (ii) once a year for the ten-year term of Long Term CRRs. The annual CRR Allocation releases Seasonal CRRs and Long Term CRRs for four seasonal periods. The CAISO also conducts monthly CRR Allocations twelve times a year in advance of each month. Within each annual and monthly CRR Allocation process the CAISO performs distinct allocation processes for each on-peak and off-peak specification. The CRR Allocation process for CRR Year One is a distinct process that differs from subsequent annual CRR Allocations as described in Section 36.8.3.1 and 36.8.3.2. Each allocation procedure is based on nominations to the CAISO by LSEs eligible to receive CRRs. A timeline of the CRR Allocation and CRR Auction processes is contained in the BPMs.

36.8.2 Load Eligible for CRRs and Eligible CRR Sinks.

An LSE serving internal Load is eligible for CRRs up to its Seasonal or Monthly CRR Eligible Quantity, which is derived from its Seasonal or Monthly CRR Load Metric as follows. These quantities are calculated for each LSE separately for each combination of season and time of use period for the annual process, and for each time of use period for each monthly process, and for each CRR Sink at which the eligible LSE serves Load. MSS eligibility for CRRs will account for net or gross MSS settlement in accordance with Section 4.9.13.1. If the MSS elects net settlement, LSEs for such MSS Load shall submit CRR Sink nominations at the MSS LAP, and if the MSS elects for gross settlement LSEs for such MSS Load shall submit CRRs Sink nominations at the applicable Default LAP. Load that is Pumped-Storage Hydro Units but is not Participating Load may be scheduled and settled at a PNode or Custom Load Aggregation Point and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode or Custom Load Aggregation Point. Load that is a Participating Load that is also aggregated is scheduled and settled at a Custom Load Aggregation Point that is customized specifically for such Load and, therefore, LSEs for such Participating Load shall submit CRR Sink nominations at the Custom Load Aggregation Point. Load that is Participating Load is scheduled and settled at an individual PNode, and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode. As provided in Sections 30.5.3, Load that is non-Participating Load, is not Pumped-Storage Hydro Units, and is not Load associated with ETCs, TORs, or MSS that elects net settlement, is scheduled and settled

at the Default LAP. Therefore, LSEs for such Load shall submit CRR Sink nominations at their assigned Default LAP or Default LAPs if the Load they serve is located in more than one Default LAP. In tier 3 of the annual process and tier 2 of the monthly process, such LSEs may also submit CRR Sink nominations at a sub-LAP of their assigned Default LAP.

36.8.2.1 Seasonal CRR Eligible Quantity.

The CAISO constructs load duration curves for the annual CRR Allocation process for each LSE based on the LSE's submission to the CAISO of its historical hourly Load data for the prior year, for each LAP within which the LSE serves Load. An LSE's Seasonal CRR Load Metric for each season and time of use period is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's historical Load data. In the event that the LSE has lost or gained net Load through Load migration during the course of the prior year, the historical load data will be adjusted to reflect the loss or gain in accordance with the applicable BPM. The CAISO calculates an LSE's Seasonal CRR Eligible Quantity by subtracting from that LSE's Seasonal CRR Load Metric the quantity of Load served by its TORs, ETCs, and Converted ETCs, and multiplying the result by 0.75.

36.8.2.2 Monthly CRR Eligible Quantity.

Each month the CAISO uses the LSE's submitted monthly load forecast to calculate two load duration curves (one on-peak and one off-peak load duration curve for the applicable month) to form the basis for monthly allocations for each LAP in which the LSE serves Load. The Monthly CRR Load Metric is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's submitted load forecast. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity by subtracting from that LSE's Monthly CRR Load Metric the quantity of Load served by its TORs, ETCs, and Converted ETCs.

36.8.3 CRR Allocation Process.

36.8.3.1 Annual CRR Allocation for CRR Year One.

The annual CRR Allocation for CRR Year One consists of a sequence of four (4) tiers for each season and time of use period (on-peak and off-peak). Each tier will feature a SFT applied to the CRR nominations submitted by eligible LSEs, the results of which are provided by the CAISO to the respective LSEs prior to the LSEs submitting their nominations to the next tier. Allocations of CRRs in each tier are considered final once they are provided by the CAISO to the respective LSEs. After each tier, LSEs will have an amount of time as specified in the Business Practice Manual after their receipt of the results of each tier to submit their nominations for the next tier, if there is one. The annual CRR Allocation allows LSEs to submit nominations for Seasonal CRRs up to their CRR Eligible Quantities for each season of the relevant year, each time of use period and each LAP, and nominations for Long Term CRRs up to fifty percent (50%) of their Adjusted Load Metric for each season, time of use period and each LAP. The annual CRR Allocation for CRR Year One will be conducted in the following sequence of tiers:

36.8.3.1.1 Tier 1. In tier 1, LSEs may nominate and the CAISO will allocate to the LSEs Seasonal CRRs up to 50% of their Seasonal CRR Eligible Quantity for each season.

36.8.3.1.2 Tier 2. In tier 2, LSEs may nominate and the CAISO will allocate to the LSEs Seasonal CRRs up to 75% of their Seasonal CRR Eligible Quantity for each season minus the quantity of CRRs allocated to that LSE in tier 1.

36.8.3.1.3 Tier LT. Tier LT will follow tier 2. In Tier LT, eligible entities may nominate Long Term CRRs from the Seasonal CRRs allocated in tiers 1 and 2. The amount of Seasonal CRRs that can be nominated as Long Term CRRs is limited to fifty percent (50%) of the eligible entity's Adjusted Load Metric. After receiving nominations for Long Term CRRs, the CAISO will run SFTs to ensure the feasibility of the nominated Long Term CRRs for the remaining nine years of the ten-year term of the Long Term CRR. The SFT run in Tier LT will test the feasibility of only the Long Term CRR nominations and will not include in the analysis those Seasonal CRRs allocated in tiers 1 and 2 that are not nominated as Long Term CRRs. The quantity of Long Term CRRs that can be allocated for any season and time-of-use period must be feasible for the entire ten-year term of the Long Term CRR. As a result of the Tier LT SFT runs, Long Term CRR nominations may not be fully allocated; however, such a result will not affect the CRR Year One validity of the Seasonal CRR allocated in tiers 1 and 2. The CAISO will inform the nominating entity of the results of the Tier LT SFTs before the deadline for submission of the tier 3 nominations.

36.8.3.1.4 Tier 3. In tier 3, LSEs may nominate and the CAISO will allocate to the LSEs Seasonal CRRs up to 100% of their Seasonal CRR Eligible Quantity for each season minus the quantity of CRRs allocated to that LSE in tiers 1 and 2. In tier 3, Sub-LAPs will be eligible CRR Sinks provided that the sub-LAP is within the nominating LSE's LAP.

36.8.3.2 Monthly Allocation for CRR Year One.

The monthly CRR Allocation in CRR Year One shall consist of a sequence of two (2) tiers for each time of use period (on-peak and off-peak). The monthly CRR Allocation will distribute Monthly CRRs to each LSE up to one hundred percent (100%) of its Monthly CRR Eligible Quantity minus CRRs allocated to that LSE in the annual CRR Allocation for the relevant month and time of use period. The monthly CRR Allocation for CRR Year One will be conducted as follows:

a. Tier 1. In Tier 1 of the monthly CRR Allocations, LSEs may nominate and the CAISO will allocate to the LSEs Monthly CRRs up to 50% of their Monthly CRR Eligible Quantities;

b. Tier 2. In Tier 2 of the monthly CRR Allocations, LSEs may nominate and the CAISO will allocate to the LSEs Monthly CRRs up to 100% of their CRR Eligible Quantities, minus the quantity of CRRs allocated to that LSE in Tier 1. In Tier 2 of the Monthly Allocation, sub-LAPs will be eligible CRR Sinks provided that the sub-LAP is within the nominating LSE's LAP.

36.8.3.4 Source Verification.

In CRR Year One, nominations for tier 1 and tier 2 of the annual CRR Allocation and tier 1 of the monthly CRR Allocations must be source verified. Through the source verification process described in the Business Practice Manuals, an LSE must demonstrate that it could actually Schedule Energy from the nominated CRR Sources to serve its Load either through ownership of, or contractual rights to, the relevant Generating Units, or a contract to take ownership of power at the relevant source such as a Trading Hub or a Scheduling Point. Source verification will use data for the period beginning September 1, 2004 and ending August 31, 2005 as the basis for verification. Nominations of CRRs whose CRR Source is a Scheduling Point must be source verified in accordance with Section 36.8.4.1.

36.8.3.5 Annual CRR Allocation Beyond CRR Year One.

The annual CRR Allocation for years beyond CRR Year One consists of a sequence of four (4) tiers for each season and time of use period (on-peak and off-peak). Allocations of CRRs in each tier are considered final once they are provided by the CAISO to the respective LSEs. After each tier, LSEs will have an amount of time as specified in the Business Practice Manual after their receipt of the results of each tier to submit their nominations for the next tier, if there is one. The annual CRR Allocation will allow

LSEs to submit nominations up to their Seasonal CRR Eligible Quantities minus the quantity of previously allocated Long Term CRRs for each season of the relevant year, each time of use period and each LAP in which they serve Load. Annual CRR Allocations for years beyond CRR Year One will be conducted in the following sequence of tiers:

36.8.3.5.1 Tier 1 – Priority Nomination Process. Tier 1 of the annual CRR Allocation in years beyond CRR Year One will be a Priority Nomination Process ("PNP") through which CRR Holders may nominate some of the same CRRs that they were allocated in the immediately previous year. In all Annual CRR Allocations after CRR Year One, an LSE may make PNP nominations up to the lesser of: (1) 66.7% of its Seasonal CRR Eligible Quantity minus the quantity of previously allocated Long Term CRRs for each season, time of use period and LAP for that year; or, (2) the total quantity of CRRs allocated to that LSE in the previous annual CRR Allocation for that season, time of use period and LAP, minus any reduction for net loss of Load through retail Load migration as described in Section 36.8.5.1. In addition, an LSE's nomination of any particular CRR source-sink combination in the PNP may not exceed the MW quantity of CRRs having that source and sink that the LSE was allocated in the previous annual CRR allocation for the same season and time of use period, adjusted for net Load loss resulting from Load migration. CRRs whose CRR Sink is a sub-LAP are not eligible for nomination in the PNP. PNP Eligible Quantities are not affected by secondary transfers of CRRs. That is: (i) a LSE may nominate in the PNP a CRR it was allocated in the prior annual CRR Allocation even though it transferred that CRR to another party during the year, and (ii) a LSE may not nominate in the PNP a CRR that it received through a secondary transfer from another party. CRRs received through a CRR Auction are not eligible for nomination in the PNP. Eligible entities may, in the final year of the Long Term CRR, nominate the identical source, sink, and MW terms of the expiring Long Term CRR in this PNP. An eligible entity with an Existing Transmission Contract or Converted Rights that expire by the start of the year for which the CRR Allocation process is conducted may participate in the PNP as if their Existing Transmission Contract or Converted Rights sources and sinks were previously allocated Seasonal CRRs. The maximum quantity of CRRs that such an eligible entity may nominate in the PNP is fifty percent (50%) of

the eligible entity's Adjusted Load Metric minus any previously allocated Long Term CRRs. The CAISO does not guarantee that all CRR nominations in the PNP will be allocated. The CAISO will conduct a SFT to determine whether all CRR nominations in the PNP are simultaneously feasible. If the SFT determines that all priority nominations are not simultaneously feasible, the CAISO will reduce the allocated CRRs until simultaneous feasibility is achieved.

36.8.3.5.2 Tier LT. In Tier LT, eligible entities may nominate Long Term CRRs from any of the Seasonal CRRs allocated in the PNP so long as the amount of the nominated Long Term CRRs is less than or equal to fifty percent (50%) of the eligible entity's Adjusted Load Metric minus the quantity of previously allocated Long Term CRRs.

After receiving nominations for Long Term CRRs, the CAISO will run SFTs to ensure the feasibility of the nominated Long Term CRRs for the remaining nine years of the ten-year term of the Long Term CRR. The SFT run in Tier LT will test the feasibility of only the Long Term CRR nominations and will not include in the analysis those Seasonal CRRs allocated in the PNP that were not nominated as Long Term CRRs. The quantity of Long Term CRRs that can be allocated for any season and time-of-use period must be feasible for the entire ten-year term of the Long Term CRR. As a result of the Tier LT SFT runs, Long Term CRR nominations may not be fully allocated; however, such a result will not affect the validity of: (i) the Long Term CRRs allocated in previous years, or (ii) the Seasonal CRRs allocated in the PNP. The CAISO will inform nominating eligible entities of the results of the Tier LT SFTs before the deadline for submission of the tier 2 nominations.

36.8.3.5.3 Tier 2. In tier 2 of the annual CRR Allocation, the CAISO will allocate Seasonal CRRs to each LSE up to 66.7% of its Seasonal CRR Eligible Quantity for each season, time of use period and LAP, plus 50% of the net Load gained by the LSE through Load migration during the year, minus the

quantity of: (i) CRRs allocated to that LSE in tier 1, and (ii) Long Term CRRs previously allocated to that eligible entity that are valid for the CRR term currently being allocated.

36.8.3.5.4 Tier 3. In tier 3 of the annual CRR Allocation, the CAISO will allocate Seasonal CRRs to each LSE up to 100% of its Seasonal CRR Eligible Quantity for each season, time of use period and LAP, minus the quantity of: (i) CRRs allocated to that LSE in tiers 1 and 2, and (ii) Long Term CRRs previously allocated to that eligible entity that are valid for the CRR term currently being allocated. In tier 3 of the annual CRR Allocation, sub-LAPs will be eligible CRR Sinks provided that the sub-LAP is within the nominating LSE's LAP.

36.8.3.6 Monthly Allocation Beyond CRR Year One.

The monthly CRR Allocation shall consist of a sequence of two (2) tiers of allocations for each time of use period (on-peak and off-peak). The monthly CRR Allocation will distribute Monthly CRRs to LSEs up to one hundred percent (100%) of their Monthly CRR Eligible Quantity minus CRRs allocated to that LSE in the annual CRR Allocation.

a. Tier 1. In Tier 1 of the monthly CRR Allocations, each LSE may nominate Monthly CRRs up to 50% of its Monthly CRR Eligible Quantities;

b. Tier 2. In Tier 2 of the monthly CRR Allocations, each LSE may nominate Monthly CRRs up to 100% of its Monthly CRR Eligible Quantities, minus the quantity of CRRs allocated to that LSE in Tier 1. In Tier 2 of the Monthly Allocation, Sub-LAPs will be eligible CRR Sinks.

36.8.4 Eligible Sources for CRR Allocation.

In the CRR Allocation processes for Seasonal CRRs and Monthly CRRs, sources of CRR nominations can be either PNodes or Trading Hubs. For Long Term CRRs, a Trading Hub is not an eligible source. For tiers 1 and 2 of the annual CRR Allocation in CRR Year One, LSEs requesting CRRs whose CRR Source is a specific Generating Unit will be limited to seventy-five percent (75%) of that Generating Unit's PMax, even if that Generating Unit is owned by or fully contracted to the LSE requesting the CRR. For tiers 1 and 2 of the annual CRR Allocation in CRR Year One, LSEs requesting CRRs whose CRR Source is a Trading Hub will be limited to seventy-five

percent (75%) of the average hourly quantity of Energy contracted for delivery at that Trading Hub. A Scheduling Point can be a CRR Source for the annual and monthly CRR Allocation to the extent the requirements of Section 36.8.4.1 are satisfied.

36.8.4.1 Import CRRs.

LSEs may nominate CRRs whose CRR Source is a Scheduling Point in the annual and monthly CRR Allocation in accordance with this Section. In CRR Year One, in Tiers 1 and 2 of the annual CRR allocation process an LSE may nominate such CRRs to the extent that it can demonstrate to the CAISO that, for the verification period stated in Section 36.8.3.5, it owned or was a party to a contract with a System Resource, and that it or the counter-party to the contract had procured appropriate transmission from the applicable transmission provider outside the CAISO to the Scheduling Point. In addition, also in Tiers 1 and 2 of the annual CRR allocation in CRR Year One, all LSEs eligible to nominate CRRs under this Section 36.8 may nominate as CRR Sources, without any verification, shares of the residual import CRR capacity at each Scheduling Point that remains after the completion of the source verification process. Each LSE's share of the residual import CRR capacity will be calculated as follows. Starting with the total capacity at each Scheduling Point that was available in the DC FNM for the Annual CRR Allocation and Auction process, the CAISO will calculate the amount that remains at each Scheduling Point after subtracting the capacity accounted for by those Scheduling Point CRR Sources submitted by LSEs for verification that have been verified. The CAISO will then set aside 50 percent of this amount at each Scheduling Point for the Annual CRR Auction, and will allow LSEs to nominate pro rata shares of the other 50 percent in proportion to their Seasonal CRR Eligible Quantities. In each Monthly CRR Allocation during CRR Year One, source verification will be required in Tier 1 as in the annual allocation process. Following the verification process, the CAISO will calculate and set aside for the Monthly CRR Auction 50 percent of the import capacity that remains at each Scheduling Point after accounting for the verified Scheduling Point CRR Source submissions to the monthly process and the Annual CRR Allocation and Auction results for that month, and will allow LSEs to nominate monthly CRRs with CRR Sources at each Scheduling Point in quantities up to their pro rata shares of the other 50 percent in proportion to their Monthly CRR Eligible Quantities. In the Annual CRR Allocation processes subsequent to CRR Year One, there will be no special provisions regarding CRR Sources at Scheduling Points in

Tiers 1 and 2. For Tier 3 the CAISO will calculate and set aside for the Annual CRR Auction 50 percent of the import capacity at each Scheduling Point that remains after the Tier 1 and Tier 2 allocations. In the Monthly CRR Allocation processes subsequent to CRR Year One there will be no special provisions regarding CRR Sources at Scheduling Points in Tier 1. For Tier 2 the CAISO will calculate and set aside for the Monthly CRR Auction 50 percent of the import capacity that remains at each Scheduling Point after accounting for the Annual CRR allocation and auction results for that month and Tier 1 of the monthly CRR Allocation.

36.8.5 Load Migration Between LSEs.

Load migration between LSEs will be reflected in the hourly Load data and load forecasts used by the CAISO to calculate the CRR Load Metrics and CRR Eligible Quantities for each LSE, in accordance with procedures set forth in the applicable BPM. When Load migration occurs during an annual CRR cycle, such migration will be reflected in appropriate adjustments to each affected LSE's CRR Eligible Quantities in subsequent annual and monthly CRR Allocations, as well as its PNP Eligible Quantities in the next annual CRR allocation. LSEs with Seasonal CRRs that lose Load through Load migration must comply with Section 36.8.5.2.

36.8.5.1 Adjustments Reflected in the Annual Allocation Process Due To Load Migration.

An LSE who loses or gains net Load through Load migration in a given year will have its Seasonal CRR Eligible Quantities in the next Annual CRR Allocation reduced or increased, respectively, in proportion to the net Load lost or gained through Load migration. In addition, an LSE who loses Load through Load migration in a given year will have its PNP Eligible Quantities reduced in proportion to the gross amount of Load lost through Load migration. The reduction in PNP Eligible Quantities will be applied as a constant percentage to all CRRs allocated to that LSE in the prior annual CRR Allocation. There is no increase in an LSE's PNP Eligible Quantities due to an increase in Load due to Load migration. Such an LSE may acquire additional CRRs for net Load gained in tiers 2 and 3 of the subsequent annual CRR Allocation. The CAISO will reserve CRRs in the annual PNP corresponding to the CRRs released by LSEs whose PNP Eligible Quantities were reduced, and will then release these CRRs for tiers 2 and 3.

This mechanism will ensure, in the event that changes to the DC FNM prevent the full allocation of PNP Eligible Quantities, that CRRs nominated in the PNP undergo the same proportional reduction as CRRs released by the LSEs who lose Load due to Load migration, so as not to unfairly disadvantage those LSEs who gain Load through Load migration. The Load-gaining LSE will not be required to request the precise CRRs released by the relevant Load-losing LSE but will be able to nominate its preferred CRRs in tiers 2 and 3.

36.8.5.2 Transfers of Allocated CRRs to Reflect Load Migration.

LSEs that have been allocated Seasonal CRRs or Long Term CRRs and that lose Load through Load migration must transfer allocated Seasonal CRRs and Long Term CRRs in accordance with this Section 36.8.5.2. An LSE that receives shares of allocated CRRs due to Load migration must meet all requirements applicable to CRR Holders.

36.8.5.2.1 Mid-Year Adjustments in Seasonal CRRs.

If an LSE loses Load through Load migration to another LSE at any time between annual CRR Allocations, the Load-losing LSE must compensate the Load-gaining LSE in one of the following two manners: 1) using the SRS, the Load-losing LSE may transfer a percentage of each of the Seasonal CRR that it was allocated for the remainder of the annual CRR cycle and for both on-peak and off-peak periods, to the Load-gaining LSE in a quantity proportionate to the percentage of its Load lost to the other LSE through migration; or 2) the LSE who loses Load through Load migration to another LSE may make cash payments to the relevant Load-gaining LSE in a value commensurate with the hourly CRR Payment stream that would have accrued to the CRRs transferred, based on the quantity of CRRs awarded to the Load-losing LSE.

36.8.5.2.2 Load Migration and Allocated Long Term CRRs.

An LSE that is a CRR Holder that holds a Long Term CRR and that loses Load to Load migration must transfer a proportionate share of each of its Long Term CRRs to the Load-gaining LSE, in a quantity proportionate to the percentage of its Load lost to the other LSE through Load migration. After the transfer of the Long Term CRR (or the proportionate share thereof) to the Load-gaining LSE, the Load-gaining LSE is the holder of record for the transferred Long Term CRR for CAISO Settlement purposes.

36.8.5.2.3 Load Migration That Occurs After Completion of the Annual Allocation Process.

If Load migration occurs after the annual CRR Allocation process has been completed for the following year, a CRR Holder that holds Long Term CRRs may transfer the following year's segment of the Long Term CRR using the options set forth in Section 36.8.5.2.1. For all of the other remaining years of the Long Term CRR, the CRR Holder that holds Long Term CRRs may not use the options set forth in Section 36.8.5.2.1 to transfer the Long Term CRR (or the proportionate portion thereof) to the Load-gaining LSE.

36.8.5.3 Load Migration Reflected in the Monthly Allocation Process.

An LSE who loses or gains net Load through Load migration must reflect that loss or gain in the monthly Load forecasts it submits to the CAISO for determining its monthly CRR Eligible Quantities for future monthly CRR allocations.

36.8.5.4 Adjustments for Load Growth.

LSEs who experience Load growth that is not due to Load migration will reflect such Load growth in the data submitted to the CAISO for determining Seasonal and Monthly CRR Eligible Quantities for the CRR Allocation processes.

36.8.6 Load Forecasts Used to Calculate CRR MW Eligibility.

The CAISO will work closely with appropriate state and Local Regulatory Authorities and agencies to ensure that historical load data and load forecasts used to establish CRR Eligible Quantities are consistent with the data and forecasts used to establish Resource Adequacy Requirements.

36.8.7 Long Term CRRs and Participating TO Withdrawals from the CAISO Controlled Grid.

In the event a Participating TO gives the required notice and withdraws facilities or Entitlements from the CAISO Controlled Grid, the CAISO will reconfigure Long Term CRRs as necessary to reflect the CAISO Controlled Grid after the withdrawal. After reconfiguration, the CAISO will run SFTs on the reconfigured Long Term CRRs and, if necessary, reduce some of the reconfigured Long Term CRRs to ensure their feasibility. If the CRR Source and CRR Sink for an allocated Long Term CRR both are located within a departing Participating TO Service Territory, the Long Term CRR would expire on the effective date of the Participating TO's withdrawal.

36.9 CRR Allocation to LSEs serving External Load.

LSEs serving Load outside the CAISO Control Area who wish to nominate and be allocated CRR Obligations in the same annual and monthly allocation processes described in Section 36.8 may do so subject to the provisions of this Section. LSEs serving Load outside the CAISO Control Area may participate in the CRR Allocation processes and be allocated CRRs to the extent that: (1) such LSEs makes a showing of legitimate need for the CRRs nominated; (2) such entities pre-pay the appropriate Wheeling Access Charge in the amount of MWs of CRRs nominated; (3) the nominated CRRs clear the relevant SFTs; and (4) the external load for which CRRs are nominated is not served through an ETC, TOR or Converted Rights which as been designated as eligible to receive the reversal of Congestion Charges. Such LSEs that participate in the CRR Allocation processes will be subject to the applicable rules governing the tiered structure of these processes as described in Sections 36.8. All CRRs allocated under the terms of this Section 36.9 will be CRR Obligations.

36.9.1 Showing of Legitimate Need.

LSEs serving load outside the CAISO Control Area must make a showing to the CAISO of legitimate need for the CRRs requested. The determination of legitimate need will be based on demonstration of an existing contract for Generation internal to the CAISO Control Area that covers the time period of the CRRs nominated, or ownership of a Generating Unit internal to the CAISO Control Area.

36.9.2 Prepayment of Wheeling Access Charges.

LSEs serving load outside the CAISO Control Area will be required to prepay relevant Wheeling Access Charges in order to participate in the CRR Allocation processes and be allocated CRRs. For each MW of CRR nominated the nominating LSE must prepay one MW of the relevant Wheeling Access Charge, which equals the per-MWh WAC that is expected at the time the allocation process is conducted to be applicable for the period of the CRR nominated, times the number of hours comprising the period of the CRR nominated. To the extent that an LSE prepays a quantity of the WAC and is not allocated the full amount of CRRs nominated, WAC prepayment for CRRs not allocated will be refunded by the CAISO within a reasonable time following the completion of the relevant allocation process.

36.9.2.1 Prepayment of Wheeling Access Charges for Long Term CRRs.

An entity serving load outside the CAISO Control Area that wants to nominate an allocated Seasonal CRR as a Long Term CRR must execute a contract with the CAISO committing the entity to make annual

Wheeling Access Charge payments for each year of the term of a Long Term CRR. Each year's payment will be made at the beginning of the annual CRR Allocation process for the following year.

36.9.3 CRR Eligible Quantities.

The CAISO will calculate the Seasonal and Monthly CRR Eligible Quantities for LSEs serving external Load as described in Section 36.8.2 with the following modifications. The Load data submitted by the LSE from which the CAISO will construct load duration curves for determining the Seasonal and Monthly CRR Eligible Quantities must reflect the LSE's historical hourly exports at the Scheduling Point that is the CRR Sink of the nominated CRRs. LSEs that wish to nominate multiple Scheduling Points as CRR Sinks in the allocation process will have distinct CRR Eligible Quantities for each nominated Scheduling Point, and must submit historical hourly export data at each such Scheduling Point from which the CAISO will calculate the associated CRR Eligible Quantities.

36.9.4 Eligible Sources and Sinks.

Eligible CRR Sources will be the PNodes of the Generating Units for which the LSE has made a legitimate need showing as described above. Eligible CRR Sinks will be the Scheduling Points for which the CAISO has established CRR Eligible Quantities based on the LSE's submitted historical hourly export data. External Load Serving Entities requesting CRRs whose CRR Source is a specific Generating Unit will be limited to seventy-five percent (75%) of that Generating Unit's PMax in Tiers 1 and 2 of the annual CRR Allocation process in CRR Year One.

36.9.5 Priority Nomination Process.

CRRs allocated pursuant to this Section 36.9 shall be eligible for nomination in the Priority Nomination Process to the extent that the requirements of this Section 36.9 are met at the time of the relevant CRR Allocation.

36.10 CRR Allocation to Metered Subsystems.

An MSS that elects gross settlement may participate in the CRR allocation processes and be allocated CRR Obligations in accordance with Section 36.8. An MSS that elects net settlement may participate in the CRR allocation processes and be allocated CRRs in accordance with Section 36.8, except that its

CRR Eligible Quantities will reflect its net load and its allocated CRRs will use MSS-LAPs as CRR Sinks. The MSS will be required to submit to the CAISO the appropriate hourly historical net Load data and net Load forecast data from which the CAISO will construct net Load duration curves to determine the CRR Eligible Quantities.

36.11 CRR Allocation to Merchant Transmission Upgrades.

Sponsors of merchant transmission upgrades who turn such facilities over to CAISO operational control and do not recover the cost of the transmission investment through the CAISO's TAC or WAC or other regulatory cost recovery mechanism may be allocated CRR Options that reflect the contribution of the upgrade to grid transfer capacity as determined in accordance with Section 24.7.3.

36.12 [NOT USED]

36.13 CRR Auction.

The CAISO shall conduct CRR Auctions on an annual and monthly basis subsequent to each annual and monthly CRR Allocation process. Candidate CRR Holders may bid to purchase and may acquire CRRs Obligations through the CAISO's annual and monthly CRR Auctions in accordance with the provisions of this Section 36.13.

36.13.1 Scope of the CRR Auctions.

The CAISO will conduct a CRR Auction corresponding to and subsequent to the completion of each CRR Allocation process, and prior to the start of the period to which the auctioned CRRs will apply. Each CRR Auction will release CRRs having the same seasons, months and time-of-use specifications as the CRRs released in the corresponding CRR Allocation. Each CRR Auction will utilize the same DC FNM that was utilized in the corresponding CRR Allocation. For each CRR Auction, the CRRs allocated in the corresponding CRR Allocation will be modeled as fixed injections and withdrawals on the DC FNM and will not be adjusted by the SFT in the CRR Auction process. Thus the CRR Auction will release only those CRRs that are feasible given the results of the corresponding CRR Allocation. CRRs released in a CRR Auction will be indistinguishable from CRRs released in the corresponding CRR Allocation for purposes of settlement and secondary trading. The following limitations apply. First, participants in the CRR Auctions will have more choices regarding CRR Sources and CRR Sinks than are eligible for

nomination in the CRR Allocations, as described in Section 36.13.5. Second, to the extent a Market Participant receives CRRs in both a CRR Allocation and the corresponding CRR Auction, the CRRs obtained in the CRR Auction will not be eligible for nomination in the PNP. Third, in CRR Year One the CRR Auction cannot be used by CRR Holders to offer for sale CRRs they acquired in a prior CRR Allocation or CRR Auction. In the annual and monthly CRR Auction processes for years following CRR Year One, the CRR Holder, including the CRR Holder holding Long Term CRRs, may offer for sale that portion of the CRR corresponding to the CRR Auction process.

36.13.2 Responsibilities of the CAISO Prior to Each Auction.

The CAISO shall publish on the CAISO Website a notice of upcoming CRR Auctions at least seven (7) days prior to the CRR auction. The CAISO will also provide additional information needed by CRR Auction participants in accordance with the provisions of Section 6.5.1.

36.13.3 CRR Holder Creditworthiness.

All Market Participants are eligible to acquire CRRs by participating in the CRR Auction, provided that the Market Participant has met all the CRR Holder requirements described in Section 36.5, the creditworthiness provisions in Section 12 and the relevant Business Practice Manual.

36.13.4 Bids in the CRR Auctions.

Bids to purchase CRRs shall be submitted in accordance with the requirements set out in this Section 36.13.4 and as further specified in the applicable Business Practice Manuals. Once submitted to the CAISO, CRR bids may not be cancelled or rescinded by the Market Participant after the auction is closed. Market Participants may bid for Point-to-Point CRRs and Multi-Point CRRs. Each bid for a Point-to-Point CRR shall specify:

a) The associated month or season and time-of-use period;

b) The associated CRR Source and CRR Sink;

c) A monotonically non-increasing piecewise linear bid curve in quantities (denominated in tenths of MW) and prices ($/MW).

Each bid for a Multi-Point CRR shall specify:

d) The associated month or season and time-of-use period;

e) The associated CRR Sources and CRR Sinks;

f) For each CRR Source, a monotonically non-decreasing piecewise linear bid curve in quantities (denominated in tenths of MW) and prices ($/MW).

g) For each CRR Sink, a monotonically non-increasing piecewise linear bid curve in quantities (denominated in tenths of MW) and prices ($/MW).

Bid prices in all CRR bids may be negative.

36.13.5 Eligible Sources and Sinks for CRR Auction.

Allowable CRR Sources for CRRs acquired in the CRR Auction will be Generator PNodes, Scheduling Points, Trading Hubs, LAPs, MSS-LAPs and sub-LAPs. Allowable CRR Sinks for CRRs acquired in the CRR Auction will be Generator PNodes, Scheduling Points, Trading Hubs, LAPs, MSS-LAPs and Sub-LAPs.

36.13.6 Clearing of the CRR Auction.

The SFT used to clear the CRR Auction will utilize the same DC FNM and optimization algorithm as the corresponding CRR Allocation, except that nominations to the CRR Auction will have associated price-quantity bid curves. The CRR Auction SFT will use the bid prices in determining which CRRs to award when not all nominations are simultaneously feasible, will select the set of simultaneously feasible CRRs with the highest total auction value as determined by the CRR bids, and will calculate nodal prices at each PNode of the DC FNM. In the event that there are two or more identical bids for a specific combination of CRR Source and CRR Sink, and there is insufficient network capacity to accommodate all of the identical bids, each such CRR bidder will receive a pro rata share of the CRRs that can be awarded. Based on the nodal prices calculated by the CRR Auction SFT, the CRR Market Clearing Price per MW for a specific CRR will equal the nodal price at the CRR Sink minus the nodal price at the CRR Source. For a Multi-Point CRR the CRR Market Clearing Price will equal the sum over all relevant CRR Sinks of the nodal price at each CRR Sink times that CRR Sink's share of the total MW of the CRR, minus the sum over all relevant CRR Sources of the nodal price at each CRR Source times that CRR Source's share of the total MW of the CRR Market Participants shall pay the associated CRR Market Clearing Prices for all CRRs bought through the CRR Auction.

36.13.7 Announcement of CRR Auction Results.

Within five (5) business days after the close of a CRR Auction, the CAISO shall post the results. The results shall include but are not limited to the MW quantity, the CRR Source and CRR Sink for each CRR awarded, the nodal prices calculated by the CRR Auction SFT, and the parties to whom the CRRs were awarded. The CAISO shall not disclose prices specified in any CRR bid.

37 Rules of Conduct (Enforcement Protocol).

37.1 Objectives, Definitions, and Scope.

37.1.1 Purpose.

This Section sets forth the guiding principles for participation in the markets administered by the CAISO. The specified Rules of Conduct are intended to provide fair notice to Market Participants of the conduct expected of them, to provide an environment in which all parties may participate on a fair and equal basis, to redress instances of gaming and other instances of anticompetitive behavior, and thereby to foster confidence of Market Participants, ratepayers and the general public in the proper functioning of the CAISO markets.

37.1.2 Objectives.

The objectives of this CAISO Tariff are to:

(a) Provide clear Rules of Conduct specifying the behavior expected of Market Participants; and

(b) Establish in advance the Sanctions and other potential consequences for violation of the specified Rules of Conduct.

37.1.3 Application of Other Remedies.

The activities and remedies authorized under this Section 37 are in addition to any other actions or relief that may be available to the CAISO elsewhere in the CAISO Tariff or under law, regulation or order. Nothing in this Section 37 limits or should be construed to limit the right of the CAISO to take action or seek relief otherwise available to it, and such action or relief may be pursued in lieu of or in addition to the action or relief specified in this Section 37.

37.1.4 FERC Authority.

In addition to any authority afforded Market Monitoring Unit in this Section 37, FERC shall have the authority to assess the sanctions, and otherwise to enforce the rules as set forth and described in this Section 37. FERC shall have authority to remedy a violation under this Section 37 from the date of the violation. Nothing in this Section 37 shall be deemed to be a limitation or condition on the authority of FERC or other entities under current law or regulation.

37.1.5 Administration.

The Marketing Monitor Unit will administer the Rules of Conduct specified herein, except for Section 37.7, which shall be administered by FERC, and except as provided in Section 37.2.5 and Section 37.4.4. Nothing in this CAISO Tariff limits or should be construed to limit the ability of components of the CAISO organization other than the Market Monitoring Unit to analyze data and refer matters to the Market Monitoring Unit for enforcement.

37.2 Comply with Operating Orders.

37.2.1 Compliance with Orders Generally.

37.2.1.1 Expected Conduct.

Market Participants must comply with operating orders issued by the CAISO as authorized under the CAISO Tariff. For purposes of enforcement under this Section 37.2, an operating order shall be an order(s) from the CAISO directing a Market Participant to undertake, a single, clearly specified action (e.g., the operation of a specific device, or change in status of a particular Generating Unit) that is feasible and intended to resolve a specific operating condition. A Market Participant's failure to obey an operating order containing multiple instructions to address a specific operating condition will result in a single violation of Section 37.2. If some limitation prevents the Market Participant from fulfilling the action requested by the CAISO, then the Market Participant must promptly and directly communicate the nature of any such limitation to the CAISO. Compliance with CAISO operating orders requires a good faith effort to achieve full performance as soon as is reasonably practicable in accordance with Good Utility Practice.

37.2.1.2 Sanctions.

The Sanction for a violation of this Section shall be the greater of the quantity of Energy non-performance multiplied by the applicable Dispatch Settlement Interval Locational Marginal Price or the following: for the first violation in a rolling twelve (12) month period, $5,000; for the second and subsequent violations in a rolling twelve (12) month period, $ 10,000. Sanctions under Section 37.2.1 will not be greater than $10,000 per violation and will be subject to the limitation stated in Section 37.2.6. If a quantity of energy cannot be objectively determined, then the financial sanctions specified above will apply. A Market Participant may incur Sanctions for more than one violation per day.

37.2.2 Failure to Curtail Load.

37.2.2.1 Expected Conduct.

A UDC or MSS Operator shall promptly comply with any CAISO operating order to curtail interruptible or firm load issued pursuant to the CAISO's authority under Section 7.7.11.3 of the CAISO Tariff.

37.2.2.2 Sanctions.

The Sanction for non-compliance with an operating order to curtail load will be $10,000 for each violation.

37.2.3 Operations & Maintenance Practices.

37.2.3.1 Expected Conduct.

Market Participants shall undertake such operating and maintenance practices as necessary to avoid contributing to a major outage or prolonging response time as indicated by Section 7.7.13.3 of the CAISO Tariff.

37.2.3.2 Sanctions.

The Sanction for a violation of Section 37.2.3 will be $10,000.

37.2.4 Resource Adequacy Availability..

37.2.4.1 Expected Conduct.

A Market Participant shall start a Generating Unit listed as a Resource Adequacy Resource by placing it on-line and/or available consistent with a DAM or RUC commitment or Real-Time Dispatch Instructions, unless the CAISO releases the Generating Unit after the RUC process is completed, or a derate, outage or other event outside the control of the Market Participant prevents the Generating Unit from being on-line and available. A Market Participant that fails to perform in accordance with the expected conduct described in this Section 37.2.4.1 shall be subject to Sanction.

37.2.4.2 Sanctions.

The Sanctions for a violation of Section 37.2.4 shall be as follows: for the first violation in a rolling twelve (12) month period, $5,000; for the second and all subsequent violations in a rolling twelve (12) month period, $10,000. A Market Participant is limited to one Sanction per Generating Unit per calendar day.

37.2.5 Enhancements and Exceptions.

Except as otherwise specifically provided, penalty amounts shall be tripled for any violation of Section 37.2.1 through Section 37.2.4 if a CAISO System Emergency exists at the time an operating order becomes effective or at any time during the Market Participant's non-performance. Notwithstanding the foregoing, violations of Section 37.2.1 through Section 37.2.4 are subject to penalty under this rule only to the extent that the CAISO has issued a separate and distinct Dispatch Instruction to the Market Participant. Any penalty amount that is tripled under this provision and that would exceed the $10,000 per day penalty limit shall not be levied against a Market Participant until the CAISO proposes and the Commission approves such an enhancement. A Market Participant that is subject to an enhanced penalty amount under this Section 37.2.5 may appeal that penalty amount to FERC if the Market Participant believes a mitigating circumstance not covered in Section 37.9.2 exists. The duty of the Market Participant to pay the enhanced penalty amount will be tolled until FERC renders its decision on the appeal.

37.2.6 Per-Day Limitation on Amount of Sanctions.

The amount of Sanctions that any Market Participant will incur for committing two or more violations of Section 37.2.1 through Section 37.2.4 on the same day will be no greater than $10,000 per day.

37.3 Submit Feasible Energy Bids, Ancillary Service Bids, and Submissions to Self-Provide an Ancillary Service.

37.3.1 Bidding Generally.

37.3.1.1 Expected Conduct.

Market Participants must submit Bids for Energy and Ancillary Services and Submissions to Self-Provide an Ancillary Service from resources that are reasonably expected to be available and capable of performing at the levels specified in the Bid, and to remain available and capable of so performing based on all information that is known to the Market Participant or should have been known to the Market Participant at the time of submission.

37.3.1.2 Consequence for Non-Performance.

A Market Participant that fails to perform in accordance with the expected conduct described in Section 37.3.1.1 above shall be subject to having the payment rescinded for any portion of an Ancillary Service that is unavailable.

37.3.2 Exceptions.

Violations of Section 37.3.1 that result in circumstances in which an Uninstructed Deviation Penalty under Section 11.23 of the CAISO Tariff may be assessed or for which payments have been eliminated under Section 8.10.8 of the CAISO Tariff are not subject to Sanction under this section. The submission of a Bid or of a Submission to Self-Provide Ancillary Services that causes, or that the CAISO expects to cause Congestion shall not, by itself, constitute a violation of Section 37.3.1 unless the Market Participant fails to comply with an obligation under the CAISO Tariff to modify Bids as determined by the CAISO to mitigate such Congestion or such Bids violate another element of this rule.

37.4 Comply with Availability Reporting Requirements.

37.4.1 Reporting Availability.

37.4.1.1 Expected Conduct.

A Market Participant shall report to the CAISO Control Center any Outage of a Generating Unit subject to Section 4.6 of the CAISO Tariff within thirty (30) minutes after the Outage occurs, in accordance with of the CAISO Tariff.

37.4.1.2 Sanctions.

The Sanctions for a violation of Section 37.4.1 shall be as follows: for the first violation in a rolling twelve (12) month period, a warning letter; for the second violation in a rolling twelve (12) month period, $1,000; for the third violation in a rolling twelve (12) month period, $2,000; for the fourth and subsequent violations in a rolling twelve (12) month period, $5,000. A Market Participant shall not be subject to more than one Sanction per Generating Unit per calendar day for violating Section 37.4.1. A “violation” shall mean each failure to report an Outage as required.

37.4.2 Scheduling and Final Approval of Outages.

37.4.2.1 Expected Conduct.

A Market Participant shall not undertake an Outage except as approved by the CAISO Outage Coordination Office in accordance with Section 9.3.2, Section 9.3.9, and Section 9.3.6.6 of the CAISO Tariff. A Market Participant shall not commence any Outage without obtaining final approval from the CAISO Control Center in accordance with Sections 9.3.9 and 9.3.10 of the CAISO Tariff.

37.4.2.2 Sanctions.

The Sanctions for a violation of Section 37.4.2 shall be as follows: for the first violation within a rolling twelve (12) month period, $5,000; for subsequent violations within a rolling twelve (12) month period, $10,000. A "violation" shall mean each Outage undertaken for which all required approvals were not obtained.

37.4.3 Explanation of Forced Outages.

37.4.3.1 Expected Conduct.

A Market Participant, within two working days of the commencement of a Forced Outage, must provide an explanation of the Forced Outage to the CAISO that includes a description of the equipment failure or other cause and a description of all remedial actions taken by the Operator, in accordance with Section 9.3.10.5 of the CAISO Tariff. An Operator must promptly provide information requested by the CAISO to enable the CAISO to review the explanation submitted by the Operator and to prepare a report on the Forced Outage.

37.4.3.2 Sanctions.

The Sanction for failing to provide a timely explanation of Forced Outage shall be $500 per day for each day the explanation is late. The Sanction for failing to provide a timely response to information requested shall be as specified in Section 37.6.1.

37.4.4 Enhancements and Exceptions.

Except as otherwise specifically provided, penalty amounts shall be tripled for any violation of Section 37.4.1 through Section 37.4.3 that occurs during a CAISO System Emergency. Violations of the above rules that result in circumstances in which an Uninstructed Deviation Penalty under Section 11.23 of the

CAISO Tariff may be assessed shall not be subject to Sanction under this Section 37.4. A Market Participant that is subject to an enhanced penalty amount under this Section 37.4.4 may appeal that penalty amount to FERC if the Market Participant believes a mitigating circumstance not covered in Section 37.9.2 exists. The duty of the Market Participant to pay the enhanced penalty amount will be tolled until FERC renders its decision on the appeal.

37.5 Provide Factually Accurate Information.

37.5.1 Accurate Information Generally.

37.5.1.1 Expected Conduct.

All applications, Bids, Submissions, reports, and other communications by a Market Participant or agent of a Market Participant to the CAISO, including maintenance and outage data, Bid data, transaction information, and load and resource information, must be submitted by a responsible company official who is knowledgeable of the facts submitted. The Market Participant shall provide accurate and factual information and not submit false or misleading information, or omit material information, in any communication with FERC, FERC-approved market monitors, FERC-approved regional transmission organizations, or FERC-approved independent system operators, or jurisdictional transmission providers, unless the Market Participant exercised due diligence to prevent such occurrences.

37.5.1.2 Sanctions.

The Sanctions for a violation of Section 37.5.1 shall be as follows: for the first violation within a rolling twelve (12) month period, $2,500; for the second violation within a rolling twelve (12) month period), $5,000; subsequent violations within a rolling twelve (12) month period, $10,000.

37.5.2 Inaccurate Meter Data.

37.5.2.1 Expected Conduct.

Market Participants shall provide complete and accurate Settlement Quality Meter Data for each Trading Hour and shall correct any errors in such data prior to the issuance of Final Settlement Statements. Failure to provide complete and accurate Settlement Quality Meter Data, as required by Section 10 of the CAISO Tariff and that results in an error that is discovered after issuance of Final Settlement Statements, shall be a violation of this rule.

37.5.2.2 Sanctions.

Violations under this Section 37.5.2 shall be subject to Sanction described in Section 37.11.

37.5.2.3 Disposition of Sanction Proceeds.

For purposes of redistributing collected meter adjustments, any amounts collected under this provision shall be applied first to those parties affected by the conduct. Any excess amounts shall be disposed of as set forth in Section 37.9.4.

37.6 Provide Information Required by CAISO Tariff.

37.6.1 Required Information Generally.

37.6.1.1 Expected Conduct.

Except as provided below in Section 37.6.4 (Review by FERC), all information that is required to be submitted to the CAISO under the CAISO Tariff, CAISO Business Practice Manuals, or jurisdictional contracts must be submitted in a complete, accurate, and timely manner. Market Participants must comply with requests for information or data by the CAISO authorized under the CAISO Tariff, including timelines specified in the CAISO Tariff for submitting Bids and other information.

37.6.1.2 Sanctions.

Except as otherwise provided below, in Section 37.6.2 and Section 37.6.3, a violation of this rule is subject to a penalty of $500 for each day that the required information is late.

37.6.2 Investigation Information.

37.6.2.1 Expected Conduct.

Except as provided below in Section 37.6.4 (Review by FERC), Market Participants must submit timely information in response to a written request by the CAISO for information reasonably necessary to conduct an investigation authorized by the CAISO Tariff.

37.6.2.2 Sanctions.

The Sanction for a violation of Section 37.6.2 shall be as follows: for the first violation in a rolling 12-month period, $1000/day; for the second violation in a rolling 12-month period, $2000/day; for the third and subsequent violations in a rolling 12-month period, $5000/day. For purposes of this subsection, a

violation shall be each failure to provide a full response to a written request and the Sanction shall be determined from the date that the response was due until a full response to the request is received.

37.6.3 Audit Materials.

37.6.3.1 Expected Conduct.

Except as provided below in Section 37.6.4 (Review by FERC), Market Participants shall comply with the CAISO's audit and/or test procedures, and further shall perform and timely submit an annual self-audit as required under the CAISO Tariff.

37.6.3.2 Sanctions.

For failure to submit an annual Scheduling Coordinator Self Audit report, the Sanction shall be $1000/day until such report is received by the CAISO. For all other violations of this rule the Sanctions shall be as follows: for the first violation in a rolling 12-month period, $1000/day; for the second violation in a rolling 12-month period, $2000/day; for the third and subsequent violations in a rolling 12-month period, $5000/day. For purposes of this subsection, a "violation" shall be each failure to provide all information required under the audit or test, from the date that the information was due until all required information is received by the CAISO.

37.6.4 Review by FERC.

A Market Participant who objects to an information, audit or test obligation that is enforceable under Section 37.6.1, Section 37.6.2 or Section 37.6.3 above shall have the right immediately (and in all events, no later than the due date for the information) to seek review of the obligation with FERC. In the event that such review is sought, the time for submitting the response or other information to the CAISO shall be tolled until FERC resolves the issue.

37.7 Prohibition of Electric Energy Market Manipulation.

It shall be a violation of this CAISO Tariff for an entity, directly or indirectly, in connection with the purchase or sale of electric energy or the purchase or sale of transmission services subject to the jurisdiction of the FERC, (i) to use or employ any device, scheme, or artifice to defraud, (ii) to make any

untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, or (iii) to engage in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity. Violations or potential violations of this rule shall be referred to FERC for appropriate sanction.

Actions or transactions by a Market Participant that are explicitly contemplated in the CAISO Tariff or are undertaken at the direction of the CAISO are not in violation of this Rule of Conduct.

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37.8 Process for Investigation and Enforcement.

37.8.1 Purpose; Scope.

The provisions of this Section 37.8 set forth the procedures by which the Market Monitoring Unit will independently investigate potential violations of the Rules of Conduct and administer enforcement activities. Except as hereinafter provided, and except as provided in Section 37.2.5 and Section 37.4.4, the provisions of this section apply to the Rules of Conduct set forth in Sections 37.2 through 37.7.

37.8.2 Referrals to FERC.

Section 37.7 shall be enforced by FERC, in accordance with FERC's rules and procedures. The Market Monitoring Unit shall refer to FERC and its staff all matters in which it has formed a reasonable belief that a violation of Section 37.7 may have occurred. Although Sections 37.2 through 37.6 will generally be enforced by the Market Monitoring Unit, the Market Monitoring Unit shall refer to FERC any matter for which the particular circumstances preclude the objective determination of a Rules of Conduct violation, and shall refer to FERC any Sanction that it believes should be modified in accordance with Sections 37.2.5, 37.4.4, or 37.9.1. The time limitation contained in Section 37.10.1 to assess a Sanction under this Protocol shall be determined as of the date that a Sanction is initially assessed by the CAISO, excluding the time required for FERC to investigate a potential Rules of Conduct violation and/or determine a Sanction in accordance with this section, Sections 37.2.5, 37.4.4, or 37.9.1.

37.8.3 Investigation.

The Market Monitoring Unit shall conduct a reasonable investigation seeking available facts, data, and other information relevant to the potential Rules of Conduct violation.

37.8.4 Notice.

The Market Monitoring Unit shall provide notice of the investigation in sufficient detail to allow for a meaningful response to the Scheduling Coordinator and, as limited below, to all Market Participants the Scheduling Coordinator represents that are the subject(s) of the investigation. The Market Monitoring Unit shall contact the Market Participant(s) that may be involved, so long as the CAISO has sufficient objective information to identify and verify the role of the Market Participant(s) in the potential Rules of Conduct violation. Such Market Participant(s) will likely have an existing contractual relationship with the

CAISO (e.g., UDC, MSS, CAISO Metered Entity, Participating Transmission Owner, Participating Generator, or Participating Load).

37.8.5 Opportunity to Present Evidence.

The Market Monitoring Unit shall provide an opportunity to the Market Participant(s) that are the subject(s) of the investigation to present any issues of fact or other information relevant to the potential Rules of Conduct violation being investigated. The Market Monitoring Unit shall consider all such information or data presented.

37.8.6 Results of Investigation.

The Market Monitoring Unit shall notify the Market Participant(s) that are the subject(s) of the investigation of the results of the investigation. The Market Participant(s) shall have 30 days to respond to the findings of the Market Monitoring Unit before the Market Monitoring Unit makes a determination of whether a Sanction is required by this CAISO Tariff.

37.8.7 Statement of Findings and Conclusions.

Where the investigation results in a Sanction, the Market Monitoring Unit shall state its findings and conclusions in writing, and will make such writing available to the Scheduling Coordinator and, as provided in Section 37.8.4, to the Market Participant(s) that are the subject(s) of the investigation.

37.8.8 Officer Representative.

Where an investigation results in a Sanction by the Market Monitoring Unit, the Market Monitoring Unit shall direct its notice of such result to a responsible representative of the Scheduling Coordinator and, as provided in Section 37.8.4, to the Market Participant(s) that are the subject(s) of the investigation at the officer level.

37.8.9 Record of Investigation.

Where an investigation results in a Sanction, the Market Monitoring Unit will maintain a record of the investigation until its decision has been finally reviewed, if review is sought, or until the period for seeking review has expired.

37.8.10 Review of Determination.

A Market Participant that receives a Sanction may obtain immediate review of the Market Monitoring Unit's determination by directly appealing to FERC, in accordance with FERC's rules and procedures. In such case, the applicable Scheduling Coordinator shall also dispute the Preliminary Settlement Statement containing the financial penalty, in accordance with Section 11 of the CAISO Tariff. The Preliminary Settlement Statement dispute and appeal to FERC must be made in accordance with the timeline for raising disputes specified in Section 11.29.8.2 of the CAISO Tariff. The penalty will be tolled until FERC renders its decision on the appeal. The disposition by FERC of such appeal shall be final, and no separate dispute of such Sanction may be initiated under Section 13 of the CAISO Tariff, except as provided in Section 37.9.3.4. For the purpose of applying the time limitations set forth in Section 37.10.1, a sanction will be considered assessed when it is included on a Preliminary Settlement Statement, whether or not the CAISO accepts a Scheduling Coordinator's dispute of such Preliminary Settlement Statement pending resolution of an appeal to FERC in accordance with this section or Section 37.9.3.3.

37.9 Administration of Sanctions

37.9.1 Assessment; Waivers and Adjustments. Penalty amounts for violation of these Rules of Conduct shall be calculated as specified in Section 37.2 through Section 37.7. A Sanction specified in this Section 37 may be modified by FERC when it determines that such adjustment is just and reasonable. The CAISO may make a recommendation to FERC to modify a Sanction. An adjustment generally shall be deemed appropriate if the prescribed Sanction appears to be insufficient to deter the prohibited behavior, or if the circumstances suggest that the violation was inadvertent, unintentional, or some other mitigating circumstances exist.

37.9.2 Excuse.

The following circumstances shall excuse a violation of a Rule of Conduct under the terms of this CAISO Tariff:

37.9.2.1 Uncontrollable Force.

No failure by a Market Participant to satisfy the Rules of Conduct shall be subject to penalty to the extent and for the period that the Market Participant's inability to satisfy the Rules of Conduct is caused by an

event or condition of Uncontrollable Force affecting the Market Participant; provided that the Market Participant gives notice to the CAISO of the event or condition of Uncontrollable Force as promptly as possible after it knows of the event or condition and makes all reasonable efforts to cure, mitigate, or remedy the effects of the event or condition.

37.9.2.2 Safety, Licensing, or Other Requirements.

Failure by a Market Participant to perform its obligations shall not be subject to penalty if the Market Participant is able to demonstrate that it was acting in accordance with Section 4.2.1 of the CAISO Tariff.

37.9.2.3 Emergencies.

Failure by a Market Participant to perform its obligations may not be subject to penalty if the Market Participant is able to demonstrate that it was acting in good faith and consistent with Good Utility Practice to preserve System Reliability in a System Emergency, unless contrary to a CAISO operating order.

37.9.2.4 Conflicting Directives.

To the extent that any action or omission by a Market Participant is specifically required by a FERC Order or CAISO operating order, the Market Participant may not be subject to penalty for that act or omission.

37.9.3 Settlement.

37.9.3.1 Settlement Statements.

The CAISO will administer any penalties issued under this Section 37 through Preliminary Settlement Statements, and Final Settlement Statements issued to the responsible Scheduling Coordinator by the CAISO. Before invoicing a financial penalty through the Settlement process, the CAISO will provide a description of the penalty to the responsible Scheduling Coordinator and all Market Participants the Scheduling Coordinator represents that are liable for the penalty, when the CAISO has sufficient objective information to identify and verify responsibility of such Market Participants. The CAISO shall specify whether such penalty is modified pursuant to Section 37.2.5, Section 37.4.4 or Section 37.9.1. The description shall include the identity of the Market Participant that committed the violation and the amount of the penalty. Where FERC has determined the Sanction, the CAISO will provide such of the above information as is provided to it by FERC. The CAISO also may publish this information under the CAISO Website after Final Settlement Statements are issued.

37.9.3.2 Payment.

Except as provided in Section 37.2.5, Section 37.4.4, Section 37.8.10 or Section 37.9.3.3 below, the Scheduling Coordinator shall be obligated to pay all penalty amounts reflected on the Preliminary and Final Settlement Statements to the CAISO pursuant to the CAISO's Settlement process, as set forth in Section 11 of the CAISO Tariff.

37.9.3.3 Other Responsible Party.

Where a party or parties other than the Scheduling Coordinator is responsible for the conduct giving rise to a penalty reflected on a Preliminary or Final Settlement Statement, and where the Scheduling Coordinator bears no responsibility for the conduct, such other party or parties ultimately shall be liable for the penalty. Under such circumstances, the Scheduling Coordinator shall use reasonable efforts to obtain payment of the penalty from the responsible party(ies) and to remit such payment to the CAISO in the ordinary course of the settlement process. In the event that the responsible party(ies) wish to dispute the penalty, or the Scheduling Coordinator otherwise is unable to obtain payment from the responsible parties, the Scheduling Coordinator shall notify the CAISO and dispute the Preliminary Settlement Statement. The CAISO promptly shall notify FERC. If the CAISO finds that a Market Participant separate from the Scheduling Coordinator that is unable to obtain payment from the responsible party(ies) is solely responsible for a violation, the Scheduling Coordinator that is unable to obtain payment may net its payment of its Invoice amount by the amount of the penalty in question. The CAISO may refuse to offer further service to any responsible party that fails to pay a penalty, unless excused under the terms of the Tariff, by providing notice of such refusal to the Scheduling Coordinator. Following such notice, the Scheduling Coordinator shall be liable for any subsequent penalties assessed on account of such responsible party.

37.9.3.4 Dispute of FERC Sanctions.

The right that a Market Participant may otherwise have under the CAISO Tariff to dispute a penalty that has been determined by FERC shall be limited to a claim that the CAISO failed properly to implement the penalty or other Sanction ordered by FERC, except as provided by Section 37.2.5 and Section 37.4.4.

37.9.4 Disposition of Proceeds.

The CAISO shall collect penalties assessed pursuant to this Section 37.9 and deposit such amounts in an interest bearing trust account. After the end of each calendar year, the CAISO shall distribute the penalty amounts together with interest earned through payments to Scheduling Coordinators as provided herein. For the purpose of this Section 37.9.4, "eligible Market Participants" shall be those Market Participants that were not assessed a financial penalty pursuant to this Section 37 during the calendar year.

Each Scheduling Coordinator that paid GMC during the calendar year will identify, in a manner to be specified by the CAISO, the amount of GMC paid by each Market Participant for whom that Scheduling Coordinator provided service during that calendar year. The total amount assigned to all Market Participants served by that Scheduling Coordinator in such calendar year (including the Scheduling Coordinator itself for services provided on its own behalf), shall equal the total GMC paid by that Scheduling Coordinator.

The CAISO will calculate the payment due each Scheduling Coordinator based on the lesser of the GMC actually paid by all eligible Market Participants represented by that Scheduling Coordinator, or the product of a) the amount in the trust account, including interest, and b) the ratio of the GMC paid by each Scheduling Coordinator for eligible Market Participants, to the total of such amounts paid by all Scheduling Coordinators. Each Scheduling Coordinator is responsible for distributing payments to the eligible Market Participants it represented in proportion to GMC collected from each eligible Market Participant.

Prior to allocating the penalty proceeds, the CAISO will obtain FERC's approval of its determination of eligible Market Participants and their respective shares of the trust account proceeds. If the total amount in the trust account to be so allocated exceeds the total GMC obligation of all eligible Market Participants, then such excess shall be treated in accordance with Section 11.8.5.3(b).

37.10 Miscellaneous.

37.10.1 Time Limitation.

An investigation of events potentially subject to Sanction under this Section 37 must be commenced within 90 days of discovery of the events. Sanctions may be assessed under this Section 37 up to one year after discovery of the events constituting the violation, but no later than three years after the date of the violation. Nothing in this section shall limit the rights or liabilities of any party under any other provision of applicable laws, regulations or tariff provisions.

37.10.2 No Limitation on Other Rights.

Nothing contained in this Section 37 shall limit the ability of the CAISO to collect information from Market Participants or to establish new provisions pursuant to Section 15 of the CAISO Tariff.

37.11 Method for Calculating Penalties.

37.11.1 Method for Calculating Inaccurate Meter Data Penalty.

There is no Sanction for the submission of inaccurate meter data used for Preliminary Settlement Statements. However, an error in submitted meter data that is discovered after issuance of Final Settlement Statements constitutes a Rule of Conduct violation. The level of the Sanction depends on whether the Scheduling Coordinator or the CAISO discovered the error. An increased penalty will apply for errors that are discovered by the CAISO.

Table A1 below shows how the level of the Sanction depends on the following factors: whether or not the Scheduling Coordinator finds the error; whether or not the Scheduling Coordinator owes the market, and whether or not the CAISO reruns settlement of the market. If the CAISO reruns the market, then settlement to all Scheduling Coordinators is recalculated, and the impact of such reruns on charges assessed will be considered. A penalty charge equal to 30% of the estimated value of the Energy error will apply if the Scheduling Coordinator discovers the error, or 75% of the estimated value of the Energy error if the CAISO discovers the error. Penalty assessment and disposition of penalty proceeds will be administered as described in Section 37.9.1 and Section 37.9.4 respectively. A Sanction will not be imposed unless such Sanction is more than $1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate meter data.

Table A1 – Calculation of Inaccurate Meter Data Penalty When There Is A Market Rerun

Case	Does SC Owe Market?	
Case 1: SC Identifies Inaccurate Meter Data	Yes	Charge = (MWh x Hourly LMP1) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	Charge = (MWh x Hourly LMP) x 0.30
Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Charge = (MWh x Hourly LMP1) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	Charge = (MWh x Hourly LMP1) x 0.75

Note to Table A1:

The applicable price will be the greater of the Hourly LMP or $10/MWh. The Hourly LMP used will be the value posted on OASIS for each Trading Hour of the applicable Trading Day.

2. Method for Calculating Inaccurate Meter Data Penalty When The Market Is Not Re-Run.

If the Market is not re-run, for cases of inaccurate meter data, Table A2 will be used to determine and allocate the penalty proceeds. This method approximates the financial impact on the market; however, it does not completely reflect all the settlement consequences of inaccurately submitted meter data. This will be considered a market adjustment. The approximated value of the inaccurate meter data in question will be calculated and returned to the Market based on the average of the pro rata share of Unaccounted For Energy (UFE) charged in the UDC territory during the period of the inaccurate meter data event. The 30% or 75% penalty will be distributed as discussed in Section 37.9.4. For cases where the market is not re-run and the Scheduling Coordinator does not owe the market, then no market adjustment will be performed.

TABLE A2- Calculation Of Inaccurate Meter Data Penalty When There Is No Market Re-Run

Case	Does SC Owe Market?	CAISO does not perform a market settlement re-run
Case 1: SC Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x Hourly LMP) Penalty = (MWh x Hourly LMP) x 0.30
Case 1: SC Identifies Inaccurate Meter Data	No	No Market Adjustment will be made Penalty = (MWh x Hourly LMP) x 0.30
Case 2: CAISO Identifies Inaccurate Meter Data	Yes	Market Adjustment = (MWh x Hourly LMP) Penalty = (MWh x Hourly LMP) x 0.75
Case 2: CAISO Identifies Inaccurate Meter Data	No	No Market Adjustment will be made Penalty = (MWh x Hourly LMP) x 0.75

Notes to Table A2:

The applicable price will be the greater of the Hourly LMP or $10/MWh. The Hourly LMP used will be the value posted on OASIS for each Trading Hour of the applicable Trading Day.

A Sanction will be imposed only if the Sanction is more than $1,000 for at least one Trading Day during the period for which there was incomplete or inaccurate meter data.

If the error is to the detriment of the responsible Scheduling Coordinator (e.g., under-reported generation or over-reported load), and the CAISO does not rerun the market, then no correction will be made, representing an implicit penalty of 100% of the value of the Energy. If the market is rerun after the error is corrected, then the Scheduling Coordinator will be given credit for the additional Energy through the normal Settlement process. If the Scheduling Coordinator is paid for an error due to a market rerun, then a Sanction will be assessed to assure that market reruns do not diminish the incentive to correct such

errors. This Sanction would be 30% of the Energy value of the error if the Scheduling Coordinator discovers the error, or 75% estimated value of the error if the CAISO discovers the error.

If the error is to the detriment of the market, then a charge equal to 30% or 75% of the estimated value of the error, as appropriate, will be added to the charge for the Energy. If there is no market rerun, then the cost of Energy supplied by the CAISO (and inappropriately charged to the market as Unaccounted for Energy) must be recovered as well, and the charge will be equal to 130% or 175% of the estimated value of the error, as appropriate.

38 Market Monitoring.

38.1 Objectives and Scope.

This Section sets forth the framework under which the CAISO Department of Market Monitoring and CAISO Market Surveillance Committee will monitor the CAISO Markets to identify abuses of market power, to ensure to the extent possible the efficient working of the CAISO Markets immediately upon commencement of their operation, and to provide for their protection from abuses of market power in both the short term and the long term, and from other abuses that have the potential to undermine their effective functioning or overall efficiency in accordance with Section 38.1.1 of the CAISO Tariff. Such monitoring activities will be carried out by, among other CAISO departments, the CAISO Department of Market Monitoring and the CAISO Market Surveillance Committee to be established and to operate under the terms of this CAISO Tariff, as set forth below. This Section provides a general framework for the operation of the Department of Market Monitoring and the Market Surveillance Committee and are not intended to limit the activities or remedies available to these entities or to the CAISO as a whole elsewhere in the CAISO Tariff or otherwise under law.

38.1.1 Market Surveillance: Changes to Operating Rules and Procedures.

The CAISO shall keep the operation of the markets that it administers under review to determine whether changes in its operating rules, Business Practice Manuals, or CAISO Tariff would improve the efficiency of those markets or prevent the exercise of market power by any Market Participant; and it shall institute necessary changes in accordance with this Section 38.

38.1.2 Reporting Requirements.

This Section of the CAISO Tariff sets forth the information dissemination, publication and reporting activities and other means of providing information that the CAISO generally undertakes to meet its reporting requirements to regulatory agencies, Market Participants and others. The goal of the reporting provisions is to adequately inform regulatory agencies, law enforcement agencies, policymakers, Market Participants and others of the state of the CAISO Markets, especially their competitiveness and efficiency. This function is designed to facilitate efficient corrective actions to be taken by the appropriate body or bodies when required.

38.2 Practices Subject to Scrutiny – General.

The Department of Market Monitoring shall monitor the activities of Market Participants that affect the operation of the CAISO Markets and that provide indications of the phenomena set forth below in this Section 38.2 and will monitor for violations of the behavior market rules specified in Section 37 and any FERC orders establishing market behavior rules for Market Participants. Any corrective actions taken in response to potential violations of market behavior rules shall be made consistent with Section 37 and/or the applicable FERC orders. Where appropriate, it will take such further action as it considers necessary under Section 38.4.

38.2.1 Abuse of Reliability Must-Run Unit Status.

Where Generating Units are determined by the CAISO to be Reliability Must-Run Units, circumstances that indicate that such Generating Units are being operated in a manner that will adversely affect the competitive nature and efficient workings of the CAISO Markets.

38.2.2 CAISO and Other Market Design Flaws.

Design flaws and inefficiencies in the CAISO Tariff, Business Practices Manuals, and Operating Procedures, including the potential for problems between the CAISO and other independent power markets or exchanges insofar as they affect the CAISO Markets.

38.2.3 Market Structure Flaws.

With respect to flaws in the overall structure of the California energy markets that may reveal undue concentrations of market power in Generation or other structural flaws, the Department of Market Monitoring shall provide such information or evidence of such flaws and such analysis as it may conduct to the CAISO CEO and/or to the CAISO Governing Board, subject to due protections of confidential or commercially sensitive information. After due internal consultation, if instructed by any of such CAISO institutions or persons, the Department of Market Monitoring shall also provide such information or evidence to the Market Surveillance Committee, the appropriate regulatory and antitrust enforcement agency or agencies, subject to due protections of confidential or commercially sensitive information. The Department of Market Monitoring shall, at the direction of the CAISO CEO and/or the CAISO Governing Board, or their designee, provide such other evidence, views, analyses or testimony as may be

appropriate or required and as it is reasonably capable of providing to assist the investigations of such agencies.

38.3 Scrutiny of Market Participant Changes Potentially Affecting Market Structure.

The Department of Market Monitoring may undertake the following measures to monitor the special circumstances that may affect the operation of the CAISO Markets due to corporate reorganizations including bankruptcies or changes in affiliate relationships and may recommend corrective actions as provided in Section 38.4.

38.3.1 Exercises of Horizontal Market Power.

The Department of Market Monitoring may analyze the impact of changes in market structure on the ability of Market Participants to exercise short-term horizontal market power.

38.4 Response Action by CAISO.

38.4.1 Corrective Actions.

Where the monitoring activities or any consequent investigations carried out by the Department of Market Monitoring pursuant to Section 38.2 and Appendix P.1 reveal a significant possibility of the presence of or potential for exercises of market power that would adversely affect the operation of the CAISO Markets, or other markets interconnected or interdependent on the CAISO Markets, the Department of Market Monitoring shall take the appropriate measures under this section and under Appendix P to institute the corrective action most effective and appropriate for the situation or, in the case of markets interconnected to or interdependent on the CAISO Markets, the Department of Market Monitoring may recommend corrective actions to the appropriate regulatory agencies.

38.4.2 Further Actions.

Where the monitoring activities of or any consequent investigations carried out by the Department of Market Monitoring pursuant to Sections 38.2 and 38.3 reveal that activities or behavior of Market Participants in the CAISO Markets have the effect of, or potential for, undermining the efficiency, workability or reliability of the CAISO Markets to give or to serve such Market Participants an unfair competitive advantage over other Market Participants, the Department of Market Monitoring shall fully investigate and analyze the effect of such activities or behavior and make recommendations to the

CAISO CEO and the CAISO Governing Board for further action by the CAISO or, where necessary, by other entities. The Department of Market Monitoring may, where appropriate, make specific recommendations to the CAISO CEO and to the CAISO Governing Board for amendment to rules and protocols under its control, or for changes to the structure of the CAISO Markets, and the Department of Market Monitoring may recommend actions, including fines or suspensions, against specific entities in order to deter such activities or behavior.

38.4.3 Adverse Effects of Transition Mechanisms.

Should the monitoring and analysis conducted reveal significant adverse effects of transition mechanisms on competition in or the efficient operation of the CAISO Markets, the Department of Market Monitoring shall examine and fully assess the efficacy of all possible measures that may be taken by the CAISO, in order to prevent or to mitigate such adverse effects. The Department of Market Monitoring shall make such recommendations to the CEO of the CAISO and to the CAISO Governing Board as it considers appropriate for action by the CAISO and/or for referral to regulatory or law enforcement agencies. Such proposed measures may include, but shall not be limited to the following:

38.4.3.1 the use of direct Bid caps as a mechanism to prevent or mitigate artificially high Market Clearing Prices caused by abuses of market power;

38.4.3.2 the use of contracts for differences for eliminating the incentive for Generators to bid CAISO prices to artificially high levels enabled by the presence of market power;

38.4.3.3 calling upon Reliability Must-Run Units to operate; and to modify Reliability Must-Run Contracts;

38.4.3.4 Bid floors to prevent or mitigate the possible exercise of below-cost bidding or predatory pricing.

In the event that the CAISO Governing Board adopts, and where necessary obtains regulatory approval for, any measure proposed pursuant to Section 38.4.3, the Department of Market Monitoring shall monitor the implementation and effect of such measure on the state of the CAISO Markets and shall periodically report on them to the CEO and the CAISO Governing Board.

39 Market Power Mitigation Procedures.

39.1 These CAISO market power mitigation measures ("Mitigation Measures") are intended to provide the means for the CAISO to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the CAISO Markets while avoiding unnecessary interference with competitive price signals. These Mitigation Measures are intended to minimize interference with an open and competitive market, and thus to permit, to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions. To that end, the Mitigation Measures authorize the mitigation only of specific conduct identified through explicit procedures specified below. In addition, the CAISO shall monitor the markets it administers for conduct that it determines constitutes an abuse of market power but is not addressed by the market power mitigation procedures specified below. If the CAISO identifies any such conduct, it shall make a filing under Section 205 of the Federal Power Act, 16 U.S.C. § 824d, with FERC requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the CAISO believes warrants mitigation, shall propose a specific mitigation measure for the conduct, and shall set forth the CAISO's justification for imposing that mitigation measure.

39.2 Conditions for the Imposition of Mitigation Measures.

39.2.1 In general, the CAISO shall consider a Market Participant's conduct to be inconsistent with competitive conduct if the conduct would not be in the economic interest of the Market Participant in the absence of market power. The categories of conduct that are inconsistent with competitive conduct include, but may not be limited to, the four categories of conduct specified in Section 39.3 below.

39.3 Categories of Conduct that May Warrant Mitigation.

39.3.1 Mitigation Measures may be applied to bidding, scheduling or operation of an Electric Facility or as specified in Section 39.3.1. The following categories of conduct, whether by a single firm or by multiple firms acting in concert, may cause a material effect on prices or generally the outcome of the CAISO Markets if exercised from a position of market power. Accordingly, the CAISO shall monitor the CAISO Markets for the following categories of conduct, and shall impose appropriate Mitigation Measures

if such conduct is detected and the other applicable conditions for the imposition of Mitigation Measures are met:

(1) Physical withholding of an Electric Facility, in whole or in part, that is, not offering to sell or schedule the output of or services provided by an Electric Facility capable of serving a CAISO Market. Such withholding may include, but not be limited to: (i) falsely declaring that an Electric Facility has been forced out of service or otherwise become totally or partially unavailable, (ii) refusing to offer Bids for an Electric Facility when it would be in the economic interest, absent market power, of the withholding entity to do so, (iii) declining Bids called upon by the CAISO (unless the CAISO is informed in accordance with established procedures that the relevant resource for which the Bid is submitted has undergone a forced outage or derate), or (iv) operating a Generating Unit in Real-Time to produce an output level that is less than the Dispatch Instruction.

(2) Economic withholding of an Electric Facility, that is, submitting Bids for an Electric Facility that are unjustifiably high (relative to known operational characteristics and/or the known operating cost of the resource) so that: (i) the Electric Facility is not or will not be dispatched or scheduled, or (ii) the Bids will set LMPs.

(3) Uneconomic production from an Electric Facility that is, increasing the output of an Electric Facility to levels that would otherwise be uneconomic in order to cause, and obtain benefits from, a transmission constraint.

(4) Bidding practices that distort prices or uplift charges away from those expected in a competitive market.

39.3.2 Mitigation Measures may also be imposed to mitigate the market effects of a rule, standard, procedure, design feature, or known software imperfection of a CAISO Market that allows a Market Participant to manipulate market prices or otherwise impair the efficient operation of that market, pending the revision of such rule, standard, procedure design feature, or software defect to preclude such manipulation of prices or impairment of efficiency.

39.3.3 Taking advantage of opportunities to sell at a higher price or buy at a lower price in a market other than a CAISO Market shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.

39.3.4 The CAISO shall monitor CAISO Markets for other categories of conduct, whether by a single firm or by multiple firms acting in concert, that have material effects on prices in a CAISO Market or other payments. The CAISO shall seek to amend the foregoing list as may be appropriate to include any such conduct that would substantially distort or impair the competitiveness of any of the CAISO Markets.

39.4 Sanctions for Physical Withholding.

The CAISO may report a Market Participant the CAISO determines to have engaged in physical withholding, including providing the CAISO false information regarding derating or outage of an Electric Facility, to the Federal Energy Regulatory Commission in accordance with Section 9.3.10.5 of the CAISO Tariff. In addition, a Market Participant that fails to operate a Generating Unit in conformance with CAISO Dispatch Instructions shall be subject to the penalties set forth in Section 11.23 of the CAISO Tariff.

39.5 FERC-Ordered Measures.

In addition to any mitigation measures specified above, the CAISO shall administer, and apply when appropriate in accordance with their terms, such other mitigation measures as it may be directed to implement by order of the FERC.

39.6 Rules Limiting Certain Energy, Ancillary Services, And Residual Unit Commitment Bids.

39.6.1 Maximum Bid Prices.

Notwithstanding any other provision of this CAISO Tariff, maximum Bid price provisions of Section 39 shall apply to limit, Energy Bids, RUC Availability Bids, and Ancillary Service Bids as specified below.

39.6.1.1 Maximum Price for Energy Bids

For the twelve (12) months following the effective date of this Section, the maximum Energy Bid prices shall be $500/MWh. After the twelfth month following the effective date of this Section, the maximum Energy Bid price shall be $750/MWh. After the twenty-fourth month following the effective date of this Section, the maximum Energy Bid price shall be $1,000/MWh.

39.6.1.2 Maximum RUC Availability Bid Prices

The maximum RUC Availability Bid price shall be $250/MW/h.

39.6.1.3 Maximum Ancillary Services Bid Prices

The maximum level for Ancillary Services Bid prices shall be $250/MWh.

39.6.1.4 Minimum Bid Price for Energy Bids.

Energy Bids into the CAISO Markets less than -$30/MWh are not eligible to set any LMP. If the CAISO dispatches a resource with an Energy Bid less than -$30/MWh, the Scheduling Coordinator on behalf of the resource will be eligible to be paid the Bid price upon the submission of detailed information justifying the cost components of the Bid to the CAISO and FERC no later than seven (7) days after the end of the month in which the Bid was submitted. The CAISO will treat such information as confidential and will apply the procedure in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall pay Scheduling Coordinators for amounts in excess of -$30/MWh minimum Bid price upon FERC acceptance of the information justifying the cost components.

39.6.1.5 Minimum Bid Price for Ancillary and RUC Bids.

Ancillary Service Bids and RUC Availability Bids submitted into CAISO markets must have Bid prices not less than $0/MW/h.

39.7 Local Market Power Mitigation for Energy Bids.

Local market power mitigation is based on a periodic assessment and designation of transmission constraints as competitive or non-competitive. Such periodic assessment will be performed at a minimum on an annual basis and potentially more frequently if needed due to changes in system conditions, network topology, or market performance. Any changes in constraint designations will be publicly noticed prior to making the change. Upon determination that an ad hoc assessment is warranted, the CAISO will notice market participants that such an assessment will be performed. The determination whether a unit is being dispatched to relieve congestion on a competitive or non-competitive transmission constraint is based on two preliminary market runs that are performed prior to the actual pricing run of the market and are described in Sections 31 and 33 for the DAM and RTM, respectively.

39.7.1 Calculation of Default Energy Bids

Default Energy Bids shall be calculated by the CAISO, for the on-peak hours and off-peak hours for both the DAM and RTMs, pursuant to one of the methodologies described in this Section. The Scheduling Coordinator for each Generating Unit owner or Participating Load must rank order the following options of calculating the Default Energy Bid starting with its preferred method. The Scheduling Coordinator must provide the data necessary for determining the Variable Costs unless the Negotiated Rate option precedes the Variable Cost option in the rank order, in which case the Scheduling Coordinator must have a Negotiated Rate established with the Independent Entity charged with calculating the Default Energy

Bid. If no rank order is specified for a Generating Unit or Participating Load, then the default rank order of (1) Variable Cost Option, (2) Negotiated Rate Option, (3) LMP Option will be applied.

39.7.1.1 Variable Cost Option.

The Variable Cost option will calculate the Default Energy Bid as Variable Costs plus ten percent (10%). Variable Cost will be comprised of two components: Fuel Cost and Variable Operation and Maintenance Cost. The Fuel Cost portion will be calculated for each Bid segment using the Heat Rate supplied by the resource owner on file in the Master File and applicable regional natural gas price indices as specified in the Business Practice Manual. The default value for the Variable Operation and Maintenance Cost portion will be $2/MWh. Generating Units that are of the Combustion Turbine or Reciprocating Engine technology will be eligible for a default Variable Operation and Maintenance Cost of $4/MWh. Resource specific values may be negotiated with the Independent Entity charged with calculating the Default Energy Bid.

39.7.1.2 LMP Option.

The CAISO will calculate the LMP Option for the Default Energy Bid as a weighted average of the lowest quartile of LMPs at the Generating Unit PNode in periods when the unit was Dispatched during the preceding ninety (90) days. The weighted average will be calculated based on the quantities Dispatched within each segment of the Default Energy Bid curve.

39.7.1.3 Negotiated Rate Option.

39.7.1.3.1 Submission Process

Scheduling Coordinators that elect the Negotiated Rate Option for the Default Energy Bid shall submit a proposed Default Energy Bid along with supporting information and documentation as described in a BPM. Within ten (10) Business Days of receipt, the CAISO or an Independent Entity selected by the CAISO will provide a written response. If the CAISO or Independent Entity accepts the proposed Default Energy Bid, it will become effective within three (3) Business Days from the date of acceptance by the CAISO and remain in effect until: (1) the Default Energy Bid is modified by FERC; (2) the Default Energy

Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Default Energy Bid expires, is terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If the CAISO or Independent Entity selected by the CAISO does not accept the proposed Default Energy Bid, the CAISO or Independent Entity selected by the CAISO and the Scheduling Coordinator shall enter a period of good faith negotiations that terminates 60-days following the date of submission of a proposed Default Energy Bid by a Scheduling Coordinator. If at any time during this period, the CAISO or Independent Entity selected by the CAISO and the Scheduling Coordinator agree upon the Default Energy Bid, it will be become effective within three (3) Business Days of the date of agreement and remain in effect until: (1) the Default Energy Bid is modified by FERC; (2) the Default Energy Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Default Energy Bid expires, is terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If by the end of the 60-day period the CAISO or Independent Entity selected by the CAISO and the Scheduling Coordinator fail to agree on the Default Energy Bid to be used under the Negotiated Rate Option, the Scheduling Coordinator has the right to file a proposed Default Energy Bid with FERC pursuant to Section 205 of the Federal Power Act.

During the 60-day period following the submission of a proposed negotiated Default Energy Bid by a Scheduling Coordinator, and pending FERC's acceptance in cases where the CAISO or Independent Entity selected by the CAISO fail to agree on the Default Energy Bid for use under the Negotiated Rate Option and the Scheduling Coordinator filed a proposed Default Energy Bid with FERC pursuant to Section 205 of the Federal Power Act, the Scheduling Coordinator has the option of electing to use any of the other options available pursuant to Section 39.7. If the Scheduling Coordinator does not elect to use any of the other options available pursuant to Section 39.7, or if sufficient data do not exist to calculate a Default Energy Bid using any of these options, the CAISO may establish a temporary Default Energy Bid as specified in Section 39.7.1.5.

39.7.1.3.2 Informational Filings With FERC

The CAISO shall make an informational filing with FERC of any Default Energy Bids negotiated pursuant to this section, or any temporary Default Energy Bids established pursuant to Section 39.7.1.5, no later than seven (7) days after the end of the month in which the Default Energy Bids were established.

39.7.1.4 Frequently Mitigated Unit Option.

A Frequently Mitigated Unit that is eligible for a Bid Adder may select a fourth Default Energy Bid option, which is equal to the Variable Cost Option plus the Bid Adder as described in Section 39.7.

39.7.1.5 Temporary Default Energy Bid

If the Scheduling Coordinator does not elect to use any of the other options available pursuant to Section 39.7, or if sufficient data do not exist to calculate a Default Energy Bid using any of the available options, the CAISO may establish a temporary Default Energy Bid based on one or more of the following: (1) operating cost data, opportunity cost, and other appropriate input from the Market Participant; (2) the CAISO's estimated operating costs of the Electric Facility, taking the best information available to the CAISO; (3) an appropriate average of competitive Bids of one or more similar Electric Facilities; or (4) any of the other options for determining a Default Energy Bid for which data are available.

39.7.2 Competitive Path Designation.

39.7.2.1 Timing of Assessments.

The CAISO will complete the first assessment of competitiveness of transmission constraints prior to the effective date of this provision. Constraint designations resulting from the first assessment will be applied in the MPM-RRD mechanism on the day this CAISO Tariff becomes effective and will not be changed until a subsequent assessment has been performed. Subsequent annual assessments will be made in each subsequent year to be effective on January 1 of the following year (beginning on January 1, 2009). The CAISO may perform additional competitive constraint assessments during the year if changes in transmission infrastructure, generation resources, or Load, in the CAISO Control Area and adjacent Control Areas suggest material changes in market conditions or if market outcomes are observed that are inconsistent with competitive market outcomes.

39.7.2.2 Criteria.

A transmission constraint, will be deemed competitive if no three unaffiliated suppliers are jointly pivotal in relieving congestion on that constraint. The determination of whether or not the pivotal supplier criteria for an individual constraint are violated will be assessed using the Feasibility Index described in Section 39.7.2.4 of this CAISO Tariff. Assessment of competitiveness will be performed assuming various system conditions potentially including but not limited to season, load, planned transmission and resource outages. If an individual constraint fails the pivotal supplier criteria under any of these system conditions, the constraint will be deemed uncompetitive for the entire year under all system conditions until a subsequent assessment deems the constraint competitive. In general, a constraint may be an individual transmission line or a collection of lines that create distinct transmission constraint. For purposes of the competitive assessment, the set of constraints that will be included in the network model are those modeled along with transmission limits to be enforced in the FNM used in clearing the CAISO Markets.

39.7.2.3 Candidate Path Identification.

The first assessment of competitive constraints will be determined prior to the effective date of this provision and will consider all interfaces to neighboring control areas and all inter-zonal interfaces for zones that existed prior to the effective date of this provision to be competitive. The set of candidate

constraints that will be evaluated for competitiveness in the initial assessment will be limited to intra-zonal constraints for zones that existed prior to the effective date of this provision, that were managed for Congestion in Real-Time in greater than 500 hours in the 12-month period from April 1, 2006 to March 31, 2007. For the second competitive path assessment, the 12-month period of historical data would include a few months of operation before the effective date of this provision and a few months after the effective date of this provision. The Congestion frequency threshold of 500 hours for designation of competitive constraint candidates will be based on the combination of real-time intra-zonal congestion hours that pre-dated the effective date of this provision, and congestion in IFM and Real-Time markets after the effective date of this provision for the 12 months of historical data. Subsequent annual assessments will again consider all pre-existing interfaces to neighboring control areas and all inter-zonal interfaces to be competitive and will not be included in the set of candidate constraints for assessment. The set of candidate constraints will be further reduced to those remaining constraints that were congested or managed for congestion in greater than 500 hours in the prior 12 months.

39.7.2.4 Feasibility Index.

The CAISO will perform a pivotal supplier test on all suppliers in the CAISO Control Area for each path to be assessed using the Feasibility Index (FI). The FI requires solving the network model having removed all internal resources of a supplier and modifying the candidate constraints of the network model such that the flow limits of the set of candidate constraints can be exceeded with a penalty imposed for excess flow. The resulting solution to the network model produces constraint flows that can be used to calculate the FI. The FI is calculated for each constraint as the proportion of the constraint limit that is exceeded to solve the FNM without the specified supplier's supply. FI values less than zero indicate the supplier is pivotal in relieving Congestion on the specified constraint. The process is repeated by removing the supply portfolio of two and three suppliers for paths with non-negative FI. If any three suppliers are jointly pivotal in relieving congestion on a candidate path, as indicated by an FI value less than zero, the candidate path will be deemed uncompetitive. Otherwise, the candidate path will be deemed competitive. The portfolio of each supplier will be based on ownership information available to the CAISO, taking into account any material transfer of sufficient length that the transfer of control could have persistent impact on the relative shares of supply within the CAISO Control Area. These transfers of control will be utilized in the

assessment as provided to the CAISO by the supplier reflecting its triennial filing with FERC for market-based rate authority.

39.8 Eligibility for Bid Adder.

A Scheduling Coordinator submitting Bids for Generating Units is eligible to have a Bid Adder applied to a Generating Unit for the next operating month if the criteria in Section 39.8.1 are met as determined on a monthly basis in the preceding month.

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 12 months; (ii) have run for more than 200 hours in the previous 12 months; and (iii) must not have an contract to be a Resource Adequacy Resource for its entire net dependable capacity or be subject to an obligation to make capacity available under this CAISO Tariff. Additionally, the Scheduling Coordinator for the Generating Unit must 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. During the first 12 months after the effective date of this Section, the Mitigation Frequency will be based on a rolling 12-month combination of RMR dispatches and incremental bids dispatched out of economic merit order to manage local congestion from the period prior to the effective date of this Section, which will serve as a proxy for being subject to Local Market Power Mitigation, and a Generating Unit's Local Market Power Mitigation frequency after the effective date of this Section. 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 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-RRD procedures in Sections 31 and 33.

39.8.2 New Generating Units.

For new Generating Units, with less than 12-months of operation, determination of eligibility for the Bid Adder will be based on data beginning with the first date the Generating Unit participated in the CAISO Markets through the end date of the period for which the Mitigation Frequency is being calculated. The

200 run hour criteria will be pro-rated for the proportion of a 12-month period that the new Generating Unit submitted effective Bids in the CAISO markets.

39.8.3 Bid Adder Values.

The value of the Bid Adder will be either: (i) a unit-specific value determined in consultation with the CAISO or an independent entity selected by the CAISO, or (ii) a default Bid Adder of $24/MWh. For Generating Units with a portion of their capacity identified as meeting an LSE's Resource Adequacy Requirements, that Generating Unit's Bid adder value will be reduced by the percent of the Generating Unit's capacity that is identified as meeting an LSE's Resource Adequacy Requirements. The reduced Bid Adder will be applied to that Generating Unit's entire Default Energy Bid curve.

39.9 CRR Monitoring and Affiliate Disclosure Requirements.

The CAISO will monitor the CRR holdings and CAISO Markets activity for anomalous market behavior, gaming, or exercise of market power resulting from CRR ownership concentrations that are not aligned with actual transmission usage as a result of secondary market auction outcomes. If the CAISO identifies such behavior it may seek FERC approval to impose position limits on the total number or MW quantity of CRRs that may be held by any single entity and its affiliates. CRR Holders must notify the CAISO of all entities with which the CRR Holder is affiliated that are CRR Holders or Market Participants.

ARTICLE V – RESOURCE ADEQUACY

40 RESOURCE ADEQUACY DEMONSTRATION FOR ALL SCHEDULING COORDINATORS SCHEDULING DEMAND IN THE CAISO CONTROL AREA.

40.1 Applicability.

A Load Serving Entity, and its Scheduling Coordinator, shall be exempt from Section 40 during the compliance year, as defined in the Business Practice Manual, if the metered peak Demand of the Load Serving Entity did not exceed one (1) MW during the twelve months preceding the compliance year. Section 40 shall apply to all other Load Serving Entities and their respective Scheduling Coordinators.

40.1.1 Election of Load Serving Entity Status

On an annual basis, in the manner and schedule set forth in the Business Practice Manual, the Scheduling Coordinator for a Load Serving Entity, not exempt under Section 40.1, shall inform the CAISO whether each such LSE elects to be either: (i) a Reserve Sharing LSE or a (ii) Modified Reserve Sharing LSE. A Scheduling Coordinator for a Load-following MSS is not required to make an election under this Section. Scheduling Coordinators for Load-following MSSs are subject solely to Sections 40.2.4 and 40.3.

The CAISO may confirm with the CPUC, Local Regulatory Authority, or federal agency, as applicable, the accuracy of the election by the Scheduling Coordinator for any LSE under its respective jurisdiction, or, in the absence of any election by the Scheduling Coordinator, the desired election for any LSE under its jurisdiction. The determination of the CPUC, Local Regulatory Authority, or federal agency will be deemed binding by the CAISO on the Scheduling Coordinator and the LSE. If the Scheduling Coordinator and CPUC, Local Regulatory Authority, or federal agency, as appropriate, fail to make the election on behalf of an LSE in accordance with the Business Practice Manual, the LSE shall be deemed a Reserve Sharing LSE.

40.2 Information Requirements Regarding Resource Adequacy Programs.

40.2.1. Reserve Sharing LSEs.

40.2.1.1 Requirements for CPUC Load Serving Entities Electing Reserve Sharing LSE Status

(a) The Scheduling Coordinators for a CPUC Load Serving Entity electing Reserve Sharing LSE status must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, including, but not limited to, annual and monthly Resource Adequacy Plans.

(b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1 shall apply.

(c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.

(d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecasts requirements, then the provisions of Section 40.2.2.3 shall apply.

(e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements, then Section 40.2.2.4 shall apply.

40.2.2 Requirements for Non-CPUC Load Serving Entities Electing Reserve Sharing LSE Status, Including Default Provisions for CPUC Load Serving Entities

40.2.2.1 Reserve Margin

(a) The Scheduling Coordinator for a Non-CPUC Load Serving Entity electing Reserve Sharing LSE status must provide the CAISO with the Reserve Margin(s) adopted by the appropriate Local Regulatory Authority or federal agency for use in the annual Resource Adequacy Plan and monthly Resource Adequacy Plans listed as a percentage of the Demand Forecasts developed in accordance with Section 40.2.2.3.

(b) For the Scheduling Coordinator for a non-CPUC Load Serving Entity for which the appropriate Local Regulatory Authority or federal agency has not established a Reserve Margin(s) or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) that has elected Reserve Sharing LSE status, the Reserve Margin shall be no less than 15% of the applicable month's peak hour Demand of the LSE as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3.

40.2.2.2 Qualifying Capacity Criteria

The Scheduling Coordinator for a Non-CPUC Load Serving Entity electing Reserve Sharing LSE status must provide the CAISO with a description of the criteria adopted by the Local Regulatory Authority or federal agency for determining qualifying resource types and the Qualifying Capacity from such resources and any modifications thereto as they are implemented from time to time. The Reserve Sharing LSE may elect to utilize the criteria set forth in Section 40.8.

40.2.2.3 Demand Forecasts

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or CPUC Load Serving Entity subject to Section 40.2.1.1(b) electing Reserve Sharing LSE status must provide annual and monthly Demand Forecasts on the schedule set forth in the Business Practices Manual. The annual and monthly Demand Forecasts shall set forth the Load Serving Entity's respective annual and monthly non-coincident peak Demand for its Service Area, MSS area, or TAC Area in which the Load Serving Entity serves Load, unless either (i) the Load Serving Entity agrees to utilize the annual and monthly coincident peak Demand determinations provided by the California Energy Commission for such Load Serving Entity; or (ii) if the

California Energy Commission does not produce coincident peak Demand forecasts for the Load Serving Entity, the annual and monthly coincident peak Demand forecasts produced by the CAISO in accordance with its Business Practice Manual. Scheduling Coordinators must provide data and/or supporting information, as requested by the CAISO, for the Demand Forecasts required by this Section for each Load Serving Entity and a description of the criteria upon which the Demand Forecasts were developed, if applicable, and any modifications thereto as they are implemented from time to time.

40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a non-CPUC Load Serving Entity or a CPUC Load Serving Entities subject to Section 40.2.1.1(b) electing Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans, on a schedule and in the reporting formats set forth in the CAISO's Business Practice Manual, for such Load Serving Entity. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3. The monthly Resource Adequacy Plan should identify the resources the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3. and applicable Reserve Margin. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4.

40.2.3 Modified Reserve Sharing LSEs.

40.2.3.1 Reserve Margin

(a) The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide the CAISO with the Reserve Margin(s) adopted by the CPUC, appropriate Local Regulatory Authority or federal agency, as appropriate, for use in the annual Resource Adequacy Plan and monthly Resource Adequacy Plans listed as a percentage of the Demand Forecasts developed in accordance with Section 40.2.3.3.

(b) For the Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status for which the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has not established a Reserve Margin(s), the Reserve Margin shall be no less than 15% of the applicable month's peak hour Demand of the LSE as determined by the Demand Forecasts developed in accordance with Section 40.2.3.3.

40.2.3.2 Qualifying Capacity

The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide the CAISO with a description of the criteria for determining qualifying resource types and the Qualifying Capacity from such resources and any modifications thereto as they are implemented from time to time. The Modified Reserve Sharing LSE may elect to utilize the criteria set forth in Section 40.8.

40.2.3.3 Demand Forecasts

(a) The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must submit, as part of its monthly Resource Adequacy Plan as, a Demand Forecast reflecting the non-coincident peak hour Demand to be served by the Modified Reserve Sharing LSE for the relevant month, measured in megawatts. This Demand Forecast plus the applicable Reserve Margin as set forth in Section 40.2.3.1 shall establish the Scheduling Coordinator's monthly Resource Adequacy Plan demonstration for each Modified Reserve Sharing LSE for the relevant month.

(b) The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must submit, on the schedule and in the manner set forth in the Business Practice Manual, hourly Demand Forecasts for each Trading Hour of the next Trading Day for each Modified Reserve Sharing LSE represented.

(c) The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide data or supporting information, as requested by the CAISO, for the Demand Forecasts required by Section 40.2.3.3 for each Modified Reserve Sharing LSE served by the Scheduling Coordinator and a description of the criteria upon which the Demand Forecast was developed, and any modifications thereto as they are implemented from time to time.

40.2.3.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Load Serving Entity electing Modified Reserve Sharing LSE status must provide annual and monthly Resource Adequacy Plans, on a schedule and in the format set forth in the Business Practice Manual, for each Modified Reserve Sharing LSE served by the Scheduling Coordinator. The annual Resource Adequacy Plan should set forth the Local Capacity Area Resources, if any, procured by the Modified Reserve Sharing LSE as described in Section 40.3. The monthly Resource Adequacy Plan should identify the resources the Modified Reserve Sharing LSE will rely upon to satisfy its monthly forecasted monthly Demand and Reserve Margin as set forth in Section 40.2.3.1, for the relevant reporting period and must utilize the Net Qualifying Capacity requirements of Section 40.4.

40.2.4 Load-Following MSS.

A Scheduling Coordinator for a Load-following MSS must provide an annual Resource Adequacy Plan that sets forth the Local Capacity Area Resources, if any, procured by the Load-following MSS as described in Section 40.3.

40.3 Local Capacity Area Resource Requirements Applicable to Scheduling Coordinators for All Load Serving Entities.

40.3.1 CAISO Technical Study.

The CAISO will, on an annual basis, perform and publish on the CAISO Website a technical study that determines the minimum amount of Local Capacity Area Resources that must be available to the CAISO within each Local Capacity Area identified in the technical study. The CAISO shall collaborate with the CPUC, Local Regulatory Authorities within the CAISO Control Area, and other market participants to establish the parameters, assumptions, and other criteria to be used and described in the technical study that permit compliance with Applicable Reliability Criteria.

40.3.2 Allocation of Local Capacity Area Resource Obligations.

The CAISO will allocate responsibility for Local Capacity Area Resources to Scheduling Coordinators Load Serving Entities in the following sequential manner:

i. The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate coincident share, on a gross Load basis, of the previous annual peak Demand in the TAC Area under the conditions used in the technical study. This will result in a MW responsibility for the entire TAC Area that may be met by procurement of that MW quantity in any Local Capacity Area in the TAC Area.

ii. For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(i) above.

iii. For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the

CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(i), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(i). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(i).

Once the CAISO has determined the total responsibility, the CAISO will inform each Scheduling Coordinator for LSE of its specific allocated responsibility for Local Capacity Area Resources.

40.3.3 Procurement of Local Capacity Area Resource Obligations by Load Serving Entities.

Nothing in this Section 40 obligates any Scheduling Coordinator to demonstrate on behalf of a Load Serving Entity that the Load Serving Entity has procured Local Capacity Area Resources to satisfy capacity requirements for each Local Capacity Area identified in the technical study. Scheduling Coordinators for Load Serving Entities may aggregate responsibilities for procurement of Local Capacity Area Resources. If a Load Serving Entity has procured Local Capacity Area Resources that satisfy generation capacity requirements for Local Capacity Areas, the Scheduling Coordinator for such Load Serving Entity shall include this information in its annual and monthly Resource Adequacy Plan(s).

40.3.4 Procurement of Local Capacity Area Resources by the CAISO.

The CAISO may procure Local Capacity Area Resources, pursuant to applicable provisions of the CAISO Tariff, including any mechanism incorporated into the CAISO Tariff specifically to permit procurement of Local Capacity Area Resources by the CAISO, to the extent:

(i) a Scheduling Coordinator representing a Load Serving Entity with Load in the TAC Area in which the Local Capacity Area is located fails to demonstrate in an annual Resource Adequacy Plan procurement of the Load Serving Entity's share of Local Capacity Area Resources , as determined in Section 40.3.2, in which case the CAISO may procure Local Capacity Area

Resources to remedy the deficiency pursuant to Section 42.1.5 and allocate the costs of such procurement pursuant to Section 42.1.8(a); provided that the CAISO shall not procure Local Capacity Area Resources to remedy the deficiency of the Load Serving Entity unless in the aggregate a deficiency exists that results in the failure to comply with Applicable Reliability Criteria in the Local Capacity Area after taking into account Generating Units under Reliability Must-Run Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans, whether or not such Resource Adequacy Resources are located in the applicable Local Capacity Area.

(ii) the Local Capacity Area Resources specified in the annual Resource Adequacy Plans of all Scheduling Coordinators fail to permit or ensure compliance with Applicable Reliability Criteria

in one or more Local Capacity Areas, regardless of whether such resources satisfy, for the deficient Local Capacity Area, the minimum amount of Local Capacity Area Resources identified in the technical study performed under Section 40.3.1 and after taking into account Generating Units under Reliability Must-Run Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans, whether or not such Resource Adequacy Resources are located in the applicable Local Capacity Area, in which case, the CAISO will procure Local Capacity Area Resources in an amount and location sufficient to permit or ensure compliance with such Applicable Reliability Criteria in the Local Capacity Area. The CAISO will procure any Local Capacity Resources required by this Section 40.3.4(ii) pursuant to Section 41 to the extent the failure to satisfy Applicable Reliability Critiera constitutes a violation of the technical evaluations performed pursuant to Section 41.3. The CAISO will procure any Local Capacity Area Resources required by this Section 40.3.4(ii) pursuant to Section 42.1 and will allocate the costs of such procurement pursuant to 42.1.8(b) to the extent the failure to satisfy Applicable Reliability Critiera constitutes a violation of the technical evaluations performed pursuant to Section 40.3.1, but not the technical evaluations performed pursuant to 41.3. .

To the extent the cost of CAISO procurement under this Section is allocated to a Scheduling Coordinator, on behalf of a Load Serving Entity, that Scheduling Coordinator will receive credit toward itsLocal Capacity Area Resource obligation for the Load Serving Entity's pro rata share of the procured Local Capacity Area Resource. Whether or not the share of the Local Capacity Resource procured by the CAISO under this Section may count towards satisfaction of a Load Serving Entity's Reserve Margin shall be determined by the CPUC, Local Regulatory Authority, or federal agency with jurisdiction of the Load Serving Entity, unless the CPUC, Local Regulatory Authority, or federal agency has failed to establish a Reserve Margin, in which case the CAISO will assign the Load Serving Entity's share of the Local Capacity Area Resource towards satisfaction of its Reserve Margin pursuant to Sections 40.2.1.1(b), 40.2.2.1(b), and 40.2.3.1(b).

40.3.4.1 Factors for Procuring Local Capacity Resources

The CAISO shall procure Local Capacity Area Resources under Section 40.3.4 considering the

effectiveness of the capacity at meeting Applicable Reliability Criteria in the Local Capacity Area and the costs associated with the capacity. The CAISO is permitted to procure a Generating Unit or Participating Load resource even where only a portion of capacity of the Generating Unit or Participating Load resource is needed to meet Applicable Reliability Criteria in the Local Capacity Area.

40.3.4.2 Local Capacity Area Procurement Report

The CAISO shall publish a report on the CAISO Website which shall show the Local Capacity Area Resources procured under Section 40.3.4, the megawatts of capacity procured, the duration procurement, the reason(s) for the procurement, and all payments in dollars, itemized for each Local Capacity Area. The CAISO will provide a market notice of the availability of the report.

40.4 General Requirements on Resource Adequacy Resources.

40.4.1 Designation of Eligible Resources and Determination of Qualifying Capacity.

The CAISO shall use the criteria provided by the CPUC or Local Regulatory Authority to determine and verify, if necessary, the Qualifying Capacity of all Resource Adequacy Resources; however, to the extent a resource is listed by one or more Scheduling Coordinators in their Resource Adequacy Plans, which apply the criteria of more than one Local Regulatory Authority that leads to conflicting Qualifying Capacity values for that resource, the CAISO will accept the methodology that results in the highest Qualifying Capacity value. Only if the CPUC, Local Regulatory Authority, or federal agency has not established any Qualifying Capacity criteria, or chooses to rely on the criteria in this CAISO Tariff, will the provisions of Section 40.8 apply.

40.4.2 Net Qualifying Capacity Report.

The CAISO shall produce an annual report posted to the CAISO Website setting forth the Net Qualifying Capacity of all Participating Generators. All other Resource Adequacy Resources may be included in the annual report under Section 40.4.2 upon their request. Any disputes as to the CAISO's determination regarding Net Qualifying Capacity shall be subject to the CAISO ADR Procedures.

40.4.3 General Qualifications for Supplying Net Qualifying Capacity.

Resource Adequacy Resources included in a Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity serving Load in the CAISO Control Area are subject to the following:

(1) Be available for testing by the CAISO to validate Qualifying Capacity and determine Net Qualifying Capacity;

(2) Provide any information requested by the CAISO to apply the performance criteria to be adopted by the CAISO pursuant to Section 40.4.5;

(3) Submit Bids into the CAISO Markets as required by this CAISO Tariff;

(4) Be in compliance with the criteria for Qualifying Capacity established by the CPUC, relevant Local Regulatory Authority, or federal agency and provided to the CAISO; and

(5) Be subject to sanctions for non-performance as specified in the CAISO Tariff.

40.4.4. Reductions for Testing.

In accordance with the procedures specified in the Business Practice Manual, Participating Generators or other Generating Units or System Units included in a Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity serving can have its Qualifying Capacity reduced if a CAISO testing program determines that it is not capable of supplying the full Qualifying Capacity amount.

40.4.5 Reductions for Performance Criteria.

No later than 12 months after the effective date of this Section 40, the CAISO will issue a report outlining a proposal with respect to performance criteria. The Scheduling Coordinator of a Resource Adequacy Resource shall provide or make available to the CAISO, subject to the confidentiality provisions of this CAISO Tariff, all documentation requested by the CAISO to determine, develop or implement the performance criteria, including, but not limited to, NERC Generating Availability Data System data. The CAISO will begin reducing Qualifying Capacity based on performance criteria after adoption of performance criteria by the CPUC and/or Local Regulatory Authorities.

40.4.6 Reductions for Deliverability.

40.4.6.1 Deliverability Within the CAISO Control Area.

In order to determine Net Qualifying Capacity from Resource Adequacy Resources subject to this Section 40.4, the CAISO will determine that a Resource Adequacy Resource is available to serve the aggregate of Load by means of a deliverability study. Documentation explaining the CAISO's deliverability analysis will be posted on the CAISO Website. The deliverability study will be performed annually and shall focus on peak Demand conditions. The results of the deliverability study shall be effective for a period no shorter than a compliance year. To the extent the deliverability study shows that the Qualifying Capacity is not deliverable to the aggregate of Demand under the conditions studied, the Qualifying Capacity of the Resource Adequacy Resource will be reduced on a MW basis for the capacity that is undeliverable.

40.4.6.2 Deliverability of Imports.

The CAISO shall, by means of an annual deliverability study, establish the total import capacity for each import path to be allocated to Scheduling Coordinators for Load Serving Entities. The study results shall be posted on the CAISO Website. For the purpose of accounting for import Resource Adequacy Capacity, the import capability of the system will be allocated by branch group to Scheduling Coordinators for Non-CPUC Load Serving Entities individually and to the Scheduling Coordinators for CPUC Load Serving Entities as an aggregated allocation, which will be subject to the allocation rules of the CPUC. The allocation to Scheduling Coordinators for CPUC Load Serving Entities will be the total import value by branch group minus import capacity associated with (i) Existing Transmission Contracts, (ii) Encumbrances and Transmission Ownership Rights, and (iii) resource commitments outside the CAISO Control Area of Non-CPUC Load Serving Entities, as of October 27, 2005. The allocation to Scheduling Coordinators for Non-CPUC Load Serving Entities will be the resource commitments outside the CAISO Control Area of Scheduling Coordinators for Non-CPUC Load Serving Entities, as of October 27, 2005. Import capacity associated with (i) Existing Transmission Contracts and (ii) Encumbrances and Transmission Ownership Rights shall be reserved for holders of such commitments as part of the deliverability study and will not be subject to allocation under these rules. Resource commitments outside the CAISO Control Area of any Load Serving Entity entered into after October 27, 2005 will be given

identical allocation priority. This allocation does not guarantee or result in any actual transmission service being allocated and is only used for determining the maximum Resource Adequacy Capacity that can be credited towards satisfying a Scheduling Coordinator's obligations under its Resource Adequacy Plan. Upon the request of the CAISO, Scheduling Coordinators must provide the CAISO with information on existing Energy or capacity import contracts and any trades or sales of their Load share allocation. Such information will be subject to the confidentiality provisions of this CAISO Tariff. The CAISO will inform the CPUC if a Resource Adequacy Plan submitted by a Scheduling Coordinator for a CPUC Load Serving Entity exceeds its allocation of import capacity. The CAISO will inform the Scheduling Coordinator for a Non-CPUC Load Serving Entity if its Resource Adequacy Plan exceeds the Non-CPUC Load Serving Entity's allocation of import capacity and will either: (i) reduce all Resource Adequacy Capacity from imports of that Scheduling Coordinator on a pro rata basis or (ii) reduce a specific Resource Adequacy Capacity from imports as instructed by the Scheduling Coordinator so as to equal the allocated amount of import capacity.

40.4.7 Submission of Supply Plans.

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with an annual and/or monthly plan, as applicable, on the schedule set forth in the Business Practices Manual verifying their agreement to provide the Resource Adequacy Capacity listed on the annual and/or monthly Resource Adequacy Plan, as applicable, submitted by a Scheduling Coordinator for a Load Serving Entity. The Supply Plan must be in the form of the template provided on the CAISO Website.

40.5 Requirements Applicable to Modified Reserve Sharing LSEs Only.

40.5.1 Day Ahead Scheduling and Bidding Requirements.

Scheduling Coordinators on behalf of Modified Reserve Sharing LSEs serving Load within the CAISO Control Area for whom they submit Demand Bids:

(1) Submit into the IFM, a Self-Schedule or Bid equal to 115% of the hourly Demand Forecasts for each Modified Reserve Sharing LSE it represents for each Trading Hour for the next Trading Day. Subject to Section 40.5.5, the resources included in a Self-Scheduled and/or bid in each Trading Hour to satisfy 115% of the Modified Reserve Sharing LSE's hourly Demand Forecasts will be deemed Resource Adequacy Resources and (i) shall be those resources listed in the Modified Reserve Sharing LSE's monthly Resource Adequacy Plan and (ii) shall include all Local Capacity Area Resources listed in the Modified Reserve Sharing LSE's annual Resource Adequacy Plan, if any, except to the extent the Local Capacity Area Resources, if any, are unavailable due to any outages or reductions in capacity reported to the CAISO in accordance with this CAISO Tariff.

i. A Local Capacity Area Resource that has not fully submitted a Bid or Self-Schedule for all of its Resource Adequacy capacity of will be subject to the CAISO's optimization for the remainder of its capacity, which must be Bid into the Day-Ahead Market; however, to the extent the Generating Unit providing Local Capacity Area Resource capacity constitutes a Use-Limited Resource under Section 40.6.4, the provisions of Section 40.6.4 will apply.

ii. If the Resource Adequacy Resource submits a Bid for Ancillary Services, the Energy Bid associated with the Bid for Ancillary Services will be optimized by the CAISO. However, pursuant to Section 8.6.2, to the extent the Local Capacity Area Resource Self-Provides Ancillary Services and local constraints result is a solution in the MPM-RRD that involves Load

reduction, then Self-Provided AS from the Local Capacity Area Resource will be converted into Ancillary Service Bids at the Minimum Bid Price for Ancillary Services as prescribed in Section 39.6.1.5.

iii. Resource Adequacy Resources must participate in the RUC to the extent that the resource has not submitted a Self-Schedule or already committed to provide Energy or capacity in the IFM. Resource Adequacy Resources will be required to offer into RUC and will be considered based on a $0 RUC Availability Bid.

iv. Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

(2) Resource Adequacy Resources of Modified Reserve Sharing LSEs that do not clear in the IFM or are not committed in RUC shall have no further offer requirements in HASP or Real-Time, except under System Emergencies as provided in this CAISO Tariff.

(3) Resource Adequacy Resources committed by the CAISO must maintain that commitment through Real-Time. In the event of a forced outage on a Resource Adequacy Resource committed in the Day-Ahead Market to provide Energy, the Scheduling Coordinator for the Modified Reserve Sharing LSE will have up to the next HASP bidding opportunity, plus one hour, to replace the lesser of:(i) the committed resource suffering the forced outage, (ii) the quantity of Energy committed in the Day-Ahead Market, or (iii) 107% of the hourly forecast load.

40.5.2 Demand Forecast Accuracy.

On a monthly basis, the CAISO will review meter data to evaluate the accuracy or quality of the hourly Day-Ahead Demand Forecasts submitted by the Scheduling Coordinator on behalf of Modified Reserve Sharing LSEs. If the CAISO determines, based on its review, that one or more Demand Forecasts materially under-forecasts the Load of the Modified Reserve Sharing LSEs for whom the Scheduling Coordinator schedules, after accounting for weather adjustments, the CAISO will notify the Scheduling Coordinator of the deficiency and will cooperate with the Scheduling Coordinator and Modified Reserve Sharing LSE(s) to revise its Demand Forecast protocols or criteria. If the material deficiency persists for three (3) consecutive months with respect to the monthly Demand Forecast or ten (10) hourly

occurrences over a minimum of two (2) non-consecutive week days within a month, the CAISO may: (i) inform State authorities including, but not necessarily limited to the Legislature, and identify the Modified Reserve Sharing LSE(s) represented by the Scheduling Coordinator and (ii) assign to the Scheduling Coordinator responsibility for all Tier 1 RUC charges as specified in Section 11.8.6.5 to address the uncertainty caused by the Scheduling Coordinator's deficient hourly Demand Forecasts until the deficiency is addressed.

40.5.3 Requirement to Make Resources Available During System Emergencies.

Scheduling Coordinators for Modified Reserve Sharing LSEs that are MSS Operators shall make resources available to the CAISO during a System Emergency in accordance with the provisions of Section 4.9 and their Metered Subsystem Agreement. Scheduling Coordinators for all other Modified Reserve Sharing LSEs shall make available to the CAISO upon a warning or emergency notice of an actual or imminent System Emergency all resources that have not submitted a Self-Schedule or Economic Bid in the IFM that were listed in the Modified Reserve Sharing LSEs monthly Resource Adequacy Plan that are physically capable of operating without violation of any applicable law.

40.5.4 Consequence of Failure to Meet Scheduling Obligation.

(1) If the Scheduling Coordinator for the Modified Reserve Sharing LSE fails to submit a Self-Schedule or submit Bids equal to 115% of its hourly Demand Forecasts for each Trading Hour for the next Trading Day in the IFM and RUC, the Scheduling Coordinator will be charged a capacity surcharge of three times the price of the relevant Day-Ahead Hourly LAP LMP in the amount of the shortfall. To the extent the Scheduling Coordinator for the Modified Reserve Sharing LSE schedules imports on one or more Scheduling Points in an aggregate megawatt amount greater than its aggregate import deliverability allocation under Section 40.4.6.2, the quantity of megawatts in excess of its import deliverability allocation will not count toward satisfying the Modified Reserve Sharing LSE's scheduling obligation, unless it clears the Day-Ahead Market.

(2) If the Scheduling Coordinator for the Modified Reserve Sharing LSE cannot fulfill its obligations under Section 40.5.1(3) of this CAISO Tariff, the Scheduling Coordinator for the Modified Reserve Sharing LSE will be charged a capacity surcharge of two times the average of the six (6) Settlement

Interval LAP prices for the hour in the amount of the shortfall. Energy scheduled in the HASP will not net against, or be used as a credit to correct, any failure to fulfill the Day-Ahead IFM hourly scheduling and RUC obligation in Section 40.5.2(1).

(3) Any Energy surcharge received by the CAISO pursuant to Section 40.5.4, shall be allocated to Scheduling Coordinators representing other Load Serving Entities in proportion to metered Demand during the relevant Trading Hour(s).

40.5.5 Substitution of Resources.

Subject to the provisions of this Section 40.5, the Scheduling Coordinator for a Modified Reserve Sharing LSE may substitute for its Resource Adequacy Resources listed in its monthly Resource Adequacy Plan provided:

1) Substitutions must occur no later than the close of the IFM; and

2) Resources eligible for substitution are either imports or capacity from Non-Resource Adequacy Resources or Resource Adequacy Resources with additional available capacity defined as Net Qualifying Capacity in excess of previously sold Resource Adequacy Capacity; however the Local Capacity Area Resource may be substituted only with capacity from Non-Resource Adequacy Resources located in the same Local Capacity Area.

40.6 Requirements Applicable to Scheduling Coordinators for Reserve Sharing LSEs and Resources Providing Resource Adequacy Capacity to Reserve Sharing LSEs.

This Section 40.6 does not apply to Resource Adequacy Resources of Load-following MSSs and those entities that participate in the Modified Reserve Sharing program in Section 40.5. Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity listed in the Scheduling Coordinator's monthly Supply Plans under Section 40.4.7 available to the CAISO each hour of each day of the report-month in accordance with this Section 40.6.

40.6.1 Day-Ahead Availability.

Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity, except for that subject to Section 40.6.4, available Day-Ahead to the CAISO as follows:

(1) Resource Adequacy Resources physically capable of operating must Self-Schedule or submit Economic Bids or Self-Schedules for their Resource Adequacy Capacity into the IFM and RUC.

(2) Any inter-temporal constraints such as Minimum Run times must not be more restrictive than those pre-specified in the Master File limitations or as otherwise required by this CAISO Tariff or by Good Utility Practice.

(3) Resource Adequacy Resources that do not submit Self-Schedules or Economic Bids reflecting all of their Resource Adequacy Capacity will be subject to the CAISO's optimization for the remainder of their Resource Adequacy Capacity Bids into the Day-Ahead Market. If the Resource Adequacy Resource submits a Bid for Ancillary Service(s), the Energy Bid associated with the Bid for Ancillary Services will be optimized by the CAISO.

(4) Resource Adequacy Resources must participate in the RUC to the extent that the resource has available Resource Adequacy Capacity that is not reflected in a Self-Scheduled is already committed to provide Energy or capacity in the IFM. Resource Adequacy Resources will be subject to RUC and will be optimized at a zero dollar RUC Availability Bid.

(5) Capacity from Resource Adequacy Resources selected in RUC will not be eligible to receive a RUC Availability Payment.

40.6.2 Real-Time Availability.

Resource Adequacy Resources that have been committed by the CAISO in the Day-Ahead Market or the RUC for part of their Resource Adequacy Capacity or have submitted a Self-Schedule for part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time, including capacity reflected in the Day-Ahead Schedule and any remaining capacity, for the scheduled and non-scheduled portions of their Resource Adequacy Capacity, subject to the provisions of Section 40.6.4.

40.6.3 Additional Availability Requirements For Short-Start Units.

Short Start Units must meet the following Real-Time availability requirements:

1) Submit a Bid for the resource in the HASP; or

2) Submit a Bid for the resource into the Real-Time Market.

The CAISO may waive these availability obligations for Short-Start Units not have not submitted a Bid or Self-Schedule or selected in the IFM or RUC based on the procedure published on the CAISO Website.

40.6.4 Additional Availability Requirements for Use-Limited Resources.

40.6.4.1 Registration of Use-Limited Resources.

Scheduling Coordinators for Use-Limited Resources, other than for hydro Generating Units, must provide the CAISO an application in the form specified on the CAISO Website requesting registration of a specifically identified resource as a Use-Limited Resource. This application shall include specific operating data and supporting documentation including, but not limited to;

1) a detailed explanation of why the unit is subject to operating limitations;
2) historical data to show attainable MWhs for each 24-hour period during the preceding year. This data should include, as applicable, environmental restrictions for NOx, SOx, or other factors.
3) further data or other information as may be requested by the CAISO to understand the operating characteristics of the unit.

Within, 5 days upon receipt of the application, the CAISO will respond to the Scheduling Coordinator as to whether or not the CAISO agrees that the facility is eligible to be a Use-Limited Resource. If the CAISO determines the facility is not a Use-Limited Resource, the Scheduling Coordinator may challenge that determination in accordance with the CAISO ADR Procedures.

40.6.4.2 Use Plan.

With regard to Use-Limited Resources, the Scheduling Coordinator will provide by September for the following year, a proposed annual use plan for each Use-Limited Resource that is a Resource Adequacy Resource. The proposed annual use plan will delineate on a month-by-month basis the total MWhs of generation, total run hours, expected daily supply capability (if greater than four hours) and the daily energy limit, operating constraints, and the timeframe for each constraint. The CAISO will have an opportunity to discuss the proposed annual use plan with the Scheduling Coordinator and suggest potential revisions to meet reliability needs of the system. The Scheduling Coordinator shall then submit its final annual plan by October of each year. The Scheduling Coordinator will be able to update the projections made in the annual use plan in the monthly Resource Adequacy Plans. The annual use plan

must reflect the potential operation of the Use-Limited Resource at a level no less than the minimum criteria set forth by the Local Regulatory Authority for qualification of the resource.

40.6.4.3 Bidding Requirements on Use-Limited Resources.

40.6.4.3.1 Non-Hydro and Dispatchable Use Limited Resources.

Use-Limited Resources, other than those subject to the provisions of 40.6.4.3.2, must submit a Supply Bid or Self-Schedule for their Resource Adequacy Capacity in the Day-Ahead Market whenever the Use-Limited Resources are physically capable of operating in accordance with their operating criteria, including environmental or other regulatory requirements. Use-Limited Resources will also provide a daily energy limit as part of its Day-Ahead Market offer to enable the CAISO to schedule them for the period in which they are capable of providing the Energy. To the extent that the daily Energy limit has been Self-Scheduled, no further action is necessary by the CAISO, unless rescheduling of the Energy is necessary for system reliability. Use-Limited Resources will attempt to reschedule the Energy in recognition of the system reliability concern, to the extent that the change is possible without violating a Use-Limited Resource's operating criteria.

40.6.4.3.2 Hydro and Non-Dispatchable Use Limited Resources.

Hydro resources and Non-Dispatchable Use-Limited Resources shall submit Self-Schedule or Bids in the Day-Ahead Market for their expected available Energy or their expected as-available Energy, as applicable, in the Day-Ahead Market and HASP. Such Resources shall also revise their Self-Schedules or submit additional Bids in HASP based on the most current information available regarding expected Energy deliveries. Hydro resources and Non-Dispatchable Use-Limited Resources will not be subject to commitment in the RUC process. The CAISO will retain discretion as to whether a particular resource should be considered a Non-Dispatchable Use-Limited Resource, and this decision will be made in accordance with the provisions of Section 40.6.4.1.

40.6.4.3.3 Availability of Use Limited Resources During System Emergencies.

All Use-Limited Resources remain subject to Section 7.7.2.3 regarding System Emergencies to the extent the Use-Limited Resource is owned or controlled by a Participating Generator.

40.6.4.3.4 Availability of Intermittent Resources

Any Eligible Intermittent Resource that provides Resource Adequacy Capacity may, but is not required to, submit Bids in the Day-Ahead Market.

40.6.5 Additional Availability Requirements for System Resources.

In the IFM, the multi-hour block constraints of the System Resource are honored in the optimization. The CAISO anticipates that multi-hour block System Resources that are Resource Adequacy Resources must be capable of hourly selection by the CAISO in RUC if not fully committed in the IFM. If selected in the RUC, the System Resource must be dispatchable in those hours in the HASP and Real Time Market. For existing System Resources with a call-option that expires prior to the completion of the IFM, such System Resources listed on a Resource Adequacy Plan must be reported to the CAISO for consideration in any CAISO Extremely Long-Start Resource commitment process.

40.6.6 Availability Requirements for Partial Resource Adequacy Resources.

A Partial Resource Adequacy Resource has capacity that is not committed to meet a Resource Adequacy obligation in the CAISO Control Area. Only that output of the resource that is designated by a Scheduling Coordinator as Resource Adequacy Capacity in its monthly or annual Resource Adequacy Plan shall have an availability obligation to the CAISO.

40.6.7 Availability Requirements for Long Start Units.

40.6.7.1 Release of Long-Start Units.

Long-Start Units not committed in the Day-Ahead Market will be released from any further obligation to submit Self-Schedules or Bids for the relevant Operating Day. Scheduling Coordinators for Long-Start Units are not precluded from self-committing the unit after the Day-Ahead Market and submit a Self-Schedule a Wheel-Out in the HASP, unless precluded by terms of its contract.

40.6.7.2 Obligation of Long-Start Units to Offer Remaining Capacity in Real-Time.

Long Start Units that have been committed by the CAISO in the Day-Ahead Market or the RUC for part of their Resource Adequacy Capacity or have submitted a Self-Schedule for part of their Resource Adequacy Capacity must remain available to the CAISO through Real-Time for the full value of their Resource Adequacy Capacity.

40.6.8 Use of Default Energy Bids.

Prior to completion of the Day-Ahead Market, the CAISO will determine if dispatchable Resource Adequacy Capacity from Resource Adequacy Resources has not been reflected in a Bid and will insert a Default Energy Bid for any dispatchable Resource Adequacy Capacity that is not reflected in a Bid into the CAISO Day-Ahead Market and for which the CAISO has not received notification of an Outage. In addition, the CAISO will determine if all dispatchable Resource Adequacy Capacity from Short-Start Units, not otherwise selected in the IFM or RUC, is reflected in a Bid into the HASP process and will insert a Default Energy Bid for any remaining dispatchable Resource Adequacy Capacity for which the CAISO has not received notification of an Outage.

40.6.9 Availability Requirements for Grandfathered Firm Liquidated Damages Contracts.

Resource Adequacy Capacity represented by a Firm Liquidated Damages Contract and relied upon by a Scheduling Coordinator in a monthly or annual Resource Adequacy shall be Self-Scheduled or Bid in the Day-Ahead IFM to the extent such scheduling right exists under the Firm Liquidated Damages Contract. For purposes of this Section, Firm Liquidated Damages Contracts are those transactions utilizing or consistent with Service Schedule C of the Western Systems Power Pool Agreement or the Firm Liquidated Damages product of the Edison Electric Institute pro forma agreement, or any other similar firm energy contract that does not require the seller to source the energy from a particular unit, and specifies a delivery point internal to the CAISO Control Area.

40.6.10 Exports of Energy from Resource Adequacy Capacity.

Resource Adequacy Capacity may be utilized to serve an Export Bid. An Export Bid may be submitted into the CAISO Markets and be cleared by the Energy being provided by Resource Adequacy Capacity.

40.6.11 Curtailment of Exports in Emergency Situations.

At its sole discretion, the CAISO may curtail exports from a Resource Adequacy Resource to prevent or alleviate a System Emergency.

40.6.12 Participating Loads.

Participating Loads included in a Resource Adequacy Plan and Supply Plan, if the Scheduling Coordinator for the Participating Loads is not the same as that for the Load Serving Entity, will be dispatched by the CAISO in accordance with the terms and conditions established by the CPUC or the Local Regulatory Authority.

40.7 Compliance.

If the CAISO's review of an annual or monthly Resource Adequacy Plan reveals resource deficiencies, the CAISO will report the deficiencies to the CPUC or Local Regulatory Authority and Scheduling Coordinator submitting Bids for the Load Serving Entity and will coordinate with the CPUC or Local Regulatory Authority to request that the Scheduling Coordinator scheduling Demand revise the plan, as appropriate.

40.7.1 Other Compliance Issues.

Scheduling Coordinators representing Generating Units, System Units or System Resources supplying Resource Adequacy Capacity that fail to provide the CAISO with an annual and/or monthly plan, as applicable, as set forth in Section 40.7, shall be subject to Section 37.6.1.

40.7.2 Penalties for Non-Compliance.

The failure of a Resource Adequacy Resource or Resource Adequacy Capacity to make itself available to the CAISO in accordance with the requirements of Sections 40 and/or to operate the Resource Adequacy Resource by placing it online and/or in a manner consistent with a submitted Bid or Default Energy Bid shall be subject to the sanctions set forth in Section 37.2.

40.8 CAISO Default Qualifying Capacity Criteria.

40.8.1 Applicability.

The criteria in this Section 40.8 shall apply only: (i) where the CPUC or Local Regulatory Authority has not established and provided to the CAISO criteria to determine the types of resources that may be eligible to provide Qualifying Capacity and for calculating Qualifying Capacity for such eligible resource types and (ii) until the CAISO has been notified in writing by the CPUC of its intent to overturn, reject or fundamentally modify the capacity-based framework in CPUC Decisions 04-01-050 (Jan. 10, 2004), 04-10-035 (Oct. 28, 2004), and 05-10-042 (Oct. 31, 2005).

40.8.1.2 Nuclear and Thermal.

Nuclear and thermal units, other than Qualifying Facilities with effective contracts under the Public Utility Regulatory Policies Act addressed in Section 40.8.1.8 below, must be a Participating Generator or a System Unit. The Qualifying Capacity of nuclear and thermal units, other than Qualifying Facilities addressed in Section 40.8.1.8, will be based on net dependable capacity defined by North American Electric Reliability Council ("NERC") Generating Availability Data System ("GADS") information.

40.8.1.3 Hydro.

Hydro units, other than Qualifying Facilities with contracts under the Public Utility Regulatory Policies Act, must be either Participating Generators or System Units. The Qualifying Capacity of a pond or pumped storage hydro unit, other than a QF, will be determined based on net dependable capacity defined by NERC GADS minus variable head derate based on an average dry year reservoir level. The Qualifying Capacity of a pond or pumped storage hydro unit that is a QF will be determined based on historic performance during the Standard Offer 1 peak hours of noon to 6:00 p.m., using a three-year rolling average.

The Qualifying Capacity of all run-of-river hydro units, including Qualifying Facilities, will be based on net dependable capacity defined by NERC GADS minus an average dry year conveyance flow, stream flow, or canal head derate. As used in this section, average dry year reflects a one-in-five year dry hydro scenario (for example, using the 4th driest year from the last 20 years on record).

40.8.1.4 Unit-Specific Contracts.

Unit-specific contracts with Participating Generators or System Units will qualify as Resource Adequacy Capacity subject to the verification that the total MW quantity of all contracts from a specific unit do not exceed the total Net Qualifying Capacity (MW) consistent with the Net Qualifying Capacity determination for that unit.

40.8.1.5 Contracts with Liquidated Damage Provisions.

Firm energy contracts with liquidated damages provisions, as generally reflected in Service Schedule C of the Western Systems Power Pool Agreement or the Firm LD product of the Edison Electric Institute pro forma agreement, or any other similar firm energy contract that does not require the seller to source the energy from a particular unit, and specifies a delivery point internal to the CAISO Control Area entered into before October 27, 2005 shall be eligible to count as Qualifying Capacity until the end of 2008. A Scheduling Coordinator, however, cannot have more than 75% of its portfolio of Qualifying Capacity met by contracts with liquidated damage provisions for 2006. This percentage will be reduced to 50% for 2007 and 25% for 2008.

40.8.1.6 Wind and Solar.

As used in this Section, wind units are those wind Generating Units without backup sources of generation and solar units are those solar Generating Units without backup sources of generation. Wind and Solar units, other than Qualifying Facilities with effective contracts under the Public Utility Regulatory Policies Act, must be participants in the CAISO's Participating Intermittent Resource Program ("PIRP") or subject to availability provisions of Section 40.6.4.3.4.

The Qualifying Capacity of all wind or solar units, including Qualifying Facilities, will be based on their monthly historic performance during the Standard Offer 1 peak hours of noon to 6:00 p.m., using a three-year rolling average.

40.8.1.7 Geothermal.

Geothermal units, other than Qualifying Facilities addressed in Section 40.8.1.8, must be Participating Generators or System Units. The Qualifying Capacity of geothermal units, other than Qualifying Facilities addressed in Section 40.8.1.8, will be based on NERC GAD net dependable capacity minus a derate for steam field degradation.

40.8.1.8 Treatment of Qualifying Capacity for Qualifying Facilities.

Qualifying Facilities must be Participating Generators (signed a Participating Generator or QF Participating Generator Agreement) or System Units, unless they have a PURPA contract. Except for hydro, wind, and solar Qualifying Facilities addressed pursuant to Sections 40.8.1.3 and 40.8.1.6 above, the Qualifying Capacity of Qualifying Facilities under PURPA contracts, will be based on historic monthly generation output during Standard Offer 1 peak hours of noon to 6:00 p.m. (net behind the meter loads) during a three-year rolling average.

40.8.1.9 Participating Loads.

The Qualifying Capacity of Participating Loads shall be the average reduction in demand for over a three-year period on a per dispatch basis or, if the Participating Load does not have three years of performance history, based on comparable evaluation data using similar programs. Participating Loads must be available at least 48 hours and if the Participating Loads can only be dispatched for a maximum of two hours per event, than only .89 of a Scheduling Coordinator's portfolio may be made up of such Participating Loads.

40.8.1.10 Jointly-Owned Facilities.

A jointly-owned facility must be either a Participating Generator or a System Unit. The Qualifying Capacity for the entire facility will be determined based on the type of resource as described elsewhere in this Section. In addition, the Scheduling Coordinator must provide the CAISO with a demonstration of its entitlement to the output of the jointly-owned facility's Qualified Capacity and an explanation of how that entitlement may change if the facility's output is restricted.

40.8.1.11 Facilities under Construction

The Qualifying Capacity for facilities under construction will be determined based on the type of resource as described elsewhere in this Section. In addition, the facility must have been in commercial operation for no less than one month to be eligible to be included as a Resource Adequacy Resource in a Scheduling Coordinator's monthly plan.

40.8.1.12 System Resources

40.8.1.12.1 Dynamic System Resources

Dynamic System Resources shall be treated similar to resources within the CAISO Control Area, except with respect to the deliverability screen under Section 40.4.6.1. However, eligibility as a Resource Adequacy resource is contingent upon a showing by the Scheduling Coordinator that the Dynamic System Resource has secured transmission through any intervening Control Areas for the operating hours that cannot be curtailed for economic reasons or bumped by higher priority transmission and that the Load Serving Entity upon which the Scheduling Coordinator is submitting Demand Bids has an allocation of import capacity at the import Scheduling Point under Section 40.4.6.2 of the CAISO Tariff that is not less than the Resource Adequacy Capacity provided by the Dynamically Scheduled System Resource.

40.8.1.12.2 Non-Dynamic System Resources.

For Non-Dynamic System Resources, the Scheduling Coordinator must demonstrate that the Load Serving Entity upon which the Scheduling Coordinator is scheduling Demand has an allocation of import capacity at the import Scheduling Point under Section 40.4.6.2 of the CAISO Tariff that is not less than the Resource Adequacy Capacity from the Non-Dynamic System Resource. The Scheduling Coordinator must also demonstrate that the Non-Dynamic System Resource is covered by Operating Reserves, unless, unit contingent, in the sending Control Area. Eligibility as Resource Adequacy Capacity would be contingent upon a showing by the Scheduling Coordinator of the System Resource that it has secured transmission through any intervening Control Areas for the operating hours that cannot be curtailed for economic reasons or bumped by higher priority transmission. With respect to Non-Dynamic System Resources, any inter-temporal constraints such as multi-hour run blocks, must be explicitly identified in the monthly Resource Adequacy plan, and no constraints may be imposed beyond those explicitly stated in the plan.