29.39 EIM Market Power Mitigation.

(a) **EIM Market Power Mitigation Procedure.** The CAISO shall apply the Real-Time Local Market Power Mitigation procedure in Section 39.7 to the Energy Imbalance Market, including EIM Transfer constraints into an EIM Entity Balancing Authority Area on an EIM Internal Intertie, except as provided in Section 29.39.

(b) **Competitive Path Assessment.** The CAISO shall conduct the competitive path assessment to determine for each EIM Entity Balancing Authority Area whether a path is competitive or non-competitive, consistent with Section 39.7.2, except that –

(1) EIM Participating Resource Scheduling Coordinators shall submit information required by the CAISO to perform the competitive path assessment;

(2) the competitive path assessment shall not exclude EIM Participating Resources from the test used to determine the competitiveness of Transmission Constraints on the basis that they may be net buyers of Energy in the Real-Time Market; and

(3) the CAISO may establish different Reference Buses for each Balancing Authority Area, which need not be within the Balancing Authority Area, for calculating the LMP decomposition which is used to trigger Bid mitigation, based on the topology of each Balancing Authority Area and consideration of the bus at which the Marginal Cost of Congestion component of Locational Marginal Prices is least influenced by market power.

(c) **Locational Marginal Price Decomposition.** The CAISO shall perform the Locational Marginal Price decomposition for each EIM Entity Balancing Authority Area using the results of the competitive path assessment and the Congestion pricing results of the pre-market run to determine which resources may have local market power due to Congestion on a non-competitive Transmission Constraint, consistent with Section 34.2.3 and 39.7.

(d) **Default Energy Bids.** The CAISO shall use the methods and standards set forth in Section 39.7 to determine Default Energy Bids for EIM Participating Resources, except that the CAISO will use the Market Services Charge and System Operations Charge

reflected in the EIM Administrative Charge.

(e) **Incremental Net EIM Transfer Limit.**

(1) **Election.** An EIM Entity Scheduling Coordinator may elect for the CAISO to limit the incremental net EIM Transfer from above after the MPM process for the EIM Entity Balancing Authority Area pursuant to the election procedures and timelines established in the Business Practice Manual for the Energy Imbalance Market.

(2) **Application.** Incremental net EIM Transfers from an EIM Entity Balancing Authority Area that has made the election in Section 29.39(e)(1) will be limited when the MPM process triggers mitigation and EIM Transfers are constrained in the import direction to that EIM Entity Balancing Authority Area, or a group of EIM Entity Balancing Authority Areas that includes that EIM Entity Balancing Authority Area.

(3) **Limit.** The incremental net EIM Transfer limit will be the sum of the Flexible Ramping Up awards in the EIM Entity Balancing Authority Area prior to the RTM process for the interval to which the MPM process applies, which is in excess of the EIM Entity Balancing Authority Area's corresponding Flexible Ramping Up requirement, plus the greater of—

(A) the net EIM Transfer in the MPM process described in Section 34.1.5 prior to the RTM process for the interval to which the MPM process applies; or

(B) the net EIM Transfer represented by the EIM Base Schedules at each EIM Internal Intertie for the interval to which the MPM process applies.

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31.2.3 Bid Mitigation

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

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34.1.5 Mitigating Bids in the RTM

34.1.5.1 Generally

After the Market Close of the RTM, after the CAISO has validated the Bids pursuant to Section 30.7 and Section 34.1.4, and prior to conducting any other RTM processes, the CAISO conducts a MPM process. The results are used in the RTM optimization processes. Bids on behalf of Demand Response Resources, Participating Load, and Non-Generator Resources are considered in the MPM process but are not subject to Bid mitigation. Bids from resources comprised of multiple technologies that include Non-Generator Resources will remain to be subject to all applicable market power mitigation under the CAISO Tariff, including Local Market Power Mitigation.

34.1.5.2 Fifteen Minute Market MPM

The MPM process for eachthe first fifteen-minute (15) interval for a Trading Hour starts with the unmitigated Bid set as validated pursuant to Section 30.7 and Section 34.1.4. The MPM process produces results for each fifteen (15) minute interval of the Trading Hour and thus may produce up to four mitigated Bids for any given resource for the Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.3 above. If a Bid is mitigated in the MPM process for anythe first fifteen (15) minute interval for a Trading Hour, the mitigated Bid will be utilized in the RTM process for that first fifteen (15) minute interval. If a Bid is not mitigated in athe first fifteen (15) minute interval, the CAISO will still mitigate that Bid in subsequent fifteen (15) minute intervals of the Trading Hour if the MPM runs for the subsequent intervals determine that mitigation is needed. For each Trading Hour, any Bid mitigated in a prior fifteen (15) minute interval of that Trading Hour will continue to be mitigated in subsequent intervals of that Trading Hour and may be further mitigated as determined in the MPM runs for any subsequent fifteen (15) minute interval.

34.1.5.3 Hour-Ahead Scheduling Process MPM

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

34.1.5.3 Real-Time Dispatch MPM

The RTD MPM process produces results for each five (5) minute interval of a Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each five (5) minute interval, using the methodology set forth in Section 31.2.3 above. The RTD MPM process is performed for each advisory interval within a configurable time [A1]frame from the binding RTD interval to mitigate bids used in the following RTD for these intervals.The input Bids to the MPM for eachthe first of the three (3) RTD runs corresponding to a particular RTUC interval are the final Bids as mitigated pursuant to Section 34.1.5.2 for the RTD intervals corresponding to the applicable financially binding Fifteen Minute Market run. If a Bid is mitigated in the MPM process for anythe first five (5) minute interval for an applicable fifteen-minute (15) RTUC interval, the mitigated Bid

~~will be utilized for all the corresponding RTD intervals in that fifteen-minute (15) RTUC interval. If a Bid is not mitigated in athe first five (5) minute interval, the CAISO will still mitigate that Bid in subsequent five (5) minute intervals of the applicable RTUC interval if the MPM runs for the subsequent intervals determine that mitigation is needed. For each fifteen-minute (15) RTUC interval, a bid that is mitigated is maintained through the rest of the RTD intervals corresponding to the same RTUC interval as the original mitigated RTD interval. The input Bids to the RTD MPM process for the second of the three (3) RTD intervals corresponding to the RTUC interval will be the final mitigated bids used in the first RTD intervals. The input bids to the RTD MPM mitigation process for the third of the three RTD interval corresponding to the particular RTUC interval will be the final mitigated Bids used in the second RTD interval.~~

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34.1.5.5 Competitive LMP Parameter

When a Bid is mitigated, the CAISO will add a cost, not to exceed $0.01, to the Competitive LMP used in [A2]the MPM process prior to the DAM and RTM process. The CAISO will set the Competitive LMP Parameter as low as possible while reasonably creating price separation in the DAM and RTM process between the area where mitigation applies and other areas where mitigation does not apply. The CAISO will publish the value of the Competitive LMP Parameter in the Business Practice Manual.

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39.7.1.7 ~~[Not Used]~~ Hydro Default Energy Bid

Scheduling Coordinators may request a Hydro Default Energy Bid for hydro resources with storage capability located in the CAISO Balancing Authority Area or any EIM Entity Balancing Authority Area.

39.7.1.7.1 Computation

The CAISO will calculate the Hydro Default Energy Bid as the maximum of the gas floor, the short-term component or the long-term/geographic component as specified in the subsections below.

39.7.1.7.1.1 Gas Floor

The CAISO will calculate the gas floor as the average heat rate for a typical peaking gas resource multiplied by the gas price for the fuel region applicable for the location of the hydro resource, multiplied by 1.1. The heat rate used will be the most recent average heat for gas turbine resources as cited by the Energy Information Agency.[A3]

39.7.1.7.1.2 Short-Term Component

The CAISO will calculate the short-term component as the maximum of the Day-Ahead peak price at the applicable electric pricing hub, the balance of the month futures prices for the current month at the applicable electric pricing hub, and the monthly index futures price at the applicable electric pricing hub for one (1) month after the current month, multiplied by 1.40.

39.7.1.7.1.3 Long-Term/Geographic Component ~~Floor~~

The CAISO will calculate the long-term/geographic component as the maximum of the Day-Ahead peak price at the applicable electric pricing hub, the balance of the month futures prices for the current month at the applicable electric pricing hub, and the monthly index futures price at the applicable electric pricing hub for future months up to the maximum storage horizon after the current month, multiplied by 1.1.

39.7.1.7.2 Requirements

As part of its request for a Hydro Default Energy Bid, the Scheduling Coordinator must submit to the CAISO -

39.7.1.7.2.1 Transmission Rights

(a) Annually the Scheduling Coordinator must demonstrate that (1) they have purchased firm transmission rights from the hydro resource location to the requested electric pricing hub or hubs or a similarly priced location, or (2) provide documentation that supports a historical practice of purchasing qualifying firm transmission rights. [A4]Scheduling Coordinators may demonstrate transmission rights to multiple locations and, based on the CAISO's evaluation of such information, the CAISO may include multiple electric pricing hubs in the long-term/geographic component of the Hydro Default Energy Bid for the affected resources. The Scheduling Coordinator must attest in their submission that they will use the full quantity of the transmission rights to deliver incremental sales from the hydro resource.

(b) For resources with less firm transmission rights than the resource's capacity, the CAISO will use a proportional weighting of those bilateral prices when calculating values in the long-term/geographic component of the Hydro Default Energy Bid.

(c) In the absence of supporting transmission rights information when calculating the Hydro Default Energy Bid, the CAISO will revert to the default bilateral electric pricing hub specified in Section 39.7.1.7.3.

(d) If during the term of the annual period the Scheduling Coordinator no longer has the firm transmission rights previously demonstrated, the Scheduling Coordinator must inform the CAISO within 5 Business Days.

(e) The CAISO may audit the Scheduling Coordinator and request additional information in support of the Scheduling Coordinator's assertions.

(f) If the CAISO determines the Scheduling Coordinator has submitted inaccurate information, the CAISO may revert the resource to the default Trading Hubs as specified in Section 39.7.1.7.3.

39.7.1.2.2 Maximum Storage Horizon.

The maximum hydro resource storage horizon submitted by the Scheduling Coordinator must –

(a) Reflect the typical storage duration of a hydro resource's reservoir, defined as the length of time when cycling from its maximum reservoir elevation to a new maximum reservoir elevation during typical hydro year, and should be computed comparing historic reservoir elevations for multiple years for the hydro resource and observing typical cycling times for the hydro resource.

(b) Be supported by (1) a written attestation by a representative that can legally bind the company stating that the value submitted to the CAISO as the maximum storage horizon is consistent with the requirements specified in this section 39.7.1.7.2 (b), or (2) corroborating information submitted to the CAISO, which may include several years of historic reservoir levels for the specific hydro resource and regulatory filings related to the operations of the hydro resource.

39.7.1.7.3 Default Trading Hubs

The default Trading Hubs for each hydro resource area shall be designated as:

(a) PacifiCorp West, Portland, Powerex, Puget Sound will be in the Mid-Columbia Trading Hub.

(b) Arizona, Idaho, PacifiCorp East, NV Energy will be in the Palo Verde.

(c) Northern California will be in the North-of-path 15.

(d) Southern California will be in the South-of-path 15.

When additional BAAs are added to the EIM markets, they will be assigned a default bilateral hub, based on anticipated EIM prices compared to existing default bilateral hubs. A resource owner may consult with the CAISO to revise the assigned default bilateral hub, if it can be demonstrated that another hub better represents local prices for specific resources applying for this default energy bid.[A5]

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- Competitive LMP Parameter

A cost added to the Competitive LMP used in the MPM process in accordance with Section 34.1.5.5.

- Hydro Default Energy Bid

A Default Energy Bid for a hydro resource calculated in accordance with Section 39.7.1.7.