

SUPPLEMENT TO MASTER
Tariff Clarifications filing
List of proposed changes

Section or Appendix	Description	Reason
8.3.1	Remove "Time Horizon" and clarify that the procurement of Ancillary Services in the Real-Time Market is for the applicable 15 minute interval.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
11.19.1.2	Re-write fifth and sixth sentences of section to state: The FERC Annual Charges for a given Trading Month are included in the that are due monthly Invoice and Payment Advice that contains the market Settlement and Grid Management Charge issued in accordance with the CAISO Payment Calendar and the amounts owed will be issued to Scheduling Coordinators at least twice a month in their Settlement Statements accordance with the CAISO Payments Calendar in the same Invoice and Payment Advice that contains the market Settlement and Grid Management Charge. The FERC Annual Charges for a given trading month that are due annually will be issued to Scheduling Coordinators twice a month are issued in accordance with the CAISO Payment Calendar on the same day as the market Invoice and Payment Advice but in a separate Invoice as indicated in Section 11.29.10, and the amounts owed are issued to Scheduling Coordinators at least twice a month in their Settlement Statements.	This amendment clarifies the issuance of FERC fees in settlement statements.
27.1.1	Add language clarifying that the LMP for Energy at a Pnode, as described in Appendix C, considers, among other things, Energy Bid Curves.	This amendment clarifies applicable time periods for market processes and the use of Energy Bid Curves in the calculation of LMPs. This amendment also clarifies that the HASP, which is conducted hourly, calculates fifteen-minute HASP Intertie LMPs for the Subsequent Trading Hour.
27.4.1	Add language clarifying the market processes for which the ISO uses SCUC and the time intervals over which SCUC commits resources.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
27.4.1.1	Replace the term "Time Horizon" with the term "applicable market intervals."	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
27.4.2	Replace the term "Time Horizon" with a description of the intervals for which SCED produces binding Dispatch Instructions.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
27.5.5	Replace the term "Time Horizon" with the phrase, "use in the CAISO Market Processes."	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
27.7.5	Delete the term "Time Horizon" and add reference to Section 34.2.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
33.2	Delete the term "Time Horizon" and add language clarifying when HASP may commit resources.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
33.8.1	Delete the term "Time Horizon" and add language clarifying when a Constrained Output Generator will be eligible to set the Dispatch Interval LMP.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34	Delete the term "Time Horizon" and add language clarifying the time intervals over which the STUC and RTUC will may commit resources and with regard to the look-ahead period for RTD to determine optimal dispatch instructions.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."

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34.2	Delete the term "Time Horizon" and add language referring to time intervals referenced by the Tariff.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.2.1	Re-write first sentence of section to state: RTUC produces binding and advisory Start-Up and Shut-Down Dispatch Instructions for Fast Start and Short Start Units resources that have Start-Up Times that would allow the resource to be committed prior to the end of the relevant time period Time Horizon of the RTUC run <u>as described in Section 34.2.</u>	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.3.1	Re-write first sentence of section to state: RTED mode of operation for RTD normally runs every five (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 multiple as many as twelve future Dispatch Intervals over the RTD optimization Time Horizon of <u>through at least the next Trading Hour</u> sixty five (65) minutes.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.4	Re-write section to state: 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 period Time Horizon covered by the RTUC <u>described in Section 34.2.</u> The Time Horizon for the STUC <u>looks ahead over a period of at least</u> optimization run will extend three hours beyond the Trading Hour for which the RTUC optimization was run, and will utilize replicate the Bids <u>available from other CAISO Markets for used in</u> 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 <u>available</u> 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 <u>approximately five (5) hour look-ahead time period</u> Time Horizon for which it was previously de committed. STUC does not produce <u>Locational Marginal Prices</u> prices for Settlement. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the STUC process taking into consideration the impacts of the derate or outage on the available MSG Configurations.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."

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34.5 (2)	Re-write sub-section to state: In each run of the RTED or RTCD the objective will be to meet the projected Energy requirements over <u>applicable look-ahead time period</u> the Time Horizon of that run, subject to transmission and resource operational Cconstraints, 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;	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.5 (6)	Re-write sub-section to state: 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 <u>forward looking time period</u> 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 <u>forward looking time period</u> Time Horizon of the optimization, and (d) operational C 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, considering the applicable MSG Configuration;	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.5 (7)	Re-write sub-section to state: Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, over the <u>forward looking time period</u> Time Horizon for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, 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;	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.5 (8)	Re-write sub-section to state: The CAISO shall only start up resources that can start within the applicable time periods Time Horizon of the various CAISO Markets Processes that comprise the <u>used by the</u> RTM optimization methodology ;	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."

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34.5 (9)	Re-write sub-section to state: The RTM optimization may result in resources being shut down consistent with their Bids and operating characteristics provided that: (a4) the resource does not need to be on-line to provide Energy, (b2) the resource is able to start up within the applicable time periods of the processes that comprise the RTM optimization Time Horizon, (c3) the Generating Unit is not providing Regulation or Spinning Reserve, and (d4) Generating Units online providing Non-Spinning Reserve may be shut down if they can be brought up within ten (10) minutes as such resources are needed to be online to provide Non-Spinning Reserves;	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
34.19.2.3	Re-write second-to-last sentence of section to state: A Constrained Output Generator that has the ability to be committed or shut off within the Time Horizon of the applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand.	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
Appendix A	Competitive Constraint Run - Modify the definition of the term "Competitive Constraint Run."	This amendment clarifies the definition of Competitive Constraint Run to make the description consistent with Section 31.2.1, which specifies that only transmission constraints pre-designated as competitive constraints are enforced.
Appendix A	Security Constrained Unit Commitment - Modify the definition of the term "Security Constrained Unit Commitment."	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
Appendix A	Short-Term Unit Commitment - Modify the definition of the term "Short-Term Unit Commitment."	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."
Appendix A	Time Horizon - Delete definition of the term "Time Horizon."	This amendment clarifies applicable time periods for market processes and eliminates conflicting uses of defined term "Time Horizon."