

Western Power Trading Forum Comments on EIM Redlined Tariff Language

1/31/14

Energy Imbalance Market

~~First~~ Draft Final Tariff



~~November 12, 2013~~ January 16, 2014

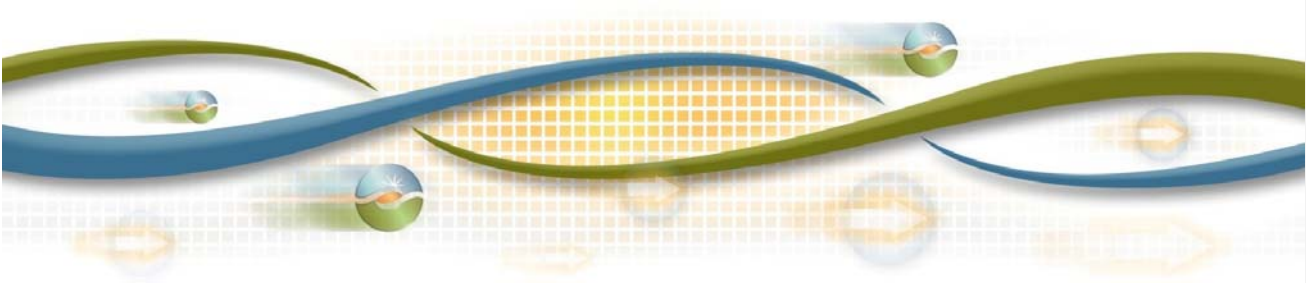


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1. Introduction

The California ISO (ISO) Board of Governors approved the design for the Energy Imbalance Market (EIM) on November 7, 2013. The draft EIM tariff presented here incorporates that approved market design into the tariff framework presented on September 10, 2013.

The ISO would appreciate stakeholder comments concerning whether the draft EIM tariff accurately reflects the market design approved by the ISO Board of Governors. Specific comments supported by proposed changes to the draft tariff generally represent the best means to reflect and understand stakeholder requests, and the ISO has included a Word version of the draft EIM tariff to facilitate that review. Comments on the draft EIM tariff framework must be submitted by December 5, 2013.

This first draft of the EIM tariff remains under review and development by the ISO. In particular, the ISO intends to further consider the appropriate use of defined terms from Appendix A in context of the EIM and the relationship with other tariff development efforts currently underway. For example, the EIM is based on the 15-minute market being implemented in the Spring of 2014 and various descriptions of EIM charge codes and other language may need to be conformed to the final accepted version of the ISO's Order 764 compliance filing. In addition, the Full Network Model stakeholder process is underway and its final design will need to be considered in the EIM tariff.

The ISO appreciates that its ongoing review will change the draft EIM tariff presented here. However, these changes are expected to clarify the relationship between the EIM tariff and the existing tariff as amended by these related stakeholder initiatives—they will not change the EIM design. The ISO believes this first draft of the EIM tariff represents the approved EIM design, and welcomes stakeholder comments on that point.

The ISO will host a stakeholder meeting on December 16. The changes in this draft final tariff addresses: (i) stakeholder comments; (ii) compliance and market changes to the ISO tariff proposed in response to Order 764; (iii) reconciliation of EIM defined terms and ISO tariff defined terms; and (iv) reconciliation of EIM requirements and ISO tariff provisions. This results in a reasonably significant number of changes consistent with the approved EIM design and the ISO tariff, particularly with respect to operation and settlement of the real-time market. For example, the ISO has changed references from the EIM to the real-time market. This reflects the conceptual discussion presented in the first tariff stakeholder meeting – that the EIM is an extension of the ISO real time market and not a separate market.

In this document, the ISO has made changes impacting EIM market participants in Section 29, including those that may apply by reference to the ISO tariff. Changes that impact ISO participants in the real-time market are included as changes to existing ISO tariff provisions. Changes to the draft EIM tariff posted on November 12 are shown in redline. Changes to existing ISO tariff provisions and definitions are shown in redline against the ISO tariff. In some cases, the ISO has made changes to ISO tariff provisions pending before FERC, particularly the Order 764 and RIMPR1 changes. In these cases, the ISO has used the filed version of the ISO tariff. Any changes as a result of those proceedings will be reflected in the final filed version of the EIM tariff. A clean version, except for changes to existing ISO tariff provisions and definitions, is included for stakeholder comments.

The ISO will host a stakeholder meeting on February 10 to discuss all timely stakeholder comments received by January 31. In this meeting the ISO will do its best to explain whether it

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intends to accept or reject each requested change and the reason for doing so. ~~A revised~~Any further substantive changes to the draft EIM final tariff will be posted on January 16, 2014, with a second round of comments due January 23, 2014, by market notice, and discussed in a related tariff stakeholder meeting on January 30, 2014, conference call as specified in the market notice. The final EIM tariff changes will be filed with FERC no later than February 28, 2014.

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2. Draft Final EIM Tariff

29 Energy Imbalance Market

29.1 General Provisions.

- (a) **Operation of EIM.** ~~The Pursuant to Section 29, the~~ CAISO shall operate and settle ~~a market pursuant the Real-Time Market to Section 29 provide~~ for the purchase and sale of ~~imbalance energy balancing Energy in the CAISO Balancing Authority Area and any other any~~ Balancing Authority Area for which the Balancing Authority executes an EIM Entity Agreement ~~with the CAISO, in conjunction with the operation and settlement of the Real-Time Market in the CAISO Balancing Authority Area in accordance with the provisions of the CAISO Tariff.~~
- (b) **EIM Tariff Obligations.** EIM Market Participants shall comply with—
- (1) the provisions of Section 29; and
 - (2) other provisions of the CAISO Tariff that apply to the extent such provisions--
 - (A) expressly refer to Section 29 or EIM Market Participants;
 - (B) are cross referenced in Section 29; or
 - ~~(C) otherwise by their terms apply to EIM Market Participants.~~
 - (C) are not limited in applicability to the CAISO Controlled Grid, the CAISO Balancing Authority Area, or CAISO Markets other than the Real-Time Market.
- (c) **~~Conflict~~Inconsistency Between Provisions.** If there is ~~a conflict an~~ inconsistency between a provision in Section 29 and another provision of the CAISO Tariff regarding the rights or obligations of EIM Market Participants, the provision in Section 29 shall prevail to the extent of the inconsistency.
- (d) **~~Reversion. Discontinuation of EIM Entity Participation.~~**
- (1) **Temporary ~~Reversion~~Discontinuation.** The CAISO may, within ~~thirty~~ (30)60 days following the ~~implementation date of the EIM EIM Entity Implementation Date~~ for an EIM Entity, and ~~upon pursuant to the terms of a~~ Market Notice, temporarily ~~revert to pre-EIM operations discontinue the participation of that EIM Entity in the Real-Time Market~~ for a period not to exceed 60 days ~~with respect to that EIM Entity~~ if market or system operational issues ~~adversely impact any portion of the EIM Area or any~~ provided that the ISO may continue operation of the Real-Time Market without the participation of the EIM Entity Balancing Authority Area for a reasonable additional period of time in order to implement a resolution of the market or system operational issues if the resolution is identified within 60 days after issuance of the Market Notice.

Comment [A1]: This clause is still quite broad given the lack of specificity with this phrase. Can this be tightened at all, for example to say any reliability or Market Disruption impact?

(2) **Permanent ReversionCAISO Termination.** If the CAISO is not able to resolveidentify a resolution of the system orEIM-related market issue duringor system operational issues within 60 days after issuance of the Market Notice of temporary reversiondiscontinuation of EIM participation by an EIM Entity, the CAISO may, upon Market Notice, permanently revertissuance of a subsequent Market Notice, extend the discontinuation of EIM participation by the EIM Entity for a time sufficient to pre-EIM operations with respect to an EIM Entityprocess termination of the EIM Entity's participation in the Real-Time Market.

Comment [A2]: This seems to give the ISO a lot of authority without much specificity. Okay?

(3) **Reinstatement.**

(A) **After Temporary ReversionDiscontinuation.** The CAISO may reinstate EIM operations after a temporary reversiondiscontinuation of EIM participation by providing public notice-an EIM Entity by issuing a Market Notice announcing the intended reinstatement no less than 405 days in advance of the reinstatement date.

(B) **Permanent ReversionAfter CAISO Termination.** The CAISO may only reinstate EIM operations with respect to an EIM Entity after a permanent reversion through termination of EIM participation by an EIM Entity pursuant to a filing with accepted by FERC.

(4) **EIM Entity Action.** In the event the CAISO issues a Market Notice of the temporary discontinuation of EIM participation by an EIM Entity, the EIM Entity shall continue to submit EIM Base Schedules and the associated meter data to enable continued operation of the Real-Time Market until the CAISO issues a subsequent Market Notice either that—

(i) the cause of the temporary discontinuation has been resolved and the EIM Entity has been reinstated; or

(ii) EIM participation by the EIM Entity has been terminated.

(5) **CAISO Action.** In the event the CAISO issues a Market Notice of the temporary discontinuation of EIM participation by an EIM Entity, the CAISO shall—

(i) prevent EIM Transfers and separate the EIM Entity Balancing Authority Area from operation of the Real-Time Market in the EIM Area;

(ii) suspend Settlement of Real-Time Market charges with respect the EIM Entity;

(iii) issue a subsequent Market Notice either that (i) the cause of the temporary discontinuation has been resolved and the EIM Entity has been reinstated or (ii) EIM participation by the EIM Entity has been terminated.

Comment [A3]: It seems like the ISO simply should revert to the pre-EIM configuration (e.g., tags, etc) rather than preventing flows all together. Need to modify this or add another sub item that says reinstate pre-EIM RT intertie transactions?

29.2 **EIM Access To ~~EIM~~The Real-Time Market.**

(a) **In general.** The CAISO shall—

~~(1) provide open and non-discriminatory access to the EIM in accordance with the provisions in the CAISO Tariff; and~~

~~(2) make available for use in the EIM Real-Time Market the transmission capacity that is available in Real-Time—~~

~~(1) on the CAISO Controlled Grid that is available in real-time and the transmission capacity; and~~

~~(2) that an EIM Entity registers in the EIM Transmission Service Registry that is available in real-time, based on its transmission ownership and contractual rights pursuant to Section 29.17.~~

(b) **Implementation of Access as an EIM Entity.**

(1) **EIM Implementation Agreement.** A Balancing Authority that wishes to become an EIM Entity must first execute an implementation agreement with the CAISO that establishes—

(A) the activities the parties must undertake to enable the Balancing Authority to participate in the EIM Real-Time Market;

(B) the ~~date upon which the Balancing Authority will become an EIM Entity; and~~ Implementation Date;

(C) the implementation fee the Balancing Authority must pay to the CAISO for the start-up costs the CAISO incurs— to accommodate the participation of the Balancing Authority in the Real-Time Market as provided in the agreement; and

~~(D) the obligation of the Balancing Authority to enter into an EIM Entity Agreement governing its participation in the Real-Time Market.~~

(2) **FERC Approval.** The ~~implementation agreement~~EIM Entity Implementation Date must be ~~accepted by FERC~~ not less than six months and not more than twenty-four months ~~before~~after the date ~~on which that the EIM implementation agreement between the CAISO and the Balancing Authority is to become an EIM Entity~~accepted by FERC.

(3) **Implementation Period.** The CAISO shall in its discretion determine the ~~required length of the implementation period~~EIM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's ~~system~~transmission and technology systems with the CAISO systems and the planned timing of the CAISO's implementation of software enhancements.

Comment [A4]: Why deleted. This was a big + in WPTF's opinion in previous version.

29.3 [Not Used]

29.4 Roles And Responsibilities.

(a) CAISO Balancing Authority Obligations.

- (1) **Reliability Responsibilities.** Nothing in Section 29 shall alter the CAISO's responsibilities under the other sections of the CAISO Tariff, under any agreement not required by Section 29, or under NERC Reliability Standards ~~and WECC~~ or any other Applicable Reliability Standards and Regional Criteria, as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled Grid.
- (2) **Operating Responsibilities.** During any interruption of the normal operation of the ~~EIM~~ Real-Time Market, the CAISO as Balancing Authority shall remain responsible for managing the resources in its Balancing Authority Area, and the flows on transmission lines internal to the CAISO Balancing Authority Area, including imports and exports, for the duration of the interruption.

(b) EIM Entity.

(1) Balancing Authority Obligations.

- (A) **EIM Entity as Balancing Authority.** An EIM Entity must be a Balancing Authority registered ~~with NERC and certified as such~~ under the applicable authorities.
- (B) **Reliability Responsibilities.** Nothing in Section 29 shall alter an EIM Entity's responsibilities under NERC Reliability Standards ~~and WECC Reliability Standards and Regional Criteria~~ as the Balancing Authority for the EIM Entity Balancing Authority Area and, to the extent applicable, as the transmission operator for transmission facilities within its Balancing Authority Area.
- (C) **Operating Responsibilities.** During any interruption of the normal operation of the ~~EIM~~ Real-Time Market, the EIM Entity as Balancing Authority shall remain responsible for managing the resources in its Balancing Authority Area and the flows on internal transmission lines, including imports into and exports out of its Balancing Authority Area, for the duration of the interruption.
- (D) **Inadvertent Energy.** An EIM Entity remains responsible for tracking inadvertent ~~energy~~ Energy and administering the payback of inadvertent ~~energy~~ Energy for its Balancing Authority Area through processes established by WECC.

- (2) **EIM Entity Agreement.** An EIM Entity must execute an EIM Entity Agreement no later than ninety (90) days before the ~~date upon which the Balancing Authority intends to become an~~ EIM Entity; Implementation Date.

(3) **EIM Entity Obligations.** An EIM Entity shall--

~~(A)~~ perform the obligations of an EIM Entity under the EIM Entity Agreement and Section 29;

~~(B)~~ have provisions in effect in its Open Access Tariff and ensure that each EIM Transmission Service Provider in its Balancing Authority Area has provisions in effect in its Open Access Tariff, as necessary, to enable the EIM in its Balancing Authority Area;

~~(C)~~ perform the obligations of an EIM Entity in accordance with the EIM Entity Agreement, Section 29, and other provisions of the CAISO Tariff that by their terms apply to EIM Entities;

~~(D)~~ have provisions in effect in its open access transmission tariff and ensure that each EIM Transmission Service Provider in its Balancing Authority Area has provisions in effect in its open access transmission tariff, as necessary, to enable operation of the Real-Time Market in its Balancing Authority Area;

~~(E)~~ qualify as or secure representation by no more than one EIM Entity Scheduling Coordinator;

~~(F)~~ review and validate information about available transmission capacity submitted to it by an EIM Transmission Service Provider and transmit such validated information to its EIM Entity Scheduling Coordinator;

~~(G)~~ provide the CAISO and its EIM Entity Scheduling Coordinator with information regarding the transmission capacity available to the EIM Real-Time Market, including any transmission system information regarding ~~constraints that~~ Transmission Constraints of which it observes is aware;

~~(H)~~ define Load Aggregation Points in its Balancing Authority Area; and

~~(I)~~ determine and inform the CAISO which resource types and transmission service providers or holders of transmission rights are eligible to participate in the EIM within Real-Time Market as resources and transmission available to the EIM Entity Balancing Authority Area.

(4) **EIM Entity Termination of EIM Participation.**

(A) **EIM Entity Agreement.** An EIM Entity that wishes to terminate participation in the EIM Real-Time Market must terminate the EIM Entity Agreement pursuant to its terms.

(B) **Notice.** Delivery to the CAISO of a written notice of termination pursuant to the terms of the EIM Entity Agreement shall represent the commitment by the EIM Entity to undertake all necessary

Comment [A5]: What is the underlying concern here?

preparations to disable the EIM Real-Time Market within the EIM Entity Balancing Authority Area.

- (C) **Actions Following Notice.** Upon receipt of such notice, the CAISO shall undertake all necessary preparations to disable the EIM Real-Time Market within the EIM Entity Balancing Authority Area, ~~which shall be as~~ outlined in the Business Practice Manual ~~Manual for the Energy Imbalance Market~~, including ~~public notice to issuance of a Market Participants Notice~~ within ~~ten (10)~~ days after receipt of such notice.

(5) EIM Entity Corrective Actions. If the EIM Entity takes corrective action, subject to the provisions of its open access transmission tariff, to address an issue with EIM implementation or EIM operation, or the EIM Entity issues a notice of termination,—

(A) the EIM Entity shall take those actions provided in Section 29.1(d)(4) during the implementation of its corrective action; and

(B) the CAISO shall issue a Market Notice in accordance with Section 29.1(d)(1) and take those actions provided in Section 29.1(d)(5) during the implementation of the EIM Entity corrective action.

(c) **EIM Entity Scheduling Coordinator.**

- (1) **Certification.** An EIM Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator.
- (2) **EIM Entity Scheduling Coordinator Agreement.** An EIM Entity Scheduling Coordinator must enter an EIM Entity Scheduling Coordinator Agreement with the CAISO, which shall satisfy the obligation to enter a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EIM Entity.
- (3) **Representation.** An EIM Entity Scheduling Coordinator—
- (A) may represent a Market Participant other than an EIM Entity, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant;
- (B) may not also be an EIM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for a Participating Generator, Participating Load, or Demand Resource Provider, unless the EIM Entity Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358; and
- (C) may represent more than one EIM Entity if it has certified to the CAISO in the manner described in the Business Practice Manual for the Energy Imbalance Market that it has informed each EIM

Entity of the multiple representation ~~has authorized it to represent each other EIM Entity.~~

- (4) **Obligations.** An EIM Entity Scheduling Coordinator shall—
- (A) perform the obligations of an EIM Entity Scheduling Coordinator under the EIM Entity Scheduling Coordinator Agreement and Section 29;
 - (B) perform the obligations of a Scheduling Coordinator under ~~such other~~ provisions of the CAISO Tariff ~~as apply by their own terms, except as provided otherwise described~~ in Section 29; 1(b);
 - (C) obtain any transmission service necessary for the EIM Entity it represents to participate in the EIM Real-Time Market under the terms of the CAISO Tariff or the tariff of another transmission service provider, as applicable;
 - (D) register in the manner set forth in the Business Practice Manual, ~~all EIM Participating Resources of each EIM Entity it represents, and for the Energy Imbalance Market~~ all non-participating resources in ~~each EIM Entity the~~ Balancing Authority Area, ~~of each EIM Entity that it represents~~ and update such information in a timely manner;
 - (E) verify in the manner set forth in the Business Practice Manual for the Energy Imbalance Market that all EIM Resources within the Balancing Authority Area of each EIM Entity represented by the EIM Entity Scheduling Coordinator have been registered with the CAISO;
 - (F) submit the ~~interchange~~ Interchange schedules with other Balancing Authorities at the defined ~~interchange~~ Interchange scheduling ~~points~~ locations, including creating and processing ~~e-tags~~ E-Tags in accordance with NERC, ~~NAESB~~ North American Energy Standards Board, and WECC standards and business practices for bilateral schedules between Balancing Authority Areas that are arranged no less than 20 minutes in advance of the ~~operating interval of the EIM~~ Dispatch Interval of the Real-Time Market in which the Interchange will occur and that are included in an EIM Resource Plan;
 - (~~FG~~) match eE-Tags and manage schedule curtailments at the defined ~~interchange~~ Interchange scheduling ~~points~~ locations with other Balancing Authorities;
 - (~~GH~~) register information in the EIM Transmission ~~System~~ Service Registry; ~~and in accordance with Section 29.17;~~
 - (~~H~~) settle all financial obligations arising out of the ~~EIM~~ Real-Time Market for the EIM Entity, including financial settlement with non-participating resources and non-participating load within the EIM

Comment [A6]: Vague. How does ISO verify compliance?

Comment [A7]: What does this obligate exactly? Specify or remove.

Entity Balancing Authority Area; and

~~(d) — J) submit EIM Participating Base Schedules, EIM Resource Plans and other required information on behalf of the EIM Entity.~~

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(d) EIM Resources.

- (1) **Eligibility.** Resources, including ~~generating units, physical scheduling plants, participating loads, proxy demand resources~~ Generating Units, Physical Scheduling Plants, Loads of Participating Loads, Proxy Demand Resources, System Resources, non-generator resources ~~and~~, dynamic transfers, and other resources qualified to participate in the Real-Time Market are eligible to become an EIM ~~Participating~~ Resource if the resource—
 - (A) meets the eligibility requirements established by the EIM Entity in whose Balancing Authority Area the resource is located; or scheduled; and
 - (B) is capable of delivering ~~energy, curtailable demand, demand response services~~ Energy, Curtailable Demand, Demand Response Services, or similar services within the time specified by Section 29 for the ~~EIM market~~ Real-Time Market in which ~~its EIM Participating Resource Scheduling Coordinator~~ will submit ~~bids; and~~
 - ~~(C) — meets California Air Resources Board registration and reporting requirements~~ Bids.
- (2) **EIM Participating Resource Agreement.** An EIM Participating Resource must execute an EIM Participating Resource Agreement.
- (3) **Obligations.** An EIM Participating Resource shall—
 - (A) perform the obligations of an EIM Participating Resource under the EIM Participating Resource Agreement and Section 29;
 - (B) perform the obligations ~~of applicable to~~ Market Participants and resources under such other the provisions of the CAISO Tariff ~~as apply by their own terms, except as provided otherwise~~ described in Section 29; 1(b); and
 - (C) if ~~it represents~~ a ~~generating unit, participating load, proxy demand resource~~ Generating Unit, Load of a Participating Load, Proxy Demand Resource, or other qualified resource, perform the obligations required ~~offor~~ for the resource under ~~such other the~~ provisions of the CAISO Tariff ~~as apply by their own terms, except as specifically provided otherwise; and~~
 - ~~(D) — register~~ described in the Compliance Instrument Tracking System Service of the California Environmental Protection Agency Air Resources Board. section 29.1(b).

(e) **EIM Participating Resource Scheduling Coordinator.**

- (1) **Certification.** An EIM Participating Resource Scheduling Coordinator must be either an existing Scheduling Coordinator or must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator.
- (2) **EIM Participating Resource Scheduling Coordinator Agreement.** An EIM Participating Resource Scheduling Coordinator must enter an EIM Participating Resource Scheduling Coordinator Agreement with the CAISO, which shall satisfy the obligation to enter a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EIM Participating Resource.
- (3) **Representation.** An EIM Participating Resource Scheduling Coordinator—
 - (A) may represent a Market Participant other than an EIM Participating Resource, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant;
 - (B) may not also be an EIM Entity Scheduling Coordinator unless the EIM Participating Resource Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358;
 - (C) may represent more than one EIM Participating Resource if it has certified to the CAISO in the manner described in the Business Practice Manual that for the Energy Imbalance Market that it has notified each EIM Participating Resource of the multiple representation has authorized it to represent each other EIM Participating Resource; and
 - (D) may represent non-EIM resources in other CAISO markets by entering into a Scheduling Coordinator Agreement under Section 4.5.1.11 if it has certified to the CAISO in the manner described in the Business Practice Manual for the Energy Imbalance Market that it has notified each entity it represents of the multiple representation.
- (4) **Obligations.** An EIM Participating Resource Scheduling Coordinator must—
 - (A) perform the obligations of an EIM Participating Resource Scheduling Coordinator under the EIM Participating Resource Scheduling Coordinator Agreement and Section 29;
 - (B) perform the obligations of a Scheduling Coordinator under such other the provisions of the CAISO Tariff as apply by their own terms, except as specifically provided otherwise; described in

Comment [A8]: Still not clear why it is the ISO's concern if an SC represents more than one PR. Shouldn't this be business concern of the parties and not of the ISO?

Comment [A9]: Still not clear why it is the ISO's concern if an SC represents more than one PR. Shouldn't this be business concern of the parties and not of the ISO? This limitation does not currently exist in the tariff for the CAISO footprint does it?

Section 29.1(b):

- (C) ~~obtain~~ ensure that the entity it represents has obtained any transmission service necessary for the entity it represents to participate in the EIM under the terms of the CAISO Tariff or the tariff of another transmission service provider, as applicable;
- (D) register in the manner set forth in the Business Practice Manual, for the Energy Imbalance Market all EIM Participating Resources that it represents, provide such information to the EIM Entity Scheduling Coordinator, and update such information in a timely manner; ~~and,~~
- (E) ~~ensure that the EIM Participating Resources it represents are registered in the Compliance Instrument Tracking System Service of the California Environmental Protection Agency Air Resources Board.~~

Comment [A10]: How is compliance verified?

29.5. [Not Used]

29.6 Communications.

- (a) **EIM Entity.** The EIM Entity shall meet the technical and communication requirements provided specified in the Business Practice ~~Manuals~~ Manual for the Energy Imbalance Market, which shall be based on the Inter-Control Center Communication Protocol and Reliability Standards.
- (b) **EIM Communications and OASIS.** Section 6 shall govern communications and information availability regarding the participation of EIM ~~to Market Participants in the extent it applies by its own terms~~ Real-Time Market except that—
 - (1) references to internal resources shall be deemed to include EIM ~~Participating~~ Resources; and
 - (2) references in Sections 6.2.2.1 and 6.5.2.1 to the CAISO Controlled Grid and references in Sections 6.5.4.2.2(a) and 6.5.5.1.1 to CAISO Balancing Authority Area shall be deemed references to the EIM Area.
- (c) **Loss of Communications.**
 - (1) **Procedures.** The CAISO and each EIM Entity and EIM Entity Scheduling Coordinator shall establish procedures to address an interruption of EIM Real-Time Market communications, which shall include steps to be taken to restore communications and address any impact on system or market operations as provided in Section 29.
 - (2) **Responsibilities.** An EIM Entity that loses communication with the CAISO remains responsible for managing its Balancing Authority Area imbalance needs without ~~the EIM balancing Energy from the Real-Time Market.~~

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- (d) **Variable Energy Resource Forecast Communications.** If the EIM Participating Resource Scheduling Coordinator for a ~~variable energy resource~~ Variable Energy Resource elects to use an independent forecasting service, it must make data transfer arrangements with the CAISO for the CAISO to receive the forecast in a format and on a schedule set forth in the Business Practice Manual for the Energy Imbalance Market.

29.7 EIM Operations Under Normal And Emergency Conditions.

- (a) **CAISO Controlled Grid Operations.** Section 7 shall not apply to EIM Market Participants in their capacities as such.
- (b) **Normal EIM Operations.** The CAISO shall administer the EIM to manage imbalance of transmission capacity made available to the Real-Time Market to manage Energy imbalances in the EIM Area under normal operations.
- (c) **Load Curtailment.** The CAISO will not issue Dispatch Instructions to an EIM Entity Scheduling Coordinator with respect to ~~load~~ Load or Demand that has not been bid into the EIM as an EIM Participating Resource Real-Time Market.
- ~~(d)~~ Dispatch Instructions for EIM Participating Resources. The CAISO will not issue Dispatch Instructions to an EIM Participating Resource Scheduling Coordinator with respect to Supply that has not been bid into the Real-Time Market.
- (e) **EIM Transfers.** The CAISO shall manage the EIM Transfers as aggregate ~~dynamic schedules~~ Dynamic Schedules with each EIM Entity Balancing Authority Area, which—
- (1) shall not require individual resource ~~e~~ E-Tags;
 - (2) shall not constitute inadvertent ~~energy~~ Energy;
 - (3) shall reflect intra-hour incremental EIM Transfers between the CAISO ~~and each EIM Entity Balancing Authority Area, with initial values that may be non-zero at the beginning of an operating hour if they represent imbalance energy dispatched in hourly, fifteen-minute, or five-minute intervals, or may be zero if they include only schedules for imbalance energy dispatched in fifteen-minute or five-minute intervals~~ Balancing Authority Area and each EIM Entity Balancing Authority Area;
 - (4) shall be updated within 60 minutes after the end of each ~~operating hour~~ Operating Hour to include the integrated ~~energy~~ Energy during the hour for the sum of all EIM Transfers ~~within~~ between each Balancing Authority Area in the EIM Area in accordance with WECC business practices for purposes of inadvertent ~~energy~~ Energy accounting; and
 - (5) shall be subsequently updated as necessary consistent with the requirements of WECC, NERC, and ~~NAESB~~ North American Energy Standards Board standards and business practices.

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(ef) **Dynamic Imbalance Schedule to Net ~~Schedule Interchange~~ EIM Transfers.**

The CAISO will—

- (1) model changes in the net five-minute ~~schedule interchange values~~ scheduled EIM Transfers that result from ~~EIM optimal dispatch~~ RTD Dispatch as a ~~dynamic schedule~~ Dynamic Schedule between the CAISO and EIM Entity for AGC control accuracy; and
- (2) calculate the dynamic net ~~schedule interchanges~~ scheduled EIM Transfers for the CAISO and each EIM Entity Balancing Authority Area and derive from these dynamic net ~~schedule interchanges the dynamic schedules on interties between the CAISO and EIM Entity Balancing Authority Areas for taggings~~ scheduled EIM Transfers the Dynamic Schedules on EIM Internal Interties for E-Tag purposes.

(fg) **~~EIM Entity Manual Dispatch.~~ EIM Entity Manual Dispatch.** The EIM Entity may issue ~~a manual dispatch~~ an EIM Manual Dispatch to an EIM Participating Resource or a non-participating resource in its Balancing Authority Area, outside of the ~~EIM optimization~~ Market Clearing of the Real-Time Market, when necessary to address reliability or operational issues in the EIM Entity Balancing Authority Area that the ~~EIM~~ CAISO is not able to address through normal economic ~~dispatch~~ Dispatch and ~~congestion management, and upon communication to the CAISO the CAISO shall—~~ Congestion Management.

- (1) ~~reflect manual dispatch instructions in fifteen-minute schedules and five-minute dispatch instructions; and~~
- (2) ~~treat an h) EIM Entity manual dispatch to an EIM Participating or non-participating resource as an imbalance instruction and settle it at the respective Locational Marginal Price, but the dispatch will not set that Locational Marginal Price.~~

(g) **~~Actions in Response to an EIM Entity Manual Dispatch.~~ Actions in Response to an EIM Entity Manual Dispatch.** If the EIM Entity issues ~~a manual dispatch~~ an EIM Manual Dispatch to address circumstances on its system—

- (1) the EIM Entity shall immediately inform the CAISO ~~that, as specified in the Business Practice Manual for the Energy Imbalance Market, if the EIM Entity Balancing Authority Area is under manual operation as specified in the Business Practice Manuals;~~
- (2) the EIM Entity shall immediately inform the CAISO of the ~~manual dispatch~~ EIM Manual Dispatch to ~~any~~ EIM Participating Resources and Resource or non-participating resource by submitting ~~manual dispatch instructions~~ the EIM Manual Dispatch instruction for the affected ~~resources~~ resource to the CAISO as specified in the Business Practice Manual for the Energy Imbalance Market; and
- (3) the EIM Entity remains responsible for informing the ~~reliability coordinator~~ Reliability Coordinator of the ~~EIM contingency~~ circumstances creating the need for the EIM Manual Dispatch and may enforce

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~~constraints~~ Transmission Constraints, as may be required.

(h) CAISO Actions in Response to Notification of EIM Manual Dispatch. Upon receipt of notice of an EIM Manual Dispatch, the CAISO shall—

- (1) reflect the EIM Manual Dispatch in the Real-Time Market;
- (2) disregard an EIM Manual Dispatch in the determination of the Location Marginal Price; and
- (3) treat an EIM Manual Dispatch to an EIM Participating Resource or non-participating resource as FMM or RTD Instructed Imbalance Energy for Settlement.

(i) **EIM Disruption.**

(1) **Declaration.** The CAISO may ~~disrupt~~ declare an interruption of the EIM when in its judgment—

- (A) operational circumstances (including ~~failures~~ a failure of the ~~EIM~~ Real-Time Market operation to produce feasible results in the EIM Area or other ~~market disruptions~~ CAISO Market Disruption) in the EIM Area have caused or are in danger of causing an abnormal system condition in the CAISO Balancing Authority Area or an EIM Balancing Authority Area that requires immediate action to prevent loss of ~~load~~ Load, equipment damage, or tripping system elements that might result in cascading ~~outages~~ Outages, or to restore system operation to meet Applicable Reliability Criteria; or
- (B) Communications between the CAISO and EIM market participants are ~~interrupted~~ disrupted and prevent an EIM Entity, EIM Entity Scheduling Coordinator, or EIM Participating Resource Scheduling Coordinator from accessing CAISO systems to submit or receive information.

(2) **CAISO Response to EIM Disruption.** If the CAISO declares an EIM ~~disruption~~ interruption, the CAISO may in its judgment, among other things—

- (A) separate the affected EIM Entity Balancing Authority Area from the EIM Area and maintain the EIM Real-Time Market for other EIM Balancing Authority Areas in the EIM Area by enforcing a net ~~interchange~~ transfer constraint for the affected ~~EIM Entity~~ Balancing Authority Area to separate it from the remainder of the EIM Area;
- (B) reduce or suspend EIM Transfers between one or more Balancing Authority Areas in the EIM Area; ~~or~~
- (C) instruct one or more ~~Balancing Authorities in the EIM Area~~ Entities

to assume ~~manual~~ dispatch ~~of authority over~~ all resources within their Balancing Authority Area; or

(D) in addition or as an alternative, establish an Administrative Price in the Real-Time Market.

- (3) **EIM Entity Responsibility.** In response to an EIM ~~disruption~~interruption by the CAISO, all EIM Entities shall follow NERC Reliability Standards applicable to their roles as Balancing Authorities in an effort to alleviate operational and system conditions and restore routine operations.
- (4) **EIM Entity Scheduling Coordinator Responsibility.** All EIM Entity Scheduling Coordinators ~~will~~shall promptly inform the CAISO of actions taken ~~in response to an EIM disruption~~ by the EIM Entities they represent in response to an EIM interruption by the CAISO through updates to ~~the~~their EIM Base ~~Schedule, interchange eSchedules, Interchange E-~~Tags, transmission limit adjustments, or ~~outage~~Outage and derate information, as applicable.
- (5) **System Restoration.** The CAISO shall reinstate normal operation of the ~~EIM~~Real-Time Market in the EIM Area at such time as it determines that the EIM disruption has been resolved.

(ik) Congestion Management and Unscheduled Flow.

- (1) **EIM Inability to Resolve Congestion.** The CAISO will provide information to EIM Entities about ~~congestion~~Congestion that the ~~EIM~~Real-Time Market cannot resolve.
- (2) **Initiation of Unscheduled Flow Procedures.** The CAISO or an EIM Entity may initiate WECC's ~~Unscheduled Flow Mitigation Procedure~~unscheduled flow mitigation procedure if applicable for conditions in its Balancing Authority Area.
- (3) **CAISO EIM Entity Action.** When ~~WECC's Unscheduled Flow Mitigation Procedure~~the WECC unscheduled flow mitigation procedure is initiated, ~~the CAISO~~each EIM Entity shall adjust ~~the affected~~its schedules as determined by the WECC procedure, and immediately inform the CAISO of the changes.
- (4) **CAISO Action.** When ~~WECC's unscheduled flow mitigation procedure is initiated, the CAISO operating procedures~~is initiated, the CAISO operating procedures shall reflect the affected EIM Market Participant schedules in the Real-Time Market as determined by the WECC procedure, EIM Entity, CAISO Operating Procedures, and Business Practice Manuals for the CAISO Balancing Authority Area and EIM Entity Balancing Authority Areas.

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29.8 [Not Used]

29.9 Outages and Critical Contingencies.

(a) **Applicability of Section 9.** Section 9 shall not apply to ~~outages of transmission and generation facilities within an EIM Entity Balancing Authority Area, Market Participants~~ except ~~that~~ as referenced in Section 29.9.

(b) **Transmission Maintenance Outages.**

- (1) **Responsibility.** The EIM Entity shall be responsible for performing engineering studies, ~~with regard to, and modeling,~~ and approving ~~Maintenance~~ Outages on transmission facilities for maintenance purposes within the EIM Entity Balancing Authority Area, including the transmission capacity made available by an EIM Transmission Service Provider to the Real-Time Market.
- (2) **Notice.** The EIM Entity Scheduling Coordinator shall submit notice of ~~approved transmission~~ Outages approved by the EIM Entity to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and in accordance with the deadlines set forth in Section 9.
- (3) **Notice of Modification.** The EIM Entity Scheduling Coordinator may submit a notice of modification of an approved transmission ~~outage~~ Outage and any resulting updates to ~~intertie~~ EIM Intertie limits to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and in accordance with the deadlines set forth in Section 9.
- (4) **Contents of Notice.** ~~Notice~~ The EIM Entity Scheduling Coordinator notices of approved transmission ~~outages~~ Outages shall include —
 - (A) the start and finish date for each ~~Maintenance~~ Outage for maintenance purposes; and
 - (B) such information other than start and finish date as is required in Section 9.3.6 for transmission operators ~~operators~~ seeking approval of ~~outages~~ Outages.

Comment [A11]: Does this mean that the CAISO approves the EIM Entities' transmission outages, or...

(c) **Generation Maintenance Outages.**

- (1) **Responsibility.** The EIM Entity shall be responsible for performing engineering studies with regard to, and modeling and approving, ~~Maintenance~~ Outages ~~for of~~ EIM Participating Resources and non-participating resources for maintenance purposes within the EIM Entity Balancing Authority Area.
- (2) **Notice.** The EIM Entity Scheduling Coordinator shall submit notice of Outages of EIM Resources and non-participating resources approved ~~generation outages~~ by the EIM Entity to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and in accordance with the deadlines set forth in Section 9 for Generating Unit Outages.

(3) **Contents of Notice.** ~~Notice~~ The EIM Entity Scheduling Coordinator notices of approved ~~generation outages~~ Outages of EIM Resources and ~~non-participating resources~~ shall include—

(A) the start and finish date for each ~~Maintenance Outage for~~ maintenance purposes; and

(B) such information other than start and finish date as is required in Section 9.3.6 for ~~generating units~~ Operators seeking approval of ~~outages~~ Generating Unit Outages.

Comment [A12]: Will then EIM entity will in fact require notification of outages?

(d) **Actions Regarding Maintenance Outages.**

(1) **CAISO Evaluation of Maintenance Outages.** The CAISO will ~~evaluate~~ implement the ~~impact of approved~~ transmission and ~~generation maintenance outages~~ Generation Outages approved by the EIM Entity through the ~~day-ahead market~~ Day-Ahead Market process and will inform the EIM Entity Scheduling Coordinator of any anticipated overloads.

(2) **EIM Entity Action.** Based on the information provided by the CAISO to the EIM Entity Scheduling Coordinator, the EIM Entity ~~will~~ shall take such action to adjust or cancel ~~outages~~ Outages as it determines to be necessary and inform the ~~reliability coordinator~~ Reliability Coordinator.

(e) **Forced Outages.** An EIM Entity Scheduling Coordinator shall comply with the ~~reporting~~ provisions of Section 9 with regard to ~~forced outages~~ Forced Outages of transmission ~~and generation~~ facilities within the Balancing Authority Area of the EIM Entity it represents ~~and an EIM Participating Resource Scheduling Coordinator shall comply with the reporting provisions of Section 9 with regard to Forced Outages of Generating Units it represents as EIM Resources.~~

(f) **Transmission Limits.** An EIM Entity Scheduling Coordinator must notify the CAISO by the means specified in the Business Practice Manual ~~for the Energy Imbalance Market~~ with respect to transmission limits on the transmission ~~facilities~~ capacity made available ~~to the Real-Time Market~~ within the EIM Entity Balancing Authority Area that need to be enforced in the ~~EIM~~ Real-Time Market, including—

(1) physical MVA or MW limits under base case and contingencies;

(2) scheduling limits for ~~intertie~~ EIM Intertie transactions based on ~~e-tags~~ E-Tags; and

(3) contractual limits on ~~transmission interfaces~~ Transmission Interfaces where the EIM ~~Entity Balancing Authority Area~~ Transmission Service Provider has transmission rights.

29.10. Metering and Settlement Data.

(a) **Telemetry Requirements.** The EIM Entity shall ensure that each EIM ~~Participating~~ Resource and non-participating resource in an EIM Entity Balancing

Authority Area that is not a ~~generating unit~~ Generating Unit or is a ~~generating unit~~ Generating Unit with a nameplate capacity in excess of 10 MW (including each aggregated resource with a total nameplate capacity in excess of 10 MW) and each ~~intertie with the EIM Balancing Authority Area~~ Intertie has telemetry meeting the requirements of the Business Practice Manual for the Energy Imbalance Market.

- (b) **Metering for Settlement Metering Purposes.** The EIM Entity shall ensure that each EIM Participating Resource and non-participating resource in an EIM Entity Balancing Authority Area becomes either a CAISO Metered Entity or a Scheduling Coordinator Metered Entity and complies with the requirements of Section 10 except as provided in Section 29.10(c).
- (c) **Exception to Requirements of Section 10.3.9.** In the absence of metering standards set by a Local Regulatory Authority, EIM Participating Resources and non-participating resources in an EIM Entity Balancing Authority Area may qualify as Scheduling Coordinator Metered Entities without the need for third party certification if the CAISO determines that the applicable metering standards meet or exceed the standards for CAISO Metered Entities.
- (d) **Interchange Meter Data.** Metering for Settlement metering purposes is required for all EIM ~~Entity Balancing Authority Area interties~~ Interties.
- (e) **EIM Energy Imbalance Energy With an External Balancing Authority Area.** For each ~~intertie bid~~ EIM External Intertie Bid that clears the EIM FMM resulting in a 15-minute ~~intertie~~ EIM External Intertie schedule ~~at an intertie between an EIM Entity Balancing Authority Area and an external Balancing Authority Area~~, the EIM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute energy Energy profiles from the respective ~~eE~~-Tags, which must reflect the ~~point~~ Point of ~~receipt~~ Receipt and ~~point~~ Point of ~~delivery~~ Delivery that was declared in ~~market bid~~ the FMM Bid submittal, at least 20 minutes before the start of the ~~hour~~ Operating Hour.

29.11. Settlements And Billing For EIM Market Participants.

- (a) **Applicability.** ~~This~~ Section 29.11, rather than Section 11, shall apply to the CAISO ~~settlement~~ Settlement with EIM Entity Scheduling Coordinators and EIM Participating ~~Resources~~ Resource Scheduling Coordinators ~~of all EIM charges described herein, except as otherwise provided~~.
- (b) **Imbalance Energy.**
 - (1) **15-Minute FMM Instructed Imbalance Energy,**
 - (A) **Calculation.** The CAISO will calculate ~~a resource's 15-minute Instructed Imbalance Energy as the algebraic difference between its 15-minute energy schedule, which is the outcome of the 15-minute market, and the hourly base schedule (for an EIM Participating Resources)~~ Resource's FMM Instructed Imbalance Energy according to Section 11.5.1.1 and Section 11.5.1.2, except that references to the Day-Ahead Schedule in the relevant

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Appendix A definitions shall be deemed references to the EIM Base Schedule.

(B) **Settlement.** The CAISO will settle the ~~15-minute~~FMM Instructed Imbalance Energy with the resource's EIM Participating Resource Scheduling Coordinator ~~at the 15-minute Locational Marginal Price.~~

Comment [A13]: Having struck at the 15-min price, how will the ISO settle it? Why was the "at the LMP" deleted?

(2) **5-Minute RTD Instructed Imbalance Energy.**

(A) **Calculation.** The CAISO will calculate ~~a resource's 5-minute~~an EIM Participating Resource's RTD Instructed Imbalance Energy ~~as the algebraic difference between its dispatch operating point, which is the outcome of Real-Time Dispatch, and its 15-minute energy schedule, which is the outcome of the 15-minute market.~~

~~(B) Settlement.~~ The CAISO will settle the ~~according Section 11.5-minute, 1.2.~~

~~(B) Settlement.~~ The CAISO will settle the RTD Instructed Imbalance Energy with the resource's EIM Participating Resource Scheduling Coordinator ~~at the 5-minute Locational Marginal Price.~~

Comment [A14]: Having struck at the 15-min price, how will the ISO settle it? Why is the "at the 5-minute..." price deleted?

~~(3) Import/Export Schedules.~~

~~(A) Calculation.~~ For static or 15-minute import/export schedules at EIM Entity scheduling points with non-EIM Balancing Authority Areas, the CAISO will determine Instructed Imbalance Energy according to the operational adjustments to the respective hourly or 15-minute e-Tags, calculated in the 5-minute market.

~~(B) Settlement.~~ The CAISO will settle the operational adjustments with the EIM Participating Resource Scheduling Coordinator or EIM Entity Scheduling Coordinator that submitted the schedule ~~at the 5-minute Locational Marginal Price.~~

Comment [A15]: Whole section needs clarity given that this detail has been taken out.

~~(4)(3) Uninstructed Imbalance Energy.~~

(A) **EIM Participating Resources.**

(i) **Calculation.** For EIM Participating Resources and an EIM Entity Balancing Authority Area's dynamic import/export schedules with external resources, the CAISO will calculate Uninstructed Imbalance Energy ~~as the algebraic difference between the 5-minute meter data and the dispatch trajectory between consecutive 5-minute dispatches, taking into account the applicable resource ramp rate according to Section 11.5.2 except that references to the Day-Ahead Schedule in the relevant Appendix A definitions~~Section 11.5.2 shall be deemed references to the EIM Base Schedule for the purposes of

these settlements.

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- (ii) **Settlement.** The CAISO will settle the Uninstructed Imbalance Energy with the EIM Participating Resource's Resource Scheduling Coordinator ~~at~~ the 5-minute Locational Marginal Price EIM Entity Scheduling Coordinator, as applicable.

Comment [A16]: How is the applicability determined? Is it EIM PR SC for non EIM Entity resources, or...?

(B) **Non-Participating Resources.**

- (i) **Calculation.** For non-participating resources in an EIM Entity Balancing Authority Area, the CAISO will calculate Uninstructed Imbalance Energy as the ~~algebraic~~ difference between the 5-minute ~~meter data~~ Meter Data and the ~~base schedule~~ EIM Base Schedule, plus any EIM Manual Dispatch Energy identified ~~manual dispatch energy~~ by the EIM Entity Scheduling Coordinator.
- (ii) **Settlement.**— The CAISO will settle the Uninstructed Imbalance Energy for non-participating resources at the ~~five-minute~~ RTD Locational Marginal Price with the EIM Entity Scheduling Coordinator.

(C) **Non-Participating Load.**

- (i) **Calculation.** For non-participating ~~load~~ Load, the CAISO will calculate Uninstructed Imbalance Energy ~~on a~~ in accordance with 11.5-minute basis as 2.2, except that references to the algebraic difference between Day-Ahead Schedule in the hourly meter data provided by relevant Appendix A definitions shall be deemed references to the EIM Entity Scheduling Coordinators and the base schedule Base Schedule.
- (ii) **Settlement.** The CAISO will settle Uninstructed Imbalance Energy for non-participating Load with the EIM Entity ~~at the hourly real-time LAP price described in Section 41.5.2.2~~ Scheduling Coordinator.

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Comment [A17]: It doesn't make a lot of sense to reference "Appendix A"

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(c) **Unaccounted For Energy of EIM Entities.**

- (1) **Calculation.** The CAISO will calculate Unaccounted For Energy for each EIM Entity Balancing Authority Area as the difference between metered ~~demand~~ Demand, and the sum of the metered ~~supply~~ Supply and the metered values at the interties, adjusted for losses.
- (2) **Settlement.** The CAISO will settle Unaccounted For Energy ~~at the hourly real-time Load Aggregation Point~~ with the EIM Entity Scheduling Coordinator at the Hourly Real-Time LAP price.

(d) **Charges for Over- and Under-Scheduling of EIM Entities.**

(1) **Under-Scheduling Charges.**

(A) **Tier 1.** If, during any Trading Hour, the metered ~~demand~~**Demand** within an EIM Entity Balancing Authority Area exceeds the ~~base schedule~~**EIM Base Schedule** of ~~supply~~**Supply** submitted by the EIM Entity by more than 5% but less than or equal to 10% and by at least 2 MW, the CAISO shall charge the **EIM Entity Scheduling Coordinator for the Uninstructed Imbalance Energy** at the EIM Entity Load Aggregation Point a price that is 125% of the ~~hourly real-time Load Aggregation Point price~~**Hourly Real-Time LAP Price**.

Comment [A18]: Where is this term defined?
Shows up a little differently in the Order 764 tariff.

(B) **Tier 2.** If, during any Trading Hour, the metered ~~demand~~**Demand** within an EIM Entity Balancing Authority Area exceeds the ~~base schedule~~**EIM Base Schedule** of ~~supply~~**Supply** submitted by the EIM Entity by more than 10% and by at least 2 MW, the CAISO shall charge the ~~entire imbalance energy~~**EIM Entity Scheduling Coordinator the Uninstructed Imbalance Energy** at the EIM Entity Load Aggregation Point a price that is 200% of the ~~hourly real-time Load Aggregation Point~~**Hourly Real-Time LAP** price.

Comment [A19]: Where is this term defined?
Shows up as a little different in the Order 764 tariff.

(2) **Over-Scheduling Charges.**

(A) **Tier 1.** If, during any Trading Hour, the metered ~~demand~~**Demand** within an EIM Entity Balancing Authority Area is less than the ~~base schedule~~**EIM Base Schedule** of ~~supply~~**Supply** submitted by the EIM Entity by more than 5% but less than or equal to 10% and by at least 2 MW, the CAISO shall pay the **EIM Scheduling Coordinator for the Uninstructed Imbalance Energy** at the EIM Entity Load Aggregation Point a price that is 75% of the ~~hourly real-time Load Aggregation Point price~~**Hourly Real-Time LAP Price**.

(B) **Tier 2.** If, during any Trading Hour, the metered ~~demand~~**Demand** within an EIM Entity Balancing Authority Area is less than the ~~base schedule~~**EIM Base Schedule** of ~~supply~~**Supply** submitted by the EIM Entity by more than 10% and by at least 2 MW, the CAISO shall pay the ~~entire~~**EIM Entity Scheduling Coordinator the Uninstructed Imbalance Energy** at the EIM Entity Load Aggregation Point a price that is 50% of the ~~hourly real-time Load Aggregation Point price~~**Hourly Real-Time LAP Price**.

(3) **Distribution of Revenues.** The CAISO will calculate the total daily excess revenues received from under-scheduling ~~and over-scheduling~~ charges and ~~over-scheduling charges under Section 29.11(d)(1) and (2)~~ and allocate them to ~~load at~~**Load in** the ~~Load Aggregation Points~~**EIM Area** that was not subject to under-scheduling or over-scheduling charges according to metered ~~demand~~**Demand**.

(4) **Exemption.** An EIM Entity will be exempt from under-scheduling and over-scheduling charges ~~under Section 29.11(d)(1) and (2)~~ if it uses the

~~Demand Forecast prepared by the CAISO load forecast~~ in its EIM Resource Plan and it approves ~~base schedules~~ EIM Base Schedules for its resources within +/- 1% of the CAISO ~~load forecast~~ Demand Forecast, as determined according to the Business Practice Manual for the Energy Imbalance Market.

(e) **Neutrality ~~Charges~~ Accounts.**

(1) **In General.** The CAISO will collect neutrality ~~charges~~ amounts from EIM Market Participants to recover differences in Real-Time Market payments made and Real-Time Market payments received from load and payments to resources at Locational Marginal Prices.

(2) **Real-Time Congestion Offset.** The CAISO will assess EIM Entity Scheduling Coordinators a Real-Time Congestion Offset Real-Time Market neutrality allocation calculated pursuant to Section 11.5.4.1.1.

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(3) **EIM Balancing Authority Area Real-Time Market Neutrality Allocation.**

(A) **Financial Amount of EIM Transfers.** The CAISO will calculate the real-time net scheduled interchange financial amount of EIM Transfers as the product of the real-time net schedule interchange direction flow in MWhs and the Locational Marginal Price of the pricing node at the corresponding intertie.

(B) **Initial Calculation.** The CAISO will calculate the EIM Balancing Authority Area real-time market neutrality amount to be recovered on a 5-minute basis for each EIM Entity Balancing Authority Area as the sum of the financial amount of EIM Transfers and the settlement amounts for Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, less the Balancing Authority Area real-time congestion balancing account.

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(C) **Adjustment.** The CAISO will adjust the initial calculation of the EIM Balancing Authority Area real-time market neutrality amount by—

(i) ~~dividing the sum of net EIM Transfers out of an~~ assess EIM Entity Balancing Authority Area by the sum of the absolute value of Uninstructed Imbalance Energy due to load, the absolute value of Uninstructed Imbalance Energy due to supply, the absolute value of Unaccounted For Energy, and the net EIM Transfer out of the Balancing Authority Area;

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(ii) ~~summing the amounts for all EIM Entity Balancing Authority Areas that had EIM Transfers out in the Scheduling Coordinators a Real-Time Market neutrality allocation calculated pursuant to Section 11.5-minute interval; and, 4.1,~~

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(iii) ~~distributing that sum to the initially determined amounts for~~

each EIM Entity Balancing Authority Area that had EIM Transfers in during the 5-minute interval based on its pro-rata share of the EIM Transfers during the 5-minute interval.

(D) ~~Allocation.~~ The CAISO will allocate the adjusted real-time market neutrality amount to EIM Entity Scheduling Coordinators.

(3) ~~EIM (4) EIM Area Neutrality Allocation.~~ The CAISO will allocate EIM Entity Scheduling Coordinators residual neutrality amounts pursuant to Section 11.5.4.1(d).

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(A) ~~Calculation.~~ The CAISO will calculate the EIM Area neutrality amount to be recovered on a 5-minute basis as the sum of the settlement amounts for Instructed Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, EIM Balancing Authority Area real-time market neutrality, real-time ancillary service congestion revenues, and virtual awards, if applicable, less the real-time congestion balancing account.

(B) ~~Allocation.~~ The CAISO will allocate the EIM Area Neutrality amount to Scheduling Coordinators based on EIM Area metered demand.

(4) ~~EIM Entity Balancing Authority Area Real-Time Congestion Balancing Account.~~

(A) ~~Real-Time Congestion Balancing Accounts.~~ The CAISO will calculate real-time congestion balancing accounts for neutrality charges for each Balancing Authority Area in the EIM Area as sum for each EIM Entity Balancing Authority Area of the product of the contribution of that EIM Entity Balancing Authority Area to the marginal congestion component of the Locational Marginal Price at each resource location and the imbalance energy, including convergence bids, at that resource location, minus any convergence bid adjustment.

(B) ~~Convergence Bid Adjustment.~~

(i) ~~Individual Constraint Calculation.~~ For each constraint in an EIM Entity Area, the CAISO will calculate a convergence bid adjustment as the product of the 15-minute market shadow price and the lesser of (1) the flow contribution of convergence bids and (2) the flow contributions of all day-ahead energy and EIM base schedules less the flow contributions of 15-minute energy schedules, but not less than zero.

(ii) ~~EIM Balancing Authority Area Calculation.~~ Each EIM Balancing Authority Area's convergence bid adjustment shall be the sum of the individual constraint calculation for all constraints within that EIM Balancing Authority Area.

~~(C) — **Allocation.** The CAISO will allocate —~~

- ~~(i) — the real-time congestion balancing account for neutrality for each EIM Entity Balancing Authority Area to EIM Entity Scheduling Coordinators;~~
- ~~(ii) — the real-time congestion balancing account for neutrality for the CAISO Balancing Authority Area to measured demand, excluding demand associated with existing contracts and transmission ownership right self-schedules; and~~
- ~~(iii) — the sum of the adjustment to Scheduling Coordinators who submitted convergence bids based on the pro-rata contribution of each convergence bid to the total calculated convergence bidding adjustment.~~

~~(5) — **EIM Neutrality Settlement.** The CAISO will charge each EIM Entity's allocated neutrality amounts to the EIM Entity Scheduling Coordinator.~~

~~(6) — **Virtual Schedule Congestion Balancing Account.** The CAISO will charge the virtual schedule congestion balancing account to each virtual schedule's pro-rata share of the positive out-of-market revenues of all virtual schedules.~~

~~(5) **Neutrality Adjustments.** The CAISO will adjust neutrality for EIM Market Participants in accordance with Section 11.14.~~

(f) **Real-Time Bid Cost Recovery.**

- (1) **In General.** The CAISO will provide Eligible EIM Participating Resources RTM Bid Cost Recovery Resources in the EIM with Real-Time Bid Cost Recovery to ensure that the resources receive sufficient Real-Time Market revenues to cover bid costs and commitment costs.
- (2) **Calculation of Real-Time Bid Cost Recovery.** The CAISO will calculate Real-Time Bid Cost Recovery payments in accordance with Section 11.8.4, except that: the CAISO will treat a non-zero EIM Base Schedule of an EIM Participating Resource as a Self-Schedule and the EIM Participating Resource will not be eligible for recovery of Start-Up Costs and Minimum Load Costs.

~~(A) — the EIM Participating Resources shall be eligible only for recovery of RTM Energy Bid Cost, RTM Start-Up Costs and RTM Minimum Load Costs; and~~

~~(B) — the CAISO will treat a non-zero EIM Base Schedule of an EIM Participating Resource as a self-schedule and the EIM Participating Resource will not be eligible for recovery of Start-Up Costs.~~

(3) **Allocation-**

~~(A) — of EIM Entity Hourly RTM Bid Cost Uplift. The Net RTM Bid Cost Uplift for the Trading Hour shall be the product of the uplift ratio in Section 11.8.6.3 and the sum over all of the 5-minute Settlement Intervals of the Trading Hour of any positive Net RTM Bid Cost Uplift plus the sum of Settlement Interval on the Trading Hour of any EIM Transfer adjustment.~~

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~~(B) — EIM Transfer Adjustment. The CAISO shall calculate the EIM Transfer adjustment by—~~

~~(i) — dividing the sum of net EIM Transfers out of an EIM Entity Balancing Authority Area by the sum of the absolute value of uninstructed imbalance energy due to load, the absolute value of uninstructed imbalance energy due to supply, the absolute value of unaccounted for energy, and the net EIM Transfer out of the Balancing Authority Area;~~

~~(ii) — summing the amounts for all EIM Entity Balancing Authority Area that had EIM Transfers out in the 5-minute interval; and~~

~~(iii) — distributing that sum to the initially (A) **Calculation of Charge.** The Net RTM Bid Cost Uplift will be determined amounts in accordance with 11.8.6.3 for each EIM Entity Balancing Authority Area, except that had EIM Transfers in during their will be determined on a 5-minute interval based basis.~~

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~~(B) **Allocation.** The Net RTM Bid Cost Uplift will be allocated in accordance with Section 11.8.6.6, except that it will be allocated on its pro-rata share of the EIM Transfers during the 5-minute interval basis.~~

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~~(4) — **EIM Entity Real-Time Bid Cost Uplift Charges (B) Settlement.** The CAISO will charge each EIM Entity's the allocated Net RTM Bid Cost Uplift for commitments within the EIM amounts to the EIM Entity Scheduling Coordinator; for costs within the EIM Entity Balancing Authority Area it represents.~~

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(g) **Flexible Ramping Constraint Allocation.**

(1) **Compensation.** The CAISO will calculate awards for Flexible Ramping Constraint capacity according to Section 11.25.1 and rescission for non-performance in accordance with 11.25.2, except that the Real-Time ASMP Ancillary Service Market Price for Spinning Reserves will be deemed to be zero in determining awards to EIM Participating Resources.

(2) **Allocation.** The CAISO will allocate Flexible Ramping Constraint costs to each EIM Entity Balancing Authority Area according to the ratio of the product of the flexible ramping capacity in that and the CAISO Balancing Authority Area and the marginal flexible ramp price in that Balancing

~~Authority Area to the sum of such products for all EIM Entity Balancing Authority Areas in accordance with Section 11.25.3.~~

- (3) **EIM Flexible Ramping Constraint Charges.** The CAISO will charge each EIM Entity's allocated ~~flexible ramping constraint~~ Flexible Ramping Constraint capacity costs to the EIM Entity Scheduling Coordinator.
- (h) **EIM Initial Fee.** The CAISO will charge Balancing Authority Areas that enter into an implementation agreement pursuant to Section 29.2(b) an ~~EIM~~ initial fee to cover a share of the capital and ~~O&M~~ operations and maintenance costs associated with setting up the ~~EIM~~ Real-Time Market to accommodate the participation of the Balancing Authority as an EIM Entity. The fee will be established by the implementation agreement entered into pursuant to Section 29.2(b)(1) as accepted by FERC.
- (i) **EIM Administrative Charge.**
- (1) **In General.** The CAISO will charge EIM Market Participants a fixed EIM Administrative Charge rate of \$0.19/MWh, applied as specified in ~~subsection (h)~~ Section 29.11(i)(2) and (3).
- (2) **Allocation** EIM Entity Calculation. The CAISO will ~~allocate~~ calculate MWh subject to the EIM Administrative Charge ~~rate for~~ each EIM Market Participant according to the sum of (A) Entity as—
- (i) the greater of the (a) the sum of the gross imbalance energy ~~FMM Instructed Imbalance Energy, gross RTD Imbalance Energy, and gross Uninstructed Imbalance Energy~~ of the EIM Market Participant's ~~supply and~~ Supply, or (b) five percent of the total gross Supply of all EIM Market Participants; plus
- (ii) the greater of (a) the gross Uninstructed Imbalance Energy of the EIM Market Participant's Demand, or (b) five percent of the total gross supply, Demand of all EIM Market Participants.
- (3) **Allocation.** The CAISO will calculate the total of the amount of the EIM Administrative Charge for each EIM Market Participant by multiplying the rate specified in Section 29.11(i)(1) by the MWh calculated pursuant to Section 29.11(i)(2) and (B) will allocate that charge—
- (i) to the greater sum of (a) the total gross imbalance energy ~~FMM Instructed Imbalance Energy, gross RTD Imbalance Energy, and gross Uninstructed Imbalance Energy~~ of the EIM Market Participant's ~~demand~~ Supply, and ~~five percent (b) the gross Uninstructed Imbalance Energy~~ of the EIM Market Participant's ~~gross demand, Demand, and~~
- (3)(ii) to the extent not all EIM Administrative Charges are allocated pursuant to Section 29.11(i)(3)(i), the remaining amounts to the

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Comment [A20]: We didn't understand that this would be the fee for all EIM entities going forward, but rather that this was the fee the ISO determined it would need to charge to PAC for its EIM implementation and operation. Has there been a good business case presented that this is the right fee for all future EIMs?

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Comment [A21]: It seems that by definition they would all be allocated. Under what conditions would they not all be allocated?

EIM Entity Scheduling Coordinator.

- (4) **Application of Revenues.** The CAISO will apply revenues received from the EIM Administrative Charge against the costs to be recovered through the Grid Management Charge as described in Appendix F, Schedule 1, Part A.
- (j) **Variable Energy Resource Forecast Charge.**
- (1) **In General.** The CAISO will charge EIM Entity Scheduling ~~Coordinator~~Coordinators and EIM Participating Resource Scheduling Coordinators a fee for the ~~variable energy resource~~Variable Energy Resource forecasting services in accordance with Appendix F, Schedule 4.
- (2) **Waiver.** The CAISO will waive the ~~variable energy~~Variable Energy Resource forecast charge if an EIM Entity has an independent forecast for its ~~variable energy resources~~Variable Energy Resources and provides its forecast to the CAISO.
- (k) **Transmission Service.** The CAISO will charge EIM Market Participants for ~~EIM~~ transmission service according to Section 29.26.
- (l) **Settlement ~~Schedule.~~The Process.** With regard to the CAISO's assessment of ~~charges to EIM Market Participants pursuant to Section 11 and 29.11, the~~ CAISO shall assess ~~EIM~~such charges, ~~address disputed invoices, and fees~~make any financial adjustments in accordance with the ~~settlements and billing~~Settlements process and schedule set forth in Section 11.

29.12 Creditworthiness.

- (a) **Requirements.** EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators shall comply with the ~~creditworthiness~~credit and other requirements of Section 12.
- (b) **Credit Default.** In the event of a ~~failure to satisfy the credit~~ default in the EIM ~~or other requirements in Section 12, the credit default settlement provisions~~consequences specified in Section 12 shall apply to EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators.

29.13 Dispute Resolution.

- (a) **Invoices.** Confirmation and validation of any dispute associated with the participation of EIM Market Participants in the Real Time Market is subject to Section 11.29.8, and shall be managed through the CAISO's customer inquiry, dispute, and information system and as provided in the Settlement and Billing Business Practice Manual for the Energy Imbalance Market.
- (b) **Other Disputes.** EIM Market Participants shall ~~agree~~be subject to dispute resolution pursuant to Section 13.

29.14 Force Majeure, Indemnity, Liabilities, and Penalties. The ~~force majeure provisions of Section 14 regarding Uncontrollable Forces, indemnity, liability, and penalty provisions of Section 14 penalties~~ shall apply to the ~~operation participation of and transactions~~ EIM Market Participants in the EIM Real-Time Market.

29.15 [Not Used]

29.16 [Not Used]

29.17 EIM Transmission System.

(a) **Registration.** Each EIM Entity ~~Scheduling Coordinator~~ shall—

- (1) register in the EIM Transmission Service Registry the static network topology information associated with transmission capacity that it owns, controls, or has a contractual entitlement to that may be used in the EIM Real-Time Market;
- (2) register in the EIM Transmission Service Registry the static network topology information associated with transmission capacity that each other EIM Transmission Service Provider owns, controls, or has a contractual entitlement to within the EIM Entity Balancing Authority Area that may be used in the EIM Real-Time Market;
- (3) update the ~~registered~~ information in the EIM Transmission Service Registry no less frequently than the timelines for updates to the Full Network Model as provided in the CAISO Tariff and Business Practice ~~Manuals~~ Manual for the Energy Imbalance Market; and
- (4) ensure that the information provided to the EIM Transmission Service Registry is accurate and complete.

(b) ~~Effectiveness.~~ The information provided in the EIM Transmission Service Registry shall only be used in the Real-Time Market in accordance with the procedures set forth in the Business Practice Manual for the Energy Imbalance Market.

Comment [A22]: This seems like a sort of a strange subheading for this item. Consider "Applicability"?

(c) **Availability.** Each EIM Entity shall ensure that all EIM Transmission Service Providers in its Balancing Authority Area make available ~~in real-time~~ for use in the EIM Real-Time Market transmission capacity that is registered in the EIM Transmission Service Registry and that is not otherwise encumbered, reserved, scheduled, or being used by its transmission customers or by others.

(ed) **Information on Availability.** Each EIM Entity Scheduling Coordinator shall inform the CAISO in the manner and by the deadlines specified in the Business Practice Manual for the Energy Imbalance Market regarding the availability of the registered transmission capacity for use in ~~real-time~~ the Real-Time Market.

(de) **EIM Transfer Limit.** A Balancing Authority that has entered an implementation agreement to become an EIM Entity shall establish and inform the CAISO of the maximum EIM Transfer limit at least ninety days prior to the date upon which it

~~will become an EIM Entity Implementation Date in accordance with the Business Practice Manual for the Energy Imbalance Market .~~

- (ef) **EIM Transfer Availability.** The EIM Transfer limit ~~available for use in the Real-Time Market~~ shall be determined by the EIM Entity Scheduling Coordinator and communicated to the CAISO prior to the start of the next ~~EIM operating interval~~Dispatch Interval in accordance with the procedures and timelines for submission and acceptance in the ~~applicable~~ Business Practice Manual for the Energy Imbalance Market.

29.18 [Not Used]

29.19 [Not Used]

~~29.20 Confidentiality Provision in Addition to Section 20. Each EIM Entity Scheduling Coordinator and EIM Participating Resource Scheduling Coordinator must execute a Non-Disclosure Agreement with the CAISO in order to access market data that the CAISO provides on the California Market Results Interface that are not publicly available.~~**29.20 Confidentiality.** The confidentiality provisions of Section 20 shall apply to participation of EIM Market Participants in the Real-Time Market.

29.21 [Not Used]

29.22 Miscellaneous Provisions in Addition to Section 22.

- (a) **Tax Liability.** To the extent that the CAISO would incur any tax liability as a result of the ~~Energy Imbalance participation of EIM Market Participants in the Real-Time~~ Market, as market operator or as central counterparty to EIM transactions, for example, the CAISO will pass those taxes on to the EIM Entity Scheduling Coordinator for the EIM Entity area where the transactions triggered the tax liability.
- (b) **Purchasing Selling Agent.** Neither the CAISO nor the EIM Entity is a ~~purchasing selling entity~~“Purchasing Selling Entity” for purposes E-Tagging or EIM Transfers, nor shall either be listed as a “Purchasing Selling Entity” for purposes of E-Tagging or EIM Transfers.
- (c) **Title for Energy.** Title ~~for energy to Energy~~ in the ~~Energy Imbalance~~Real-Time Market ~~passes directly from the entity that holds title when the energy~~Energy enters the CAISO Controlled Grid ~~or the transmission system of an EIM Transmission Service Provider, whichever is first following Dispatch,~~ to the entity that removes the ~~energy~~Energy from the CAISO Controlled Grid ~~or the transmission system of a EIM Transmission Service Provider, whichever last precedes delivery to Load.~~

29.23 [Not Used]

29.24 [Not Used]

29.25 [Not Used]

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29.26 Transmission Rates And Charges.

(a) Transmission Charges for CAISO Facilities.

(1) **Access Charge.** Transmission service charges for ~~EIM~~Real-Time Market transactions ~~with sinks on serving Load within the CAISO Balancing Authority Area that use~~ the CAISO Controlled Grid are governed by Section 26.

(2) **Wheeling Access Charge.** EIM ~~transfers~~Transfers from the CAISO Controlled Grid to ~~an EIM~~another EIM Entity Balancing Authority Area using the contractual or ownership rights of an EIM Entity shall not ~~be exports~~constitute Wheeling Out and shall not be subject to the Wheeling Access Charge under Section 26.

(b) **Non-CAISO Facilities.** The determination and charges for transmission service ~~charges for EIM~~Real-Time Market transactions on facilities that are part of the contractual or ownership rights made available to the EIM by an EIM ~~Transmission Service Provider through an EIM~~ Entity will be the responsibility of the EIM ~~entity~~Entity that made the facilities available, except that no EIM Transmission Service Provider may impose a separate charge for EIM Transfers that use its facilities, provided that charges for transmission service in excess of contractual limits shall not be considered a separate charge.

29.27 CAISO Markets And Processes. The provisions of Section 27 that are applicable to the Real-Time Market shall apply to EIM Market Participants and to the CAISO's operation of the EIM according to its terms.

29.28 Inter-SC Trades. EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators may not submit ~~inter~~Inter-SC ~~trades~~Trades.

29.29 [Not Used]

29.30 Bid and Self-Schedule Submission For CAISO Markets. The provisions of Section 30 that are applicable to the Real-Time Market shall apply to EIM Market Participants and to the CAISO's operation of the EIM according to its terms.

29.31 Day-Ahead. EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators may not submit ~~bids~~Bids in the CAISO's Day-Ahead Market on behalf of EIM Market Participants that they represent in their capacity as an EIM Entity Scheduling Coordinator or EIM Participating Resource Scheduling Coordinator.

29.32 Greenhouse Gas Regulation and EIM Bid Adders.

(a) ~~Greenhouse Gas~~EIM Bid Adders.

(1) ~~Bid Submission.~~**In General,** EIM Participating Resources ~~may submit a bid adder that is based on the estimated cost~~will have an opportunity to recover costs of compliance with California Air Resources Board greenhouse gas regulations, which may include the cost of allowances, uncertainty on the final resource specific emission factor, and other costs

Comment [A23]: This seems like it could be problematic if an EIM SC was also an SC for a CAISO participant. Is the EIM SC role and the CAISO SC role deemed separate even if they are provided by the same organization?

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of greenhouse gas regulation compliance.

(2) ~~Bid Submission. EIM Participating Resource Scheduling Coordinators may submit an EIM Bid Adder as a separate Bid component to recover costs of compliance with California Air Resources Board greenhouse gas regulations.~~

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(3) ~~Cap on Bid Adder. The sum of the greenhouse gas bid adder EIM Bid Adder and the energy Energy cost portion of the bid Bid cannot exceed \$1000/MWh.~~

(4) ~~Minimum Bid Adder. The greenhouse bid adder EIM Bid Adder shall not be less than \$0/MWh.~~

(4) ~~Market Power Mitigation. The greenhouse gas bid adder shall not be subject to local market power mitigation.~~

Comment [A24]: What is the implication of removing this from the tariff language?

(b) ~~Consideration of Greenhouse Gas Compliance EIM Bid Adders in Market Optimization Clearing. The CAISO shall modify its Security Constrained Economic Dispatch optimization in the Real-Time Unit Commitment and Real-Time Dispatch to take into account greenhouse gas bid adders EIM Bid Adders in selecting energy Energy produced by EIM Participating Resources outside California the CAISO Balancing Authority Area for import into California the CAISO Balancing Authority Area but not when selecting EIM Participating Resources to serve load Load outside of California the CAISO Balancing Authority Area.~~

(c) ~~Effect on Locational Marginal Price. Greenhouse gas compliance costs EIM Bid Adders shall be included in the shadow prices for the net imbalance energy export allocation as a fourth as a component in the Locational Marginal Prices for EIM Entity Balancing Authority Areas in addition to those specified in Appendix C.~~

Comment [A25]: Please explain this change. There won't be a shadow price but the bid adder itself will simply be added to the LMP price? Our understanding was that GHG effect was marginal in nature; that the highest bid adder clearing would be added to the related LMPs. Please explain/resolve.

(d) ~~Notice to EIM Participating Resource. The CAISO will notify the EIM Participating Resource Scheduling Coordinator through the dispatch instruction Dispatch Instruction whether the resource an EIM Resource is deemed to have been imported in to California the CAISO Balancing Authority Area as a result of the EIM optimization Market Clearing of the Real-Time Market.~~

(e) ~~Reporting Requirements. The CAISO will report to each EIM Participating Resource Scheduling Coordinator the portion of the 15-minute energy schedule FMM Energy Schedule and the portion of 5-minute energy dispatch RTD Energy Dispatch that is associated with energy imports to Energy deemed to have been imported to the CAISO for Balancing Authority Area from all EIM Participating Resources as part of the Real-Time Market results publication from each of its EIM Resources.~~

Comment [A26]: Is the quantity notification done not in the Dispatch Instruction? Why not just indicate in (d) that the notification will include the energy deemed to have been imported?

29.33 ~~Hour-Ahead Process. Hour-Ahead Processes for the EIM shall be governed by Section 33. [Not Used.]~~

29.34 EIM Operations

- (a) **In General.** ~~The CAISO shall operate the EIM according to Section 34, Except as supplemented by this provided in Section 29.34.~~ Section 34 will govern the operation of the Real-Time Market within the EIM Area .
- (b) **Applicability.** EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators will submit ~~schedules~~ EIM Base Schedules and other necessary ~~data~~ information to the CAISO for use in the EIM Real-Time Market pursuant to ~~this~~ Section 29.34 and not pursuant to Section 34.
- (c) **Submission Deadlines.** If an EIM Entity Scheduling Coordinator or EIM Participating Resource Scheduling Coordinator fails to submit ~~a schedule~~ an EIM Base Schedule according to the timelines established in this Section 29.34, the CAISO will not accept the ~~schedule~~ EIM Base Schedule or use it in the EIM Real-Time Market.
- (d) **Demand Forecast.**
- (1) **In General.**— In accordance with procedures set forth in the Business Practice Manual for the Energy Imbalance Market, the CAISO shall develop short-term and mid-term ~~forecasts~~ Demand Forecasts by Demand Forecast ~~Zone~~ zone within each EIM Entity Balancing Authority Area, separately from the CAISO Balancing Authority Area.
- (2) **Short Term Forecast.** The CAISO's short-term ~~forecast~~ Demand Forecast for an EIM Entity Balancing Authority Area shall produce a value every five minutes for the duration of the CAISO's ~~dispatch~~ Dispatch horizon, which has five-minute granularity and extends several ~~dispatch intervals out through a 4.5-hour horizon~~ Dispatch Intervals.
- (3) **Mid-Term Forecast.** The CAISO's mid-term ~~forecast~~ Demand Forecast for an EIM Entity Balancing Authority Area shall produce hourly values for the next hour through the next 7 days.
- (4) **EIM Entity ~~SC~~ Scheduling Coordinator Demand Forecast.**
- (A) **In General.** An EIM Entity Scheduling Coordinator may opt to provide a non-binding ~~demand forecast~~ Demand Forecast, net of behind-the-meter ~~generation~~ Generation that is not registered as a ~~resource~~ EIM Resource, as part of the hourly ~~base schedules~~ EIM Base Schedules.
- (B) **Timing and Scope.** The EIM Entity Scheduling Coordinator must provide any such ~~forecasts~~ Demand Forecasts by 10:00 a.m. for the next 7 days.
- (C) **Updates.** The EIM Entity Scheduling Coordinator must update any such ~~forecast~~ Demand Forecast for each ~~operating hour~~ Operating Hour and the following 6 to 10 hours and submit the update to the CAISO no later than 75 minutes prior to the start of that ~~operating hour~~ Operating Hour, as part of its hourly ~~base schedule~~ EIM Base Schedule submission.

Comment [A27]: Is it true that the ISO will de facto assume no flows rather than assuming its own flows? If the ISO assumes some flows then perhaps this should read: "...or use it in the Real-Time Market settlement."

Comment [A28]: These seem a little contradictory. (A) says they "may opt to". (B) says they "must provide...by". Would (B) be better said as: "Any such Demand Forecast must be provided by 10 am ...in order to be considered by the CAISO" or something similar?"

- (D) **Effect on Bid Requirement.** If the EIM Entity Demand Forecast is less than the CAISO Demand Forecast, then the EIM Entity's EIM Resource Plan must include sufficient bidsBids to cover the difference in demand forecastsDemand Forecasts.
- (5) **Posting.** Between 6:00 p.m. of the seventh day prior to the start of the operating dayOperating Day and 6:00 p.m. of the day prior to the operating dayOperating Day, the CAISO shall post and update hourly demand forecastsDemand Forecasts by Demand Forecast Zonezone.
- (e) **EIM Resource Plan.**
- (1) **In General.** By 10:00 a.m. of the day preceding the Operating Day, the EIM Entity Scheduling Coordinators on behalf of non-participating resources and EIM Participating Resource Scheduling Coordinators on behalf of EIM Participating Resources, must submit all applicable components of the EIM Resource Plan as set forth in Section 29.34(de)(4).
- (2) **Scope.** The EIM Resource Plan components must cover a seven day horizon (with hourly detail for each resource) beginning with the operating dayOperating Day.
- (3) **Balance.**
- (A) **Requirement.** The base schedulesEIM Base Schedules included in the EIM Resource Plan must balance the demand forecastDemand Forecast for each EIM Entity Balancing Authority Area.
- (B) **Insufficient Supply.** An EIM Resource Plan shall be deemed to have insufficient energy supplySupply if the sum of base schedulesEIM Base Schedules from non-participating resources and the sum of the highest quantity offers in the energy bidEnergy Bid range from EIM Participating Resources, including interchangeInterchange with other Balancing Authority Areas, is less than the total demand forecastDemand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.
- (C) **Excess Supply.** An EIM Resource Plan shall be deemed to have excessive energy supplySupply if the sum of base schedulesEIM Base Schedules from non-participating resources and the sum of the lowest quantity offersBids in the energy bidEnergy Bid range from EIM Participating Resources is greater than the total demand forecastDemand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.
- (4) **Contents.** The Resource Plan shall comprise—

Comment [A29]: This seems like it would apply to the EIM Entity Resource Plans but not the Participating Resource Resource Plans, yet the way it's written would have it apply to all Resource Plans, yes?

Comment [A30]: Or maybe it's a matter of timing. If the Participating Resources submit their plans at the same time the EIM Entity is to submit its plan, how does the EIM Entity assure that the plan is balanced?

Comment [A31]: Again, this is confusing because it seems to mostly refer to the EIM Entity plan but seems by drafting to apply to the EIM Participating Resource Plans too. Might you consider breaking out the EIM Participating Resource Plans from the EIM Entity Plans in this tariff section?

- (A) EIM Base Schedules;
 - (B) ~~energy~~Energy Bids (applicable to EIM Participating Resources only);
 - (C) ~~regulation Reserve~~Reserves capacity of providing meeting the WECC requirements for regulating reserves, in MW-Up (applicable to ~~resources~~ only);
 - (D) ~~regulation Reserve~~Reserves capacity of providing meeting the WECC requirements for regulating reserves, in MW-Down (applicable to resources only);
 - (E) ~~operating Reserve MW~~-Spinning Reserves in MW;
 - (F) ~~operating Reserve MW~~-Non-Spinning Reserves in MW; and
 - (G) if the EIM Entity Scheduling Coordinator is not relying on the CAISO's ~~demand forecast~~Demand Forecast, a ~~demand forecast~~Demand Forecast.
- (5) **Adjustment.** The EIM Entity Scheduling Coordinator may adjust the components of the EIM Resource Plan as necessary following CAISO ~~bid~~Bid validation reviews up to 75 minutes before the Operating Hour.
- (f) **-Real-Time EIM Base Schedules.**
- (1) **In General.**
 - (A) **Initial Submission.** EIM Entity Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and non-participating resources in the EIM Entity Balancing Authority Area ~~must~~that wish to submit real-time hourly EIM Base Schedules ~~meeting~~must submit such schedules consistent with the requirements of the Business Practice Manual for the Energy Imbalance Market and at least 75 minutes before the start of the ~~operating hour~~Operating Hour.
 - (B) **Revisions.** EIM Entity Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and non-participating resources in the EIM Entity Balancing Authority Area may revise ~~real-time~~Real-Time hourly EIM Base Schedules meeting the requirements of the Business Practice Manual for the Energy Imbalance Market at or before 55 minutes before the start of the Operating Hour and EIM Entity Scheduling Coordinators may do so again at or before ~~45~~40 minutes before the start of the ~~operating hour~~Operating Hour.
 - (2) **EIM Base Schedule for EIM Participating Resources.** The EIM Base Schedule for each EIM Participating Resource ~~must be within the~~ economic bidEconomic Bid range of the submitted ~~energy bid~~Energy Bids

Comment [A32]: EIM Participating Resources? Non Participating Resources? Or both?

Comment [A33]: Can Participating Resource SCs do the same? If not, why not?

Comment [A34]: This is unclear. Why the 55 minute requirement if there's also a 40 minute option?

Comment [A35]: Should this be "must be at or within the..." For example, it seems like for a bid of 100MW to 500MW, the base schedule could reasonably be 100MW. Would that be considered "within"?

for each ~~operating hour of resources in the~~ Operating Hour for EIM Entity Balancing Authority Area participating in the EIM Resources, which the CAISO will make available to the EIM Entity without price information.

- (3) **EIM Base Schedule for Imports and Exports.** EIM Base Schedules must disaggregate ~~day-ahead~~ Day-Ahead import/export schedules between the EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area, disaggregate the forward export schedules to other Balancing Authority Areas, and identify the relevant ~~intertie scheduling points~~ EIM Interties for imports and exports to an EIM Entity Balancing Authority Area from Balancing Authority Areas other than the CAISO Balancing Authority Area.
 - (4) **EIM Base Schedule Aggregation.** An EIM Entity Scheduling Coordinator may allow non-participating resources, ~~loads~~ Loads, and other customers to submit EIM Base Schedule information through an interface hosted by the CAISO.
- (g) **Initial EIM Base Load Schedule.** The CAISO will derive an initial EIM Base Load Schedule for each EIM Entity from the CAISO ~~demand forecast~~ Demand Forecast for the EIM Entity Balancing Authority Area, estimated ~~transmission losses~~ Transmission Losses, and an assumed ~~load~~ Load distribution, pursuant to the methodology set forth in the Business Practice Manual for the Energy Imbalance Market.
- (h) **Energy Bids.** EIM Participating Resource Scheduling Coordinators may submit Energy Bids in accordance with the timelines, processes, and requirements applicable to other resources submitting Energy Bids under Section 34.
- (i) **Intertie Interchange Schedules with Other Balancing Authorities.**
- (1) **In General.** EIM Entity Scheduling Coordinators must submit ~~intertie schedules~~ EIM Entity Interchange Schedules with other Balancing Authority Areas at the relevant ~~intertie scheduling points~~ EIM Interties and must update these ~~intertie schedules~~ EIM Entity Interchange Schedules with any adjustments, when applicable, as part of the hourly ~~resource plan~~ EIM Resource Plan revision.
 - (2) **Bidding EIM Intertie Schedules Transactions.** An EIM Entity Participating Resource Scheduling Coordinator may bid a transaction at an intertie schedule between the EIM Entity and a neighboring Balancing Authority Area EIM External Intertie into the 15-minute market FMM if both Balancing Authority Areas support ~~economic bidding of 15-minute~~ intertie scheduling at the EIM External Intertie under FERC Order No. 764.
- (j) **CAISO Validation.** The CAISO market systems will validate the initial EIM Resource Plan by 1:00 p.m. on the day before the Operating Day, and within 15 minutes of the submission of EIM Base Schedules or adjustments to EIM Base Schedules, the CAISO will validate the EIM Resource Plan and notify the EIM Entity Scheduling Coordinator--

Comment [A36]: Can we reference the timing and bidding requirements to other sections of this and/or the FMM tariff?

- (1) if the EIM Resource Plan is not balanced;
 - (2) if the EIM Resource Plan provides insufficient ~~flexible ramping~~ Flexible Ramping Constraint capacity to meet requirements determined ~~under~~ pursuant to Section 29.34~~(em)~~; and
 - (3) if the CAISO anticipates ~~congestion~~ Congestion based on the submitted EIM Resource Plans.
- (k) **Supply Insufficiency.** If ~~supply~~ Supply in the EIM Base Schedules is insufficient to meet the ~~load forecast, in which case~~ Demand Forecast, the CAISO will reduce the ~~load~~ Load in the ~~base schedule~~ EIM Base Schedule, which will result in the shortfall being settled through EIM.
- ~~(l)~~ **EIM Optimization.** ~~The CAISO will perform the EIM optimization using the Real-Time Unit Commitment and Real-Time Dispatch consistent with the procedures and timelines in Section 34.~~ Market.
- (m) **Transmission Constraint Relaxation.** If an EIM Entity Scheduling Coordinator's approved ~~resource plan~~ EIM Resource Plan does not have sufficient ~~bids~~ Bids to resolve ~~congestion~~ Congestion, the CAISO will relax the relevant ~~transmission constraints~~ Transmission Constraints in the ~~market clearing solution~~ Market Clearing and the EIM Entity will become responsible for managing its congested ~~constraints~~ Transmission Constraints through other means, and the CAISO will determine prices for ~~congestion~~ Congestion consistent with ~~transmission constraint~~ Transmission Constraint relaxation parameters established in the Business Practice ~~Manuals~~ Manual for the Energy Imbalance Market until the ~~constraint~~ Transmission Constraint is no longer binding in the EIM Real-Time Market.
- ~~(n)~~ **EIM Output Results.** ~~The CAISO will provide 15-minute energy schedules and 5-minute dispatch instructions to the EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators in the same manner as it provides them to other Scheduling Coordinators under Section 34.~~
- ~~(o)~~ **Flexible Ramping Constraint Requirement.**
- (1) **Responsibility.** Each EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area will be responsible for meeting its own portion of the combined ~~flexible ramping~~ Flexible Ramping Constraint capacity requirements for the next hour ~~as determined by Section 29.34(m)~~.
 - (2) **Nature.** The ~~flexible ramp~~ Flexible Ramping Constraint capacity requirement is a minimum requirement for each Balancing Authority Area in the EIM Area and each combination thereof based upon the ~~transfer capability~~ EIM Transfer limit between Balancing Authority Areas.
 - (3) **Determination.** Under the provisions of Section 29.34(m) and the procedures set forth in the Business Practice Manual for the Energy Imbalance Market, the CAISO will determine the ~~flexible ramping~~ Flexible

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Ramping Constraint capacity requirement using the CAISO ~~demand forecast~~Demand Forecast and CAISO ~~variable energy resource~~Variable Energy Resource forecast for each Balancing Authority Area in the EIM Area and each combination thereof ~~as upward ramping needs based on the demand forecast change across consecutive intervals, demand forecast error, and energy production variability.~~

~~(4)~~ **15-Minute Requirement.** ~~For the purpose of procurement on a 15-minute basis, the 5-minute requirements may be aggregated into a 15-minute requirement by summing the three 5-minute interval requirements into a 15-minute requirement for each 15-minute RTUC interval.~~

~~(5)~~**(4) Sufficiency Determination.**

(A) **Review.** The CAISO will review the EIM Resource Plan ~~as pursuant to the process~~ set forth in the Business Practice Manual for the Energy Imbalance Market and verify that it has sufficient ~~bids~~Bids for ~~ramping~~Ramping capability to meet the EIM Entity Balancing Authority Area ~~flexible ramping~~Flexible Ramping Constraint capacity requirement, ~~as adjusted by (B) and (C).~~

~~(B)~~**(B) Pro Rata Reduction and Diversity Limit.** ~~Each EIM Entity Balancing Authority Area Flexible Ramping Constraint capacity requirement shall be reduced by its pro rata share of the diversity benefit in the EIM Area as may be limited by the available net import EIM Transfer capability into that EIM Entity Balancing Authority Area.~~

~~(C)~~**(C) Sufficiency of an EIM Entity Balancing Authority Area with a Net Outgoing EIM Transfer.** If an EIM Entity Balancing Authority Area has a net outgoing EIM Transfer (net ~~imbalance energy~~ export with reference to the ~~base net schedule interchange~~EIM Base Schedule) before the ~~operating hour~~Operating Hour, then it will have partially fulfilled its ~~flexible ramp~~Flexible Ramping Constraint capacity requirement for that hour because it can retract that EIM ~~transfer~~Transfer during the hour as needed and the CAISO will apply a ~~flexible ramping~~Flexible Ramping Constraint capacity requirement credit in determining the flexible ramp ~~sufficiency test~~of the Flexible Ramping Constraint capacity for that EIM Entity Balancing Authority Area equal to the net outgoing EIM ~~transfer~~Transfer before the ~~operating hour~~Operating Hour.

(C) **Sufficiency of an EIM Entity Balancing Authority Area with a Net Ingoing EIM Transfer.** If an EIM Entity Balancing Authority Area ~~that~~ has a net incoming EIM ~~transfer~~Transfer (net ~~imbalance energy~~ import with reference to the ~~base net schedule interchange~~EIM Base Schedule) before the ~~operating hour~~Operating Hour; then the ~~flexible ramping requirement~~Flexible Ramping Constraint capacity for that EIM Entity Balancing Authority Area ~~in the flexible ramping sufficiency test~~ will be

Comment [A37]: If an EIM Entity's pro rata share of the benefit cannot be fully used given the available net import EIM Transfer capability, can the ISO allocate the unused share to the other EIM Entities and the CAISO BAA?

Comment [A38]: Firm exports too or only non-firm?

considered sufficient if it meets its own ~~flexible ramping~~Flexible Ramping Constraint capacity requirement, irrespective of the incoming EIM Transfer, ~~which will be the result of optimal dispatch that results from RTD Dispatch~~ in the EIM Area.

~~(65)~~ **Effect of Insufficiency.** ~~If the CAISO determines that an EIM Entity Balancing Authority Area fails the flexible ramping sufficiency test~~has insufficient Flexible Ramping Constraint capacity—

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- (1) ~~the CAISO will not be included in any~~include the EIM Balancing Authority Area in any Flexible Ramping Constraints for any combination ~~constraints of Balancing Authority Areas;~~
- (2) the CAISO will formulate only individual constraints for the EIM Entity Balancing Authority Area individual ~~flexible ramping~~Flexible Ramping Constraint capacity requirements; and
- (3) the CAISO will hold the EIM Transfer limit ~~transfer~~ into the EIM Entity Balancing Authority Area at the value for the last 15-minute interval.

~~(p)~~ **Reserve Sharing.**

~~(6)~~ **Combinations of Constraints.** The CAISO shall determine the Flexible Ramping Constraint capacity requirement for all possible combinations of sufficient Balancing Authority Areas in the EIM Area, including requirements for individual Balancing Authority Areas in each combination, by reducing the total Flexible Ramping Constraint capacity requirement for each group of Balancing Authority Areas by the total amount of EIM Internal Intertie import capability to that group from each Balancing Authority Area outside the group.

Comment [A39]: Confusing. Please explain.

~~(n)~~ **Contingency Reserves.**

(1) **Schedules.**

- (A) **EIM Entity Responsibility.** Each EIM Entity is responsible for its ~~DCS compliance~~contingency reserves, or share of such ~~compliance~~contingency reserves under the terms of a reserve sharing group agreement, and it and the reserve sharing group are responsible for deploying ~~operating~~contingency reserves ~~and regulation, including regulating reserves,~~ in conformance with NERC and WECC requirements.
- (B) **EIM Entity Scheduling Coordinator Responsibility.** The EIM Entity Scheduling Coordinator shall—
 - (i) include any ~~energy schedules for deployment of Energy deployed from~~ reserves in the hourly ~~base schedules~~EIM Base Schedules, if time permits, ~~or in manual dispatch instructions,~~ in which case they will be settled in ~~EIM~~the

Real-Time Market as bilateral (self-scheduled) transactions, with changes in resource output balanced with other changes in resource output or in tagged interchange;

Comment [A40]: Suggest striking this word and removing the parentheses around “self-scheduled” as there isn’t really tariff language around settling bilaterals. Or would it be appropriate to say that it will be settled as if it was submitted as part of the base schedules?

- (ii) otherwise include the Energy deployed from reserves as EIM Manual Dispatches, if time does not permit;
- (iii) immediately inform the CAISO of events requiring Dispatch of contingency operating reserve contingencies and resource base schedule EIM Base Schedule adjustments in response to contingencies; and
- (iiiiv) if a resource’s actual response differs from the resource base schedule EIM Base Schedule adjustment, supply provide a resource base schedule EIM Base Schedule update showing the actual resources that have deployed dispatched during the event by no later than 1:00 a.m. seven days after the operating day Operating Day in which the event occurred; and
- (v) inform the CAISO of the amount of resource capacity that is reserved for contingency reserve responsibility by either submitting an Energy Bid for such capacity or reducing the maximum operating limit of the resource.

(C) **CAISO Actions.**

- (i) **Prior to Update.** Until the CAISO receives resource operating limit updates ~~are received~~, the CAISO will continue to send ~~dispatch instructions~~ Dispatch Instructions based upon pre-event operating limits.
- (ii) **After Update.** After ~~base schedule~~ EIM Base Schedule updates are received and EIM ~~dispatches~~ Dispatches reflect the updated ~~self-schedules~~ Self-Schedules and operating limits, the CAISO shall account for the ~~dispatches~~ Dispatches in the ~~Net S~~ scheduled ~~l~~ interchange values that it provides to EIM Entity Scheduling Coordinators.

(2) **Updates to Data for Reserve Sharing Event.**

- (A) **Responsibilities.** Immediately following a reserve sharing event ~~impacting~~ the EIM Entity Balancing Authority Area—
 - (i) the EIM Entity must submit ~~assisting information regarding the assistance provided, including impacts to~~ Balancing Authority Area ~~lead to contingent Balancing Authority Area lead~~ Load schedules for each participant involved in the reserve sharing event; and

(ii) the EIM Entity Scheduling Coordinator must submit to the CAISO ~~manual dispatch~~EIM Manual Dispatch instructions for resources in the EIM Entity Balancing Authority Area deployed in response to the reserve sharing event, pursuant to the reserve sharing group's criteria.

(B) **Offsets.** Until 1:00 a.m. seven days following the reserve sharing event, the EIM Entity may offset the ~~loadLoad~~ schedules created by the reserve sharing event by entering resource to ~~loadLoad~~ schedules, reflecting generation resources actually utilized to assist in the event.

(q) **Variable Energy Resource Production Forecast.** The CAISO shall treat ~~variable energy resources~~Variable Energy Resources in accordance with Section 34.

29.35 Market Validation And Price Correction. Market validation and price correction for the EIM shall be governed by Section 35, except that ~~references to the CAISO may correct Real-Time Market shall be deemed references to prices within 10 Business Days in the EIM Area for a period not to exceed 90 days after the EIM Entity Implementation Date.~~

29.36 [Not Used]

29.37 Rules Of Conduct. EIM Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators shall be subject to the provisions of Section 37 except for Section 37.2.

29.38 Market Monitoring. The CAISO Department of Market Monitoring shall provide market monitoring services for the ~~EIM~~participation of EIM Market Participants in the Real-Time Market, including—

- (a) monitoring markets administered by the CAISO for actual or potential ineffective market rules, market abuses, market power ~~or~~ violations of FERC ~~market or CAISO Market~~ rules prohibiting provision of false information, or market manipulation;
- (b) coordinating with CAISO business units that review and monitor the performance and quality of the CAISO ~~markets~~Markets;
- (c) providing recommendations about potential market design flaws or ineffective market rules to the CAISO and FERC; and
- (d) referring a matter to FERC if the Department of Market Monitoring determines there is sufficient credible ~~information~~evidence that a violation of FERC or CAISO ~~market~~Market rules has occurred.

29.39 EIM Market Power Mitigation.

(a) **EIM Market Power Mitigation Procedure.** The CAISO shall apply the Real-~~time~~Time Local Market Power Mitigation procedure in Section 39.7 to the EIM, except ~~that—as provided in Section 29.39.~~

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- (1) ~~the CAISO shall apply the procedure separately for each EIM Entity Balancing Authority Area by performing tests for constraint competitiveness and bid mitigation only on resources within the same Balancing Authority Area in which a constraint is located;~~
- (2) ~~the CAISO shall only subject a resource to bid mitigation for market power within the same Balancing Authority Area in which it is located;~~
- (3) ~~the three pivotal supplier test used to determine the competitiveness of constraints shall not exclude any suppliers participating in the EIM; and~~
- (4) ~~the CAISO may establish different reference buses for each Balancing Authority Area, which need not be within the Balancing Authority Area, for determining shift factors used in market power mitigation procedures, based on the topography of each Balancing Authority Area and consideration of the bus at which the congestion component of Locational Marginal Prices is least influenced by market power.~~

(b) **Dynamic Competitive Path Assessment.** The CAISO shall conduct the dynamic 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 dynamic competitive path assessment;
- (2) ~~the Dynamic Competitive Path Assessment~~dynamic competitive path assessment shall not exclude ~~suppliers participating in the EIM EIM Participating Resources~~ Transmission Constraints on the basis that they may be net buyers of ~~energy~~Energy in the ~~EIM~~Real-Time Market; and
- (3) ~~the mitigation reference bus for EIM Participating Resources is not required to be the same as the CAISO's mitigation reference bus~~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.

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(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 dynamic competitive path assessment and the ~~congestion~~Congestion pricing results of the pre-market run to determine which resources may have local market power due to ~~congestion~~Congestion on an ~~uncompetitive constraint~~non-competitive Transmission Constraint, consistent with Section ~~34.2.43 and 39.7~~, except that—

- (1) the CAISO will not mitigate resource ~~bids~~Bids for scheduling limit constraints with Balancing Authority Areas that do not participate in the EIM;
 - (2) the Locational Marginal Price decomposition shall only be triggered if the resource is effective at relieving an uncompetitive constraint within the same Balancing Authority Area in which the resource is located except as described in ~~paragraph (Section 29.39(c)(4))~~;
 - (3) EIM-~~Participating~~ Resources shall be mitigated to relieve congestion on uncompetitive constraints within the same Balancing Authority Area in which ~~they~~the EIM Resources are located except as described in ~~paragraph (Section 29.39(c)(4))~~; and
 - (4) ~~the~~ EIM Transfer constraints ~~may~~into an EIM Entity Balancing Authority Area on an EIM Internal Intertie shall be included in the ~~market power mitigation~~Market Power Mitigation procedures if ~~the~~ CAISO determines that EIM Entity Balancing Authority Area market power exists, ~~and if based on a structural competitiveness assessment of an individual or group of EIM Balancing Authority Areas in the EIM Area, provided such action is authorized~~authority has been granted by FERC~~the CAISO Governing Board based on the assessment of structural competitiveness.~~
- (d) **Default Energy Bids.** The CAISO ~~will~~shall use the methods and standards ~~for setting default energy bids for Locational Marginal Price in the EIM, consistent with set forth in~~ Section 39.7 to determine Default Energy Bids for EIM Participating Resources.

29.40 [Not Used]

29.41 [Not Used]

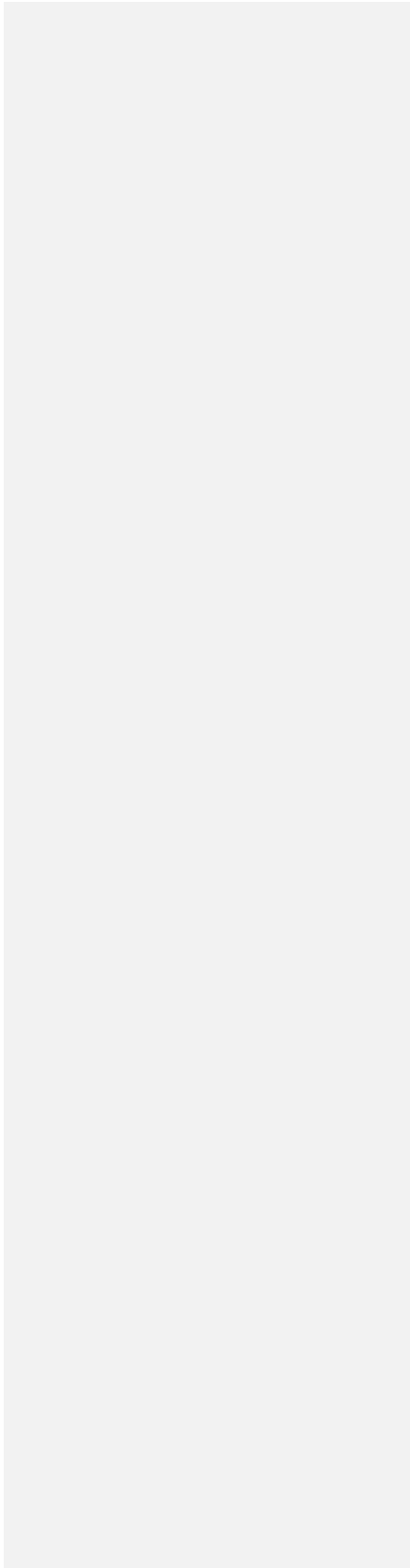
29.42 [Not Used]

29.43 [Not Used]

29.44 [Not Used]

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Appendix A



3. New Definitions EIM Defined Terms

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- Energy Imbalance Market (EIM)

The CAISO's voluntary real time market to manage transmission congestion and optimize procurement of imbalance energy (positive or negative) to balance supply and demand deviations for the EIM Area through economic bids submitted by EIM Participating Resource Scheduling Coordinators in the fifteen-minute market and five-minute markets, rules and procedures in Section 29 governing the CAISO's operation of the Real-Time Market in Balancing Authority Areas outside of the CAISO Balancing Authority Area and the participation of EIM Market Participants in the Real-Time Market.

Comment [A41]: Is the EIM just rules? It seems like it is an Energy Imbalance Market. Would it be better to say the Market for energy imbalances as provided for by the rules and procedures in Section 20...?"

- EIM Area

The combined CAISO and Balancing Authority Area and all EIM Entity Balancing Authority Areas.

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- EIM Area Measured Demand

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The metered CAISO Demand and metered EIM Demand plus Real-Time Interchange Export Schedules, excluding that portion of Demand of Non-Generator Resources dispatched as Regulation through Regulation Energy Management and EIM Transfers out of an EIM Entity Balancing Authority Area.

- EIM Base Schedule

A forward Energy Schedule submitted by an EIM Entity Scheduling Coordinator that provides hourly-level forecasts Demand Forecasts for load EIM Demand, hourly-level schedules for resources, and hourly-level schedules interchanges scheduled Interchanges that do not take into account Dispatches from the Real-Time Market and other information that, all of which is used by the CAISO as the baseline to measure deviations for purposes of EIM Settlement of transactions of EIM Market Participants in the Real-Time Market.

- EIM Base Load Schedule

A forward Energy Schedule prepared by the CAISO that provides hourly-level Demand Forecasts for EIM Demand that is used by the CAISO as the baseline to measure deviations for purposes of Settlement of transactions of EIM Market Participants in the Real-Time Market.

-EIM Bid Adder

A Bid component that provides EIM Participating Resources an opportunity to recover costs of compliance with California Air Resources Board greenhouse gas regulations.

-EIM Demand

Energy delivered to Load internal to an EIM Balancing Authority Area.

- EIM Entity

A Balancing Authority that represents one or more EIM Transmission Service Providers and that enters into the EIM Entity Agreement with the CAISO to enable the EIM to occur operation of the Real-Time Market in its Balancing Authority Area.

- EIM Entity Agreement

An agreement between an EIM Entity and the CAISO, a pro forma version of which is set forth in Appendix B.

- EIM Entity Scheduling Coordinator

The EIM Entity, or a third party designated by the EIM Entity, that is certified by the CAISO and that enters into ~~the pro forma~~ EIM Entity Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and a Market Participant and is responsible for meeting the requirements specified in Section 29 on behalf of the EIM Entity.

- EIM Entity Scheduling Coordinator Agreement

An agreement between an EIM Entity Scheduling Coordinator and the CAISO, a pro forma version of which is set forth in Appendix B.

- EIM Intertie

~~An EIM External Intertie or EIM Internal Intertie.~~

Comment [A42]: The definition seems circular.

- EIM Market Participant

An EIM Entity, EIM Entity Scheduling Coordinator, EIM Participating Resource, or EIM Participating Resource Scheduling Coordinator.

- EIM Participating Resource

A resource that (1) can deliver ~~energy, curtailable demand, demand response services~~ Energy, Curtailable Demand, Demand Response Services, or similar services; (2) is a Generating Unit, a Load of a Participating Load, or a Demand Response Resource or other CAISO qualified resource; and (3) is located within an EIM Entity Balancing Authority Area; (3) is eligible, and that is listed in and subject to be, and an EIM Participating Resource Agreement.

-EIM Participating Resource

An owner of, operator of, or seller of Energy from an EIM Resource that elects to participate in the EIM as a Real-Time Market Participant, and that enters into the pro forma EIM Participating Resource Agreement under which it is responsible for meeting the requirements specified in Section 29.

- EIM Participating Resource Agreement

An agreement between an EIM Participating Resource and the CAISO, a pro forma version of which is set forth in Appendix B.

- EIM Participating Resource Scheduling Coordinator

The ~~participating resource~~ EIM Participating Resource, or a third party designated by the ~~resource~~ EIM Participating Resource, that is certified by the CAISO and enters into ~~the pro forma~~ EIM Participating Resource Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and Market Participant and is responsible for meeting the requirements specified in ~~Tariff~~ Section 29 on behalf of the resource.

- EIM Participating Resource Scheduling Coordinator Agreement

An agreement between the EIM Participating Resource Scheduling Coordinator and the CAISO, a pro forma version of which is set forth in Appendix B.

- EIM Resource Plan

The combination of ~~load base schedules, generation base schedules, interchange base schedules,~~ EIM Base Schedules for Demand, Generation, and Interchange, the ancillary

services plans of the EIM Entity, and the ~~bid~~Bid ranges of EIM Participating Resources—, as specified in more detail in Section 29.34(e)(4).

- EIM Transfer

The transfer of ~~real-time energy~~Energy in Real-Time between an EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area, or between EIM Entity Balancing Authority Areas, using transmission capacity made available into the Real-Time Market through the EIM. The EIM Transfer is not a Real-Time Interchange Export Schedule or a Real-Time Interchange Import Schedule.

- EIM Transmission Service Provider

An EIM Entity or third party that owns transmission or has transmission service rights ~~in the EIM Entity Balancing Authority Area~~ and that ~~chooses to make~~makes transmission service available for ~~EIM~~ use in the Real-Time Market through an EIM Entity.

- EIM Transmission Service Registry

A data base maintained by the CAISO and containing information about transmission capacity available for use in the Real-Time Market through the EIM.

- EIM External Intertie

A point of interconnection between an EIM Entity Balancing Authority Area and an interconnected Balancing Authority Area other than a Balancing Authority Area in the EIM Area.

- EIM Entity Implementation Date

The first Trading Day for an EIM Entity in the Real-Time Market.

- EIM Internal Intertie

A point of interconnection between an EIM Entity Balancing Authority Area and another Balancing Authority Area in the EIM Area.

- EIM Manual Dispatch

A Dispatch by an EIM Entity to an EIM Participating Resource or a non-participating resource in its Balancing Authority Area, outside of Market Clearing of the Real-Time Market.

- EIM Interchange

The net amount of scheduled transfers into and out of a Balancing Authority Area in the EIM Area in a given interval.

Amended Definitions

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Comment [A43]: This a little ambiguous because the other BAA will not, by definition, be in the EIM Area.

4. Changes to Existing ISO Tariff Provisions

11.5.4 Imbalance Energy Pricing; Non-Zero Offset Amount Allocation

11.5.4.1 Real-Time Balancing Authority Area Neutrality Amount

- (a) Financial Value of EIM Transfers. The CAISO will calculate the Real-Time Market financial value of EIM Transfers as the product of the MWh, either positive or negative, and the Locational Marginal Price of the pricing node at the corresponding EIM Internal Intertie.
- (b) Initial Calculation. The CAISO will calculate the EIM Entity Balancing Authority Area Real-Time Market neutrality amount to be recovered on a 5-minute basis for each Balancing Authority Area in the EIM Area as the sum of the financial value of EIM Transfers and the Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, and for the CAISO, Real-Time Virtual Bid Settlement, less the Balancing Authority Area Real-Time Congestion Offset determined under Section 11.5.4.1.1, and for the CAISO, plus the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.
- (c) Adjustment. The CAISO will adjust the initial calculation of the EIM Entity Balancing Authority Area Real-Time Market neutrality amount by—
 - (1) dividing the sum of net EIM Transfers out of an EIM Entity Balancing Authority Area by the sum of the absolute value of Uninstructed Imbalance Energy due to Demand, the absolute value of Uninstructed Imbalance Energy due to Supply, the absolute value of Unaccounted For Energy, and the net EIM Transfer out of the Balancing Authority Area;
 - (2) summing the amounts for all EIM Entity Balancing Authority Areas that had EIM Transfers out in the Dispatch Interval; and
 - (3) distributing that sum to the initially determined amounts for each EIM Entity Balancing Authority Area that had EIM Transfers in during the Dispatch Interval based on its pro rata share of the EIM Transfers during the Dispatch Interval.
- (d) Residual Neutrality Amounts. Any residual neutrality amount shall be allocated to EIM Market Participants based upon EIM Area Measured Demand.

11.5.4.1.1 ~~[Not Used]~~ Real-Time Congestion Offset.

- (a) Real-Time Congestion Offset. For each Settlement Period of the RTM, the CAISO shall calculate the Real-Time Congestion Offset as—
 - (1) the sum for each EIM Entity Balancing Authority Area of the product of the

contribution of that EIM Entity Balancing Authority Area's Transmission Constraints to the marginal congestion component of the Locational Marginal Price at each resource location in the EIM Area and the imbalance energy, including Virtual Bids, at that resource location;

(ii) provided EIM Internal Interties other than with the CAISO Balancing Authority Area shall be shared based on the number of EIM Balancing Authority Areas that share the EIM Internal Intertie as provided in the Business Practice Manual for the Energy Imbalance Market; and

(2) minus any Virtual Bid adjustment.

(b) Virtual Bid Adjustment.

(1) Individual Constraint Calculation. For each Transmission Constraint in an EIM Entity Balancing Authority Area, the CAISO will calculate a Virtual Bid adjustment as the product of that Transmission Constraint's FMM Shadow Price and the lesser of (1) the Flow Impact of Virtual Bids and (2) the Flow Impacts of all Day-Ahead Scheduled Energy and EIM Base Schedules less the Flow Impacts of FMM Schedules, but not less than zero.

(2) EIM Entity Balancing Authority Area Calculation. Each EIM Entity Balancing Authority Area's Virtual Bid adjustment shall be the sum of the individual Transmission Constraint calculation for all Transmission Constraints within that EIM Entity Balancing Authority Area.

(c) Allocation. The CAISO will allocate—

(1) the Real-Time Congestion Offset for each EIM Entity Balancing Authority Area to EIM Entity Scheduling Coordinators;

(2) the Real-time Congestion Offset for the CAISO Balancing Authority Area in accordance with Section 11.5.4.2; and

(3) the Virtual Bid adjustment from each individual constraint calculation to each Scheduling Coordinator who submitted Virtual Bids based on that Scheduling Coordinator's Virtual Schedule's pro rata share of the gross positive congestion revenues received by all Virtual Schedules from that Transmission Constraint.

11.8.6.3 Determination of Total Positive CAISO Markets Uplifts

11.8.6.3.1 Total Positive IFM Uplift

Any positive Net IFM Bid Cost Uplifts are reduced by scaling them with the uplift ratio in Section 11.8.6.3.1(iii) to determine the Total IFM Uplift (for a Settlement Interval) as follows:

(i) The Total IFM Uplift is the Net IFM Bid Cost Uplift for all Settlement Intervals in the IFM Market.

(ii) The Total Positive IFM Uplift is determined as the sum of the positive IFM

Bid Cost Uplift for all Settlement Intervals in the IFM Market.

- (iii) The uplift ratio is equal to the Total IFM Uplift divided by the Total Positive IFM Uplift.

11.8.6.3.2 Total Positive RUC and RTM Uplift

Any negative RUC and Real-Time Market Bid Cost Uplifts are set to \$0 and any positive Net RUC Bid Cost Uplifts and Real-Time Market Bid Cost Uplifts are further reduced by the uplift ratio in Section 11.8.6.3.2(iii) to determine the Total RUC and RTM Uplift as follows;

- (i) The Total RUC and RTM Uplift is determined as the sum of the Net RUC Bid Cost Uplift and the Net Real-Time Market Bid Cost Uplift for all Settlement Intervals in the RUC and Real-Time Market, including EIM Transfer adjustments determined in accordance with Section 11.8.6.7.
- (ii) The Total Positive RUC and RTM Uplift is determined as the sum of the positive RUC Bid Cost Uplift and positive Real-Time Market Bid Cost Uplift, for all Settlement Intervals in the RUC and Real-Time Market.
- (iii) The uplift ratio is equal to the Total RUC and RTM Uplift divided by the Total Positive RUC and RTM Uplift.

11.8.6.6 Allocation of Net RTM Bid Cost Uplift

The hourly Net RTM Bid Cost Uplift is computed for the Trading Hour as the product of the RTM uplift ratio in Section 11.8.6.3(~~iv~~) and the sum over all of the Settlement Intervals of the Trading Hour of any positive Net RTM Bid Cost Uplift after the sequential netting in Section 11.8.6.2, plus the sum of the Trading Intervals of the Trading Hour of any EIM Transfer Adjustment calculated under Section 11.8.6.7. The hourly RTM Bid Cost Uplift is allocated to Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected (a) not to follow their Load, and (b) gross Settlement, in proportion to their Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market for the Trading Hour. For Scheduling Coordinators for MSS Operators that have elected (a) not to follow their Load, and (b) net Settlement, the hourly RTM Bid Cost Uplift is allocated in proportion to their MSS Aggregation Net Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market. For Scheduling Coordinators of MSS Operators that have elected to follow their Load, the RTM Bid Cost Uplift shall be allocated in proportion to their MSS Net Negative Uninstructed Deviation plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market. Accordingly, each Scheduling Coordinator shall be charged an amount equal to its Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market times the RTM Bid Cost Uplift rate, where the RTM Bid Cost Uplift rate is computed as the Net RTM Bid Cost Uplift amount divided by the sum of Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market across all Scheduling Coordinators for the Trading Hour. Any real-time reductions after HASP results are published to HASP Block Intertie Schedules in response to Dispatch Instructions or real-time scheduling curtailments are not allocated any Net RTM Bid Cost Uplift.

11.8.6.7 EIM Transfer Adjustment. The CAISO shall calculate the EIM Transfer adjustment by—

- (a) dividing the sum of net EIM Transfers out of an EIM Entity Balancing Authority Area by the sum of the absolute value of Uninstructed Imbalance Energy due to Load, the absolute value of Uninstructed Imbalance Energy due to Supply, the absolute value of Unaccounted For Energy, and the net EIM Transfer out of the Balancing Authority Area;
- (b) summing the amounts for all EIM Entity Balancing Authority Areas that had EIM Transfers out in the Dispatch Interval; and
- (c) distributing that sum to the initially determined amounts for each EIM Entity Balancing Authority during the Dispatch Interval based on its pro rata share of the EIM Transfers during the Dispatch Interval.

11.25 Flexible Ramping Constraint Compensation

11.25.1 Compensation

All resources identified as resolving the Flexible Ramping Constraint in the applicable RTUC interval are awarded Flexible Ramping Constraint capacity and will be compensated for such capacity for each RTUC interval, whether or not the Flexible Ramping Constraint is binding, limited by the quantity of Flexible Ramping Constraint requirements set by the CAISO operators as follows: The Scheduling Coordinator is paid the product of the (1) upward MW of capacity identified to satisfy the constraint(s) in the groupings and individual EIM Area Balancing Authority Areas in which it participates to relieve the constraint(s), multiplied by 0.25 hours, and (2) Flexible Ramping Constraint Derived Price calculated for each applicable fifteen-minute FMM interval as described further in this Section 11.25.1. Payment to resources will be rescinded as set forth in Section 11.25.2. For each applicable fifteen-minute FMM interval, the Flexible Ramping Constraint Derived Price is equal to the lesser of: 1) \$800/MWh; or 2) the greater of: (a) zero (0), or (b) the Real-Time ASMP for Spinning Reserves for the applicable fifteen-minute FMM interval; or (c) the total Flexible Ramping Constraint Shadow Price, which is determined as the sum of the Flexible Ramping Constraint Shadow Prices for the groupings and individual EIM Area Balancing Authority Areas in which the resource is deemed to have contributed to the constraint, minus seventy-five (75) percent of the maximum of (i) zero (0), or (ii) the Real-Time System Marginal Energy Cost, calculated as the simple average of the System Marginal Energy Cost for each of the three five-minute RTD intervals in the applicable fifteen-minute FMM interval. The ~~Shadow Price of the binding~~ Flexible Ramping Constraint Shadow Price represents the reduction of the total Energy and Ancillary Services procurement cost associated with a marginal change of that constraint for the applicable groupings and individual EIM Area Balancing Authority Areas in which the constraint is enforced, which is equal to zero (0) if the Flexible Ramping Constraint is not binding. All costs associated with payments made pursuant to this Section 11.25 are allocated to all Scheduling Coordinators pursuant to the requirements set forth in Section 11.25.3.

11.25.2 Rescission of Payment for Non-Performance

Payments to Scheduling Coordinators are rescinded for the quantity of MWs of undelivered Flexible Ramping Constraint capacity determined as the ~~15-minute~~hourly sum of the Settlement Interval amounts calculated as the minimum of: 1) the Flexible Ramping Constraint capacity identified as having contributed to the relief of the Flexible Ramping Constraint, or 2) the maximum of (a) zero (0), or (b) the difference between (i) the absolute value of -the negative UIE and (ii) the upward MWs identified as Undelivered Ancillary Services Capacity as required in Section 11.10.9.3. The rescinded amounts will be based on the product of the: 1) MWs quantities to be rescinded determined as described in this Section 11.25.2; and 2) ~~the~~hourly

Flexible Ramping Constraint ~~Derived Price~~ price determined as the weighted average of the four fifteen minute Flexible Ramping Constraint Derived Prices derived as described in Section 11.25.1.

11.25.3 Allocation of Costs

The CAISO ~~allocates~~~~determines~~ the total Flexible Ramping Constraint costs incurred as described in Section 11.25.1, net of the rescission of payments as described in Section 11.25.2. ~~The CAISO divides the total Flexible Ramping Constraint costs incurred in two portions and allocates each portion~~ as follows:

The CAISO determines the Balancing Authority Area specific allocation amounts by multiplying 1) the resource-specific total Flexible Ramping Constraint costs net of rescission of payments, by 2) the ratio of the Flexible Ramping Constraint Shadow Price to the total Flexible Ramping Constraint Shadow Price, determined as described in Section 11.25.1. For each EIM Area Balancing Authority Area the CAISO will determine the Flexible Ramping Constraint costs attributable to that Balancing Authority Area for which the applicable constraint(s) were binding in the applicable interval, based on ratio of the Balancing Authority Area's requirement to its contribution to the grouping or individual constraints to which that that Balancing Authority Area contributes. The CAISO will sum these amounts at the Balancing Authority Area level to determine the individual Balancing Authority Area Flexible Ramping Constraint costs.

For the CAISO Balancing Authority Area, the CAISO divides the total Flexible Ramping Constraint costs incurred in two portions and allocates each portion as described in 11.25.3.1 and 11.25.3.2. The total Flexible Ramping Constraint costs for each EIM Entity Balancing Authority Area are assigned to the EIM Entity Scheduling Coordinator as specified in Section 29.11(m).

11.25.3.1 Allocation to Measured Demand

Seventy five (75) percent of the total Flexible Ramping Constraint costs netted as described above in the Section 11.25.3, are allocated to Scheduling Coordinators based on their Measured Demand for each applicable Trading Hour. Each Scheduling Coordinator is assessed a portion of seventy-five (75) percent share of the total costs equal to the Scheduling Coordinator's Measured Demand for the applicable Trading Hour divided by total market Measured Demand for the applicable Trading Hour.

11.25.3.2 Allocation to Supply Deviations

Twenty-five (25) percent of the total Flexible Ramping Constraint costs netted as described above in this section 11.25.3, are allocated to Scheduling Coordinators based on their gross negative supply deviations as follows, using a two-step process.

First on a daily basis, the CAISO determines a daily rate equal to twenty-five (25) percent of the total daily Flexible Ramping Constraint costs divided by total daily gross supply negative deviations for the applicable Trading Day. Each Scheduling Coordinator is assessed its share of these daily costs based on its daily gross negative deviations calculated by resource as described below. Second, at the end of each Trading Month, the ISO reverses the daily amounts assessed to Scheduling Coordinators and calculates a monthly rate equal to twenty-five (25) percent of the total monthly Flexible Ramping Constraint costs divided by the total monthly gross supply negative deviations. Each Scheduling Coordinator is assessed its share of these monthly costs per its monthly gross negative deviations calculated by resource as described below. The gross supply negative deviations are determined by resource based on the sum of: (1) the resource's total negative Settlement Interval Tier 1 UIE and Tier 2 UIE deviations, which are determined as defined in Section 11.5.2, and (2) any negative import

Operational Adjustments. Gross supply negative deviations determined for this purpose are not netted across Settlement Intervals. The CAISO will provide the ability for Scheduling Coordinators to see daily or monthly Flexible Ramping Constraint cost allocation by resource for their resources in their regularly released settlement statements.

5. Changes to Existing ISO Defined Terms

- Bid Cost Recovery (BCR) Eligible Resources

Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources, Participating Loads, and Proxy Demand Resources and, for purposes of the Real-Time Market in the EIM Area, EIM Resources. A System Resource that has a Schedule that results from Bids submitted in violation of Section 30.5.5 shall not be a Bid Cost Recovery Eligible Resource for any Settlement Interval that occurs during the time period covered by the Schedule that results from Bids submitted in violation of Section 30.5.5.

-CAISO Metered Entity

- (a) any one of the following entities that is directly connected to the CAISO Controlled Grid:
 - i. a Generator other than a Generator that sells all of its Energy (excluding any Station Power that is netted pursuant to Section 10.1.3) and Ancillary Services to the Utility Distribution Company or Small Utility Distribution Company in whose Service Area it is located;
 - ii. an MSS Operator; or
 - iii. a Utility Distribution Company or Small Utility Distribution Company; and
- (b) any one of the following entities:
 - i. a Participating Generator;
 - ii. a Participating TO in relation to its Tie Point Meters with other TOs or Balancing Authority Areas;
 - iii. a Participating Load;
 - iv. a Participating Intermittent Resource; ~~or~~
 - v. an EIM Participating Resource that has elected not to be a Scheduling Coordinator Metered Entity; or
 - vi. a utility that requests that Unaccounted for Energy for its Service Area be calculated separately, in relation to its meters at points of connection of its Service Area with the systems of other utilities.

- Connected Entity

A Participating TO or any party that owns or operates facilities that are electrically interconnected with the CAISO Controlled Grid or, for the purposes of the scheduling and operation of the Real-Time Market, -electrically connected with the transmission system of an EIM Transmission Service Provider.

Curtable Demand

Demand from a Participating Load or Aggregated Participating Load that can be curtailed at the direction of the CAISO in the Real-Time Dispatch of the CAISO Controlled Grid or in the EIM Area.

-Demand

The instantaneous amount of Power-Energy that is delivered to Loads and Scheduling Points by Generation, transmission or distribution facilities. It is the product of voltage and the in-phase component of alternating current measured in units of watts or standard multiples thereof, e.g., 1,000W=1kW, 1,000kW=1MW, etc.

- End-Use Customer Or End-User

A consumer of electric power who consumes such power to satisfy a Load directly connected to the CAISO Controlled Grid, ~~or to~~ a Distribution System, or the transmission system of an EIM Transmission Service Provider and who does not resell the power.

- FMM Instructed Imbalance Energy (FMM IIE)

The portion of Imbalance Energy resulting from Day-Ahead Schedules or EIM Base Schedules and FMM Schedules determined pursuant to Section 11.5.1.

- Generating Unit

An individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered or a Physical Scheduling Plant that, in either case, is: (a) located within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a generating unit to the CAISO Balancing Authority Area) or, for the purposes of scheduling and operating the Real-Time Market, -an EIM Entity Balancing Authority Area; (b) connected to the CAISO Controlled Grid, either directly or via interconnected transmission, or distribution facilities or via a Pseudo-Tie; and (c) capable of producing and delivering net Energy (Energy in excess of a generating station's internal power requirements).

- Interchange

Imports and exports between the CAISO Balancing Authority Area and other Balancing Authority Areas and, for the Real-Time Market only, between and EIM Entity Balancing Authority Area and other Balancing Authority Areas.

- Interchange Schedule

A final agreed-upon schedule of Energy to be transferred between the CAISO Balancing Authority Area and another Balancing Authority Area and, for the Real-Time Market only, between and EIM Entity Balancing Authority Area and other Balancing Authority Area.

Market Participant

An entity, including a Scheduling Coordinator, who ~~either:~~ (1) participates in the CAISO Markets through the buying, selling, transmission, or distribution of Energy, capacity, or Ancillary Services into, out of, or through the CAISO Controlled Grid; (2) is a CRR Holder or Candidate CRR Holder; ~~or~~ (3) is a Convergence Bidding Entity; or (4) is an EIM Market Participant.

- Node

A point in the Full Network Model representing a physical location within the CAISO Balancing Authority Area, ~~or~~ the CAISO Controlled Grid, or the EIM Area that which includes the Load and Generating Unit busses in the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) and EIM Area and at the Intertie busses between the CAISO Balancing Authority Area and EIM Entity Balancing Authority Areas and interconnected Balancing Authority Areas.

- Point(s) Of Delivery (POD) Or Withdrawal

Point(s) within the CAISO Balancing Authority Area or, in the Real-Time Market only, the EIM Area where Energy and Ancillary Services are made available to a receiving party under this CAISO Tariff.

- Point(s) Of Receipt (POR) Or Injection

Point(s) within the CAISO Balancing Authority Area or, in the Real-Time Market only, the EIM Area where Energy and Ancillary Services are made available by a delivering party under this CAISO Tariff.

- Real-Time Congestion Offset

~~The amount calculated under Section 11.5.4.1 for the purposes of determining the non-zero offset amount allocation. For each Settlement Period of the RTM, the CAISO shall calculate the Real-Time Congestion Offset as the difference of 1) the sum of the products of the total of the Demand Imbalance Energy and Virtual Supply liquidated as demand in the RTM and the RTM MCC at the relevant Location; and 2) the sum of the products of the total of the Supply Imbalance Energy and Virtual Demand liquidated as supply in the RTM, and the RTM MCC at the relevant Location; including also the sum of RTM Congestion Charges for Intertie Ancillary Services Awards, and excluding the RTM Congestion Credit for ETCs and TORs calculated as provided in Section 11.5.7.1. The Real-Time Congestion Offset is allocated as provided in Section 11.5.4.2.~~

-Reference Bus

The Location(s) in the EIM Area~~on the CAISO Controlled Grid~~ relative to which mathematical quantities relating to powerflow solution will be calculated.

- RTD Imbalance Energy

The deviation of Supply or Demand from the FMM Schedule, positive or negative, as measured by metered Generation, metered Load, or Real-Time Interchange Schedules or, in the case of EIM non-participating resources, EIM Base Schedules. RTD Imbalance Energy is composed of RTD Instructed Imbalance Energy and Uninstructed Imbalance Energy.

- Real-Time Unit Commitment (RTUC)

An application of the RTM that runs every 15 minutes and commits Fast Start Units and Medium Start Units using the SCUC to adjust from Day-Ahead Schedules, EIM Base Schedules, and HASP Advisory Schedules.

-Scheduling Coordinator

An entity certified by the CAISO for the purposes of undertaking the functions specified in Section 4.5.3, including any entity designated as an EIM Entity Scheduling Coordinator or an EIM Participating Resource Scheduling Coordinator for the purposes of undertaking the functions specified in Section 29.

- Scheduling Coordinator Metered Entity

A Generator, Eligible Customer, End-User, or Proxy Demand Resource that is not a CAISO Metered Entity, an EIM Entity, or an EIM Participating Resource that elects to be a Scheduling Coordinator Metered Entity.

- Settlement

Process of financial settlement for products and services purchased and sold undertaken by the CAISO under Section 11 as supplemented by Section 29. Each Settlement will involve a price and a quantity.

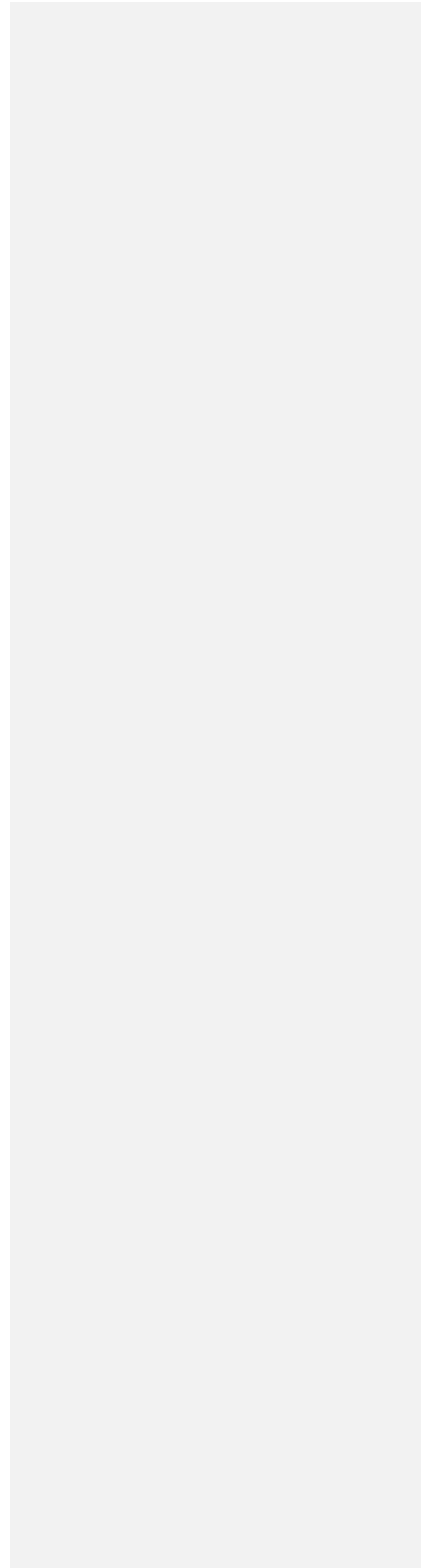
-System Resource

A group of resources, single resource, or a portion of a resource located outside of the CAISO Balancing Authority Area, or an allocated portion of a Balancing Authority Area's portfolio of generating resources that are either a static Interchange Schedule or directly responsive to that Balancing Authority Area's Automatic Generation Control (AGC) capable of providing Energy and/or Ancillary Services to the CAISO Balancing Authority Area or, for the purposes of scheduling and operating the Real-Time Market in the EIM Area, an EIM Entity Balancing Authority Area, provided that if the System Resource is providing Regulation to the CAISO it is directly responsive to AGC.

- Transmission Losses

Energy that is lost as a natural part of the process of transmitting Energy from Generation to a Point Of Delivery Or Withdrawal ~~Load delivered at the CAISO/Utility-Distribution Company boundary or Balancing Authority Area boundary.~~

|



6. Pro Forma EIM Service Agreements

EIM Entity Agreement [separate attachment]

EIM Entity Scheduling Coordinator Agreement [separate attachment]

EIM Participating Resource Agreement [separate attachment]

EIM Participating Resource Scheduling Coordinator Agreement [separate attachment]

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Appendix B.____

EIM Entity Agreement (EIMEA)

THIS ENERGY IMBALANCE MARKET ENTITY AGREEMENT (“AGREEMENT”) is established this ____ day of _____, ____ and is accepted by and between:

[Full legal name] (“EIM Entity”), having its registered and principal executive office at [address],

and

California Independent System Operator Corporation (“CAISO”), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EIM Entity and the CAISO are hereinafter referred to as the “Parties”.

Whereas:

- A. The Parties named above operate Balancing Authority Areas.
- B. The EIM Entity provides transmission service in accordance with an ~~Open Access Transmission Tariff~~ open access transmission tariff (“OATT”), including ~~imbalance energy~~ balancing Energy services.
- C. The CAISO operates ~~an Energy Imbalance~~ the Real-Time Market pursuant to the CAISO Tariff ~~(“EIM”).~~
- D. There ~~[]~~ are [] ~~are not~~ third party transmission service providers within the EIM Entity Balancing Authority Area that intend to enable EIM services on their transmission systems.
- E. The Parties are entering into this Agreement to enable the EIM Entity to participate in the CAISO’s Real-Time Market and to provide EIM services within the EIM Entity Balancing Authority Area, including ~~real-time~~ Real-Time transfers of Energy among the CAISO Balancing Authority Area and other EIM Entity Balancing Authority Areas ~~that have enabled the EIM pursuant to an EIM Entity Agreement with the CAISO.~~

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

ARTICLE I

DEFINITIONS AND INTERPRETATION

1.1 Master Definitions Supplement. All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master

Definitions Supplement to the CAISO Tariff.

1.2 Rules of Interpretation. The following rules of interpretation and conventions shall apply to this Agreement:

- (a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;
- (b) the singular shall include the plural and vice versa;
- (c) the masculine shall include the feminine and neutral and vice versa;
- (d) "includes" or "including" shall mean "including without limitation";
- (e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) any reference to a day, week, month or year is to a calendar day, week, month or year;
- (k) unless the context requires otherwise, "or" is used in the conjunctive sense; and
- (l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

ARTICLE II

RESPONSIBILITIES OF EIM ENTITY AND CAISO

2.1 Scope of Responsibilities. The Parties are individually responsible for the efficient use and reliable operation of their Balancing Authority Areas consistent with the ~~reliability standards~~ Reliability Standards established by the Western Electricity Coordinating Council ("WECC") and the North American Electric

Reliability Corporation (“NERC”), and in accordance with their respective tariffs on file with the Federal Energy Regulatory Commission (“FERC”). Nothing in this Agreement is intended to change, supersede, or alter either Party’s obligations to abide by NERC and WECC reliability standards or to provide open and non-discriminatory transmission access in accordance with the terms of their respective FERC tariffs.

- 2.2 **Tariff Provisions.** The CAISO shall provide open access to the [EIMReal-Time Market](#) in accordance with the terms of the CAISO Tariff. The EIM Entity shall have in effect provisions in its OATT to enable operation of the [EIMReal-Time Market](#) in its Balancing Authority Area in accordance with the CAISO Tariff.
- 2.3 **EIM Entity Scheduling Coordinator.** The EIM Entity shall be represented by an EIM Entity Scheduling Coordinator, which may be the EIM Entity or another entity certified by the CAISO to perform the functions of an EIM Entity Scheduling Coordinator.
- 2.4 **EIM Transmission Service and Resource Registry Information.** The EIM Entity shall populate and update a registry established by the CAISO for EIM purposes with the static network topology information of its Balancing Authority Area, non-participating resources, and loads in accordance with the CAISO Tariff and Business Practice ~~Manuals~~[Manual for the Energy Imbalance Market](#). The EIM Entity is responsible for the accuracy and completeness of this information.
- 2.5 **EIM Transmission Availability.** The EIM Entity shall make available for use in the [EIMReal-Time Market](#) transmission capacity on its system that is not otherwise encumbered, reserved, scheduled, or being used by its transmission customers or by others and shall make arrangements with third party transmission service providers within its Balancing Authority Area that intend to enable EIM services on their transmission systems to provide such transmission capacity on their systems- [for use in the Real-Time Market](#). The EIM Entity shall provide the CAISO with real time information regarding the availability of transmission capacity for use in the EIM as provided in the CAISO Tariff and Business Practice ~~Manuals~~[Manual for the Energy Imbalance Market](#).

ARTICLE III

TERM AND TERMINATION

- 3.1 **Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.
- 3.2 **Termination**
 - 3.2.1 **Termination by CAISO.** The CAISO may terminate this Agreement by giving written notice of termination in the event that the EIM Entity commits any material default under this Agreement or Section 29 of the CAISO Tariff that, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given

the EIM Entity written notice of the default, unless the default is excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

3.2.2 Termination by EIM Entity. In the event that the EIM Entity no longer wishes to enable EIM services within its Balancing Authority Area pursuant to the CAISO Tariff, it may terminate this Agreement on giving the CAISO not less than one-hundred and eighty (180) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (120) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or upon the next production date of the Full-Network Model release following the one-hundred and eighty (180) days after the CAISO's receipt of the EIM Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

3.3 No Termination Charge. The CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by the termination of the EIM Entity's participation in the EIM as of the effective date of such notice, provided that EIM Entity obligations incurred under this Agreement prior to the effective date of such notice shall survive termination until satisfied.

ARTICLE IV

CAISO TARIFF

4.1 Agreement Subject to CAISO Tariff. This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Entity shall abide by, and ~~will~~shall perform, all of the obligations of EIM Entities under the CAISO Tariff.

ARTICLE V

COSTS

- 5.1 **Operating and Maintenance Costs.** The EIM Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

ARTICLE VI

DISPUTE RESOLUTION

- 6.1 **Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE VII

REPRESENTATIONS AND WARRANTIES

- 7.1 **Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.
- 7.2 **Necessary Approvals.** The EIM Entity represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EIM Entity prior to the effective date of this Agreement, including any arrangement with third party Balancing Authorities.

ARTICLE VIII

LIABILITY

- 8.1 **Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE IX

UNCONTROLLABLE FORCES

- 9.1 **Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE X

MISCELLANEOUS

- 10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.
- 10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.
- 10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.
- 10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to

any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

- 10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.
- 10.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

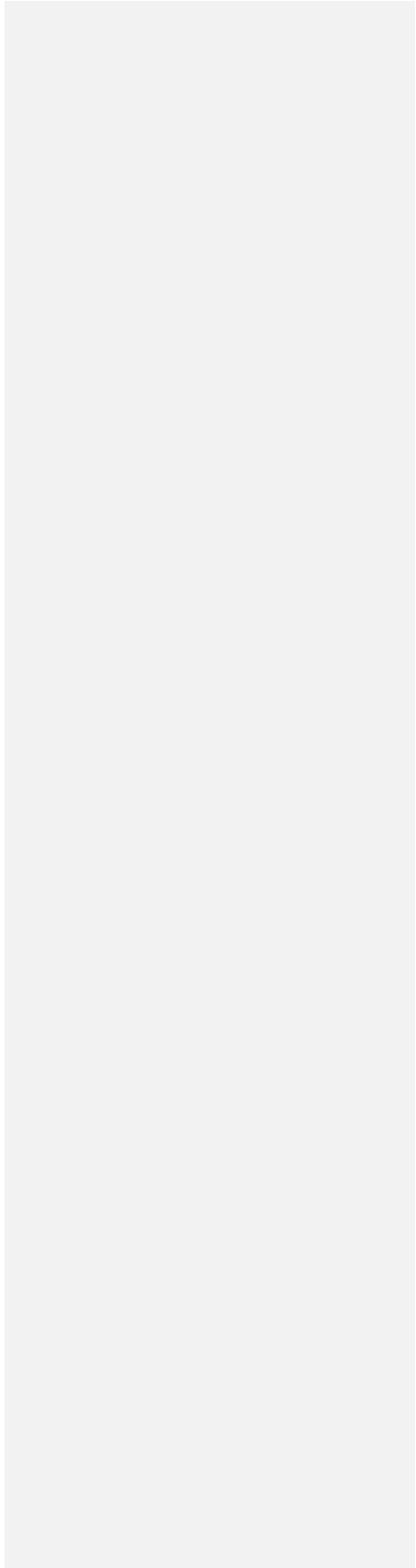
[NAME OF EIM ENTITY]

By: _____

Name: _____

Title: _____

Date: _____



SCHEDULE 1

NOTICES

[Section 10.2]

EIM Entity

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

CAISO

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

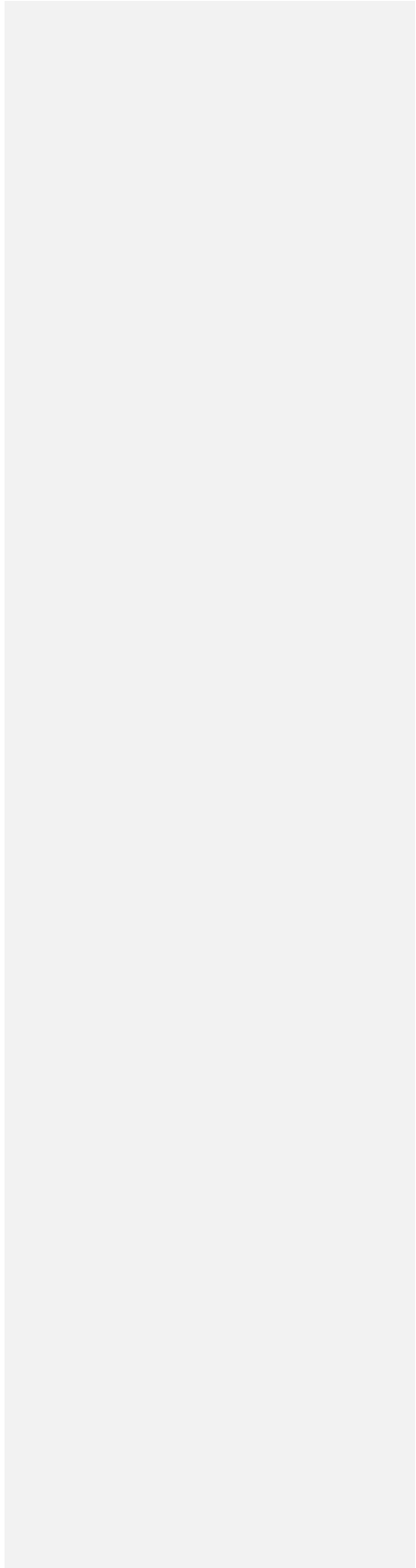
Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____



Appendix B.____

EIM Entity Scheduling Coordinator Agreement (EIMESCA)

THIS AGREEMENT is made this ____ day of _____, _____ and is entered into, by and between:

- (1) **[Full legal name]** having a registered or principal executive office at **[address]** (the "EIM Entity Scheduling Coordinator")

and

- (2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The EIM Entity Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties".

Whereas:

- A. The EIM Entity Scheduling Coordinator has applied for certification or has been certified by the CAISO under the certification procedure referred to in Section 29 of the CAISO Tariff.
- B. The EIM Entity Scheduling Coordinator wishes to ~~submit base schedules in the Energy Imbalance Market~~ ("represent an EIM") Entity under the terms and conditions set forth in Section 29 of the CAISO Tariff.

NOW IT IS HEREBY AGREED as follows:

1. Definitions and Interpretation.

1.1 Master Definitions Supplement. Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the CAISO Tariff.

1.2 Rules of Interpretation. The following rules of interpretation and conventions shall apply to this Agreement:

- (a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;
- (b) the singular shall include the plural and vice versa;
- (c) the masculine shall include the feminine and neutral and vice versa;
- (d) "includes" or "including" shall mean "including without limitation";

- (e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) unless the context otherwise requires, “or” is used in the conjunctive sense;
- (k) any reference to a day, week, month or year is to a calendar day, week, month or year; and
- (l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

2. Covenant of the EIM Entity Scheduling Coordinator.

2.1 The EIM Entity Scheduling Coordinator agrees that:

2.1.1 CAISO Tariff Section 29 governs all aspects of EIM information submission, including the financial and technical criteria for EIM Entity Scheduling Coordinator ~~base schedule~~EIM Base Schedule submissions, Settlement, information reporting requirements, and confidentiality restrictions;

2.1.2 It will abide by, and will perform all of the obligations under Section 29 of the CAISO Tariff placed on EIM Entity Scheduling Coordinators in respect of all matters set forth therein, including ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality and dispute resolution;

2.1.3 It shall ensure that each EIM Entity ~~for which that it submits base schedules~~represents enters into an EIM Entity Agreement in accordance

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with Section 29 of the CAISO Tariff;

2.1.4 It shall have the primary responsibility to the CAISO, as principal, for all EIM Entity Scheduling Coordinator payment obligations under ~~the~~ Section 29 of the CAISO Tariff; and

2.1.5 Its status as an EIM Entity Scheduling Coordinator is at all times subject to ~~the~~ Section 29 of the CAISO Tariff.

3. Term and Termination.

3.1 This Agreement shall commence on the later of (a) _____ or (b) the date the EIM Entity Scheduling Coordinator is certified by the CAISO as an EIM Entity Scheduling Coordinator.

3.2 This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the EIM Entity Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC rules regarding termination.

4. Settlement Account.

4.1 The EIM Entity Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits that arise under Section 29 of the CAISO Tariff shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the EIM Entity Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

5. Agreement to be bound by CAISO Tariff.

5.1 Section 29 of the CAISO Tariff is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff that may apply to EIM Entity Scheduling Coordinators, the terms and conditions of the CAISO Tariff shall prevail.

6. Electronic Contracting.

6.1 All submitted information, applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the

same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of Section 29 of the CAISO Tariff as if executed in written format.

7. Penalties and Sanctions.

7.1 The EIM Entity Scheduling Coordinator shall be subject to all penalties made applicable to EIM Entity Scheduling Coordinators set forth in Section 29 of the CAISO Tariff.

8. Costs.

8.1 The EIM Entity Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

9. Dispute Resolution.

9.1 The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

10. Representation and Warranties.

10.1 Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

11. Liability.

11.1 The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

12. Uncontrollable Forces.

12.1 Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

13. Miscellaneous.

- 13.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.
- 13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.
- 13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.
- 13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by

law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

- 13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Entity Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.
- 13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized officials.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

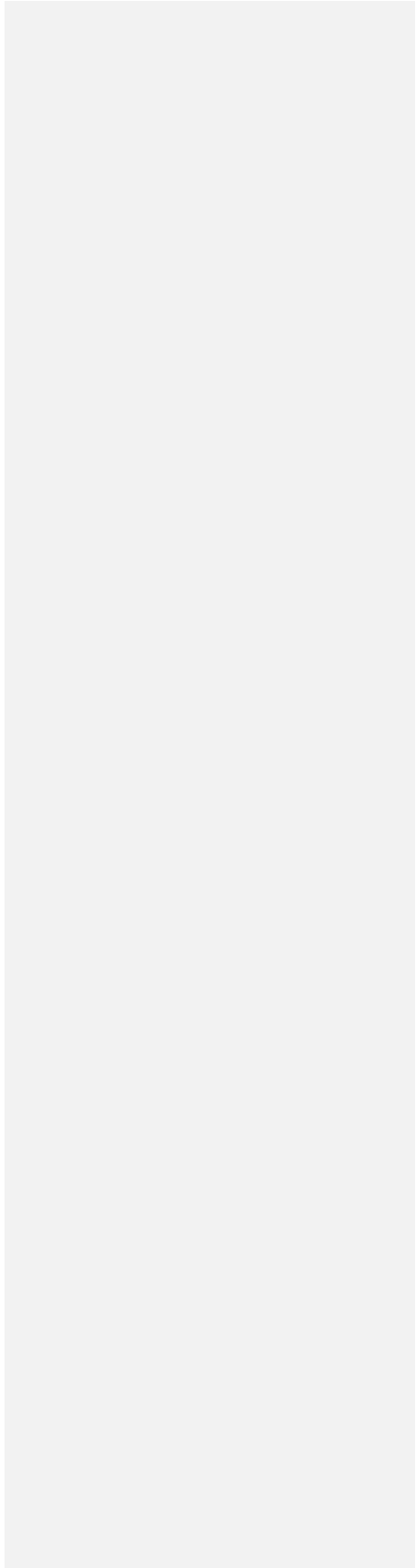
[Name of EIM Entity Scheduling Coordinator]

By: _____

Name: _____

Title: _____

Date: _____



SCHEDULE 1

NOTICES

[Section 13.2]

EIM Entity Scheduling Coordinator

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

CAISO

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

Fax: _____

Name of Alternative

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

Fax: _____

Appendix B.____

EIM Participating Resource Agreement (EIMPRA)

THIS ENERGY IMBALANCE MARKET PARTICIPATING RESOURCE AGREEMENT (“AGREEMENT”) is established this ____ day of _____, ____ and is accepted by and between:

[Full legal name] (“EIM Participating Resource”), having its registered and principal executive office at [address],

and

California Independent System Operator Corporation (“CAISO”), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EIM Participating Resource and the CAISO are hereinafter referred to as the “Parties”.

Whereas:

- A. The CAISO operates ~~an~~ Real-Time Market for Energy Imbalance Market pursuant to the CAISO Tariff.
- B. The EIM Participating Resource receives ~~imbalance energy balancing~~ Energy service from an EIM Entity in accordance with the EIM Entity's ~~Open Access Transmission Tariff~~ open access transmission tariff or from another transmission service provider within the EIM Entity Balancing Authority Area.
- C. The Parties wish to enter into this Agreement to establish the terms and conditions for participation in the ~~Energy Imbalance~~ CAISO's Real-Time Market by the EIM Participating Resource in accordance with Section 29 of the CAISO Tariff.

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NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

ARTICLE I

DEFINITIONS AND INTERPRETATION

- 1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.
- 1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

- (a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;
- (b) the singular shall include the plural and vice versa;
- (c) the masculine shall include the feminine and neutral and vice versa;
- (d) “includes” or “including” shall mean “including without limitation”;
- (e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) unless the context otherwise requires, “or” is used in the conjunctive sense;
- (k) any reference to a day, week, month or year is to a calendar day, week, month or year; and
- (l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

ARTICLE II

RESPONSIBILITIES OF EIM PARTICIPATING RESOURCE

- 2.1 EIM Participating Resource Scheduling Coordinator.** The EIM Participating Resource shall be represented by an EIM Participating Resource Scheduling Coordinator, which may be the EIM Participating Resource or another entity certified by the ISO to perform the functions of an EIM Participating Resource Scheduling Coordinator.
- 2.2 EIM Participating Resources.** The EIM Participating Resource has identified on Schedule 1 all EIM-Participating Resources that it owns, operates, has a

contractual entitlement to, or that otherwise will be included in the Master File.

2.2.1 Technical Characteristics. The EIM Participating Resource has provided to the CAISO in Schedule 1 the required information regarding the operating characteristics of each EIM Participating Resource listed in Schedule 1, in addition to any further level of detail that may be required by Section 29 of the CAISO Tariff.

2.2.2 Notification of Changes. Sixty (60) days prior to changing any technical information in Schedule 1, the EIM Participating Resource shall notify the CAISO of the proposed changes. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance, (i) the proposed dates on which the CAISO's Master File will be updated, which dates shall occur at least every three months; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the EIM Participating Resource fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the Master File, provided the EIM Participating Resource submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification this Agreement shall not apply to any EIM Participating Resource identified in Schedule 1 which the EIM Participating Resource no longer owns or no longer has contractual entitlement to.

ARTICLE III

TERM AND TERMINATION

3.1 Effective Date. This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

3.2 Termination

3.2.1 Termination by CAISO. Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the EIM Participating Resource commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the EIM ~~Entity~~ Participating Resource, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No.

2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

3.2.2 Termination by EIM Participating Resource. In the event that the EIM Participating Resource no longer wishes to submit Bids and transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 3.3, the EIM Participating Resource may modify Schedule 1 to ~~remove EIM-Participating~~ Resources which it no longer owns or no longer has contractual entitlement to and such modification shall be effective upon receipt by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the EIM Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

ARTICLE IV

CAISO TARIFF

4.1 Agreement Subject to CAISO Tariff. This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Participating Resource shall abide by, and ~~will~~**shall** perform all of the obligations under the CAISO Tariff placed on EIM ~~Entities~~Participating Resources in respect of all matters set forth therein.

4.1.1 Additional EIM Participating Resource Requirements. The EIM Participating Resource shall comply with all CAISO Tariff requirements associated with resource registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.

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ARTICLE V

PENALTIES AND SANCTIONS

5.1 Penalties. If the EIM Participating Resource fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the EIM Entity. No penalties or sanctions may be imposed under this Agreement unless a CAISO Tariff provision providing for such penalties or

sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the EIM Participating Resource to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the EIM Entity.

- 5.2 Corrective Measures.** If the EIM Participating Resource fails to meet or maintain the requirements set forth in this Agreement or Section 29 the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in Section 29 of the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

ARTICLE VI

COSTS

- 6.1 Operating and Maintenance Costs.** The EIM Participating Resource shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

ARTICLE VII

DISPUTE RESOLUTION

- 7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE VIII

REPRESENTATIONS AND WARRANTIES

- 8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.
- 8.2 Necessary Approvals.** The EIM Participating Resource represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EIM Participating Resource prior to the effective date of this Agreement, including any arrangement with third party Balancing Authorities.

ARTICLE IX

LIABILITY

- 9.1 **Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE X

UNCONTROLLABLE FORCES

- 10.1 **Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

ARTICLE XI

MISCELLANEOUS

- 11.1 **Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.
- 11.2 **Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 11.3 **Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

- 11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.
- 11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.
- 11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Participating Resource shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.
- 11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

[NAME OF EIM PARTICIPATING RESOURCE]

By: _____

Name: _____

Title: _____

Date: _____

SCHEDULE 1

EIM ~~Participating~~ Resources

[Section 2.4]

SCHEDULE 2

NOTICES

[Section 11.2]

EIM Participating Resource

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

CAISO

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

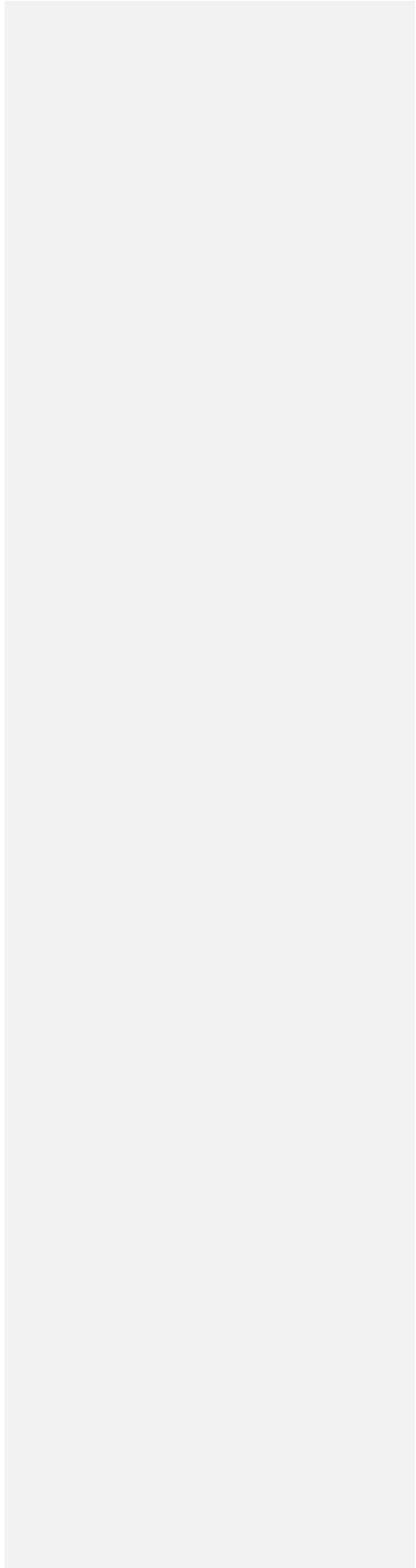
Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____



Appendix B.____

EIM Participating Resource Scheduling Coordinator Agreement (EIMPRSCA)

THIS AGREEMENT is made this ____ day of _____, _____ and is entered into, by and between:

- (1) **[Full legal name]** having a registered or principal executive office at **[address]** (the "EIM Participating Resource Scheduling Coordinator")

and

- (2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The EIM Participating Resource Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties".

Whereas:

- A. The EIM Participating Resource Scheduling Coordinator has applied for or has been certified by the CAISO under the certification procedure referred to in Section 29 of the CAISO Tariff.
- B. The EIM Participating Resource Scheduling Coordinator wishes to ~~submit Bids from~~ **represent** EIM Participating Resources under the terms and conditions set forth in Section 29 of the CAISO Tariff.

NOW IT IS HEREBY AGREED as follows:

1. Definitions and Interpretation.

1.1 Master Definitions Supplement. Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the CAISO Tariff.

1.2 Rules of Interpretation. The following rules of interpretation and conventions shall apply to this Agreement:

- (a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;
- (b) the singular shall include the plural and vice versa;
- (c) the masculine shall include the feminine and neutral and vice versa;
- (d) "includes" or "including" shall mean "including without limitation";

- (e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;
- (f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;
- (g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;
- (i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;
- (j) unless the context otherwise requires, "or" is used in the conjunctive sense;
- (k) any reference to a day, week, month or year is to a calendar day, week, month or year; and
- (l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

2. Covenant of the EIM Participating Resource Scheduling Coordinator.

2.1 The EIM Participating Resource Scheduling Coordinator agrees that:

2.1.1 CAISO Tariff Section 29 governs all aspects of ~~EIM~~-bidding and scheduling of Energy in the Real-Time Market, including (without limitation), the financial and technical criteria ~~for~~applicable to EIM Participating Resource Scheduling Coordinators, and other bidding, Settlement, information reporting requirements, and confidentiality restrictions applicable to EIM Participating Resource Scheduling Coordinators;

2.1.2 It ~~will~~shall abide by, and ~~will~~shall perform all of the obligations under Section 29 of the CAISO Tariff placed on EIM Participating Resource Scheduling Coordinators in respect of all matters set forth therein, including, without limitation, ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality, and dispute resolution;

2.1.3 It shall ensure that each EIM Participating Resource for which it submits

Bids enters into an EIM Participating Resource Agreement in accordance with Section 29 of the CAISO Tariff;

2.1.4 It shall have the primary responsibility to the CAISO, as principal, for all EIM Participating Resource Scheduling Coordinator payment obligations ~~under~~pursuant to Section 29 of the CAISO Tariff; and

2.1.5 Its status as an EIM Participating Resource Scheduling Coordinator is at all times subject to Section 29 of the CAISO Tariff.

3. Term and Termination.

3.1 This Agreement shall commence on the later of (a) _____ or (b) the date the EIM Participating Resource Scheduling Coordinator is certified by the CAISO as an EIM Participating Resource Scheduling Coordinator.

3.2 This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the EIM Participating Resource Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC rules regarding termination.

4. Settlement Account.

4.1 The EIM Participating Resource Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits that arise under Section 29 of the CAISO Tariff shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the EIM Participating Resource Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

5. Agreement to be bound by CAISO Tariff.

5.1 CAISO Tariff Section 29 is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff, the terms and conditions of the CAISO Tariff shall prevail.

6. Electronic Contracting.

6.1 All submitted information, applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the

same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of Section 29 of the CAISO Tariff as if executed in written format.

7. Penalties and Sanctions.

7.1 The EIM Participating Resource Scheduling Coordinator shall be subject to all penalties made applicable to EIM Participating Resource Scheduling Coordinators set forth in Section 29 of the CAISO Tariff.

8. Costs.

8.1 The EIM Participating Resource Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

9. Dispute Resolution.

9.1 The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

10. Representation and Warranties.

10.1 Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

11. Liability.

11.1 The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

12. Uncontrollable Forces.

12.1 Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

13. Miscellaneous.

13.1 **Assignments.** Either Party may assign or transfer any or all of its rights and/or

obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

- 13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.
- 13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.
- 13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.
- 13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.
- 13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.
- 13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by

law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

- 13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Participating Resource Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.
- 13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized officials.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

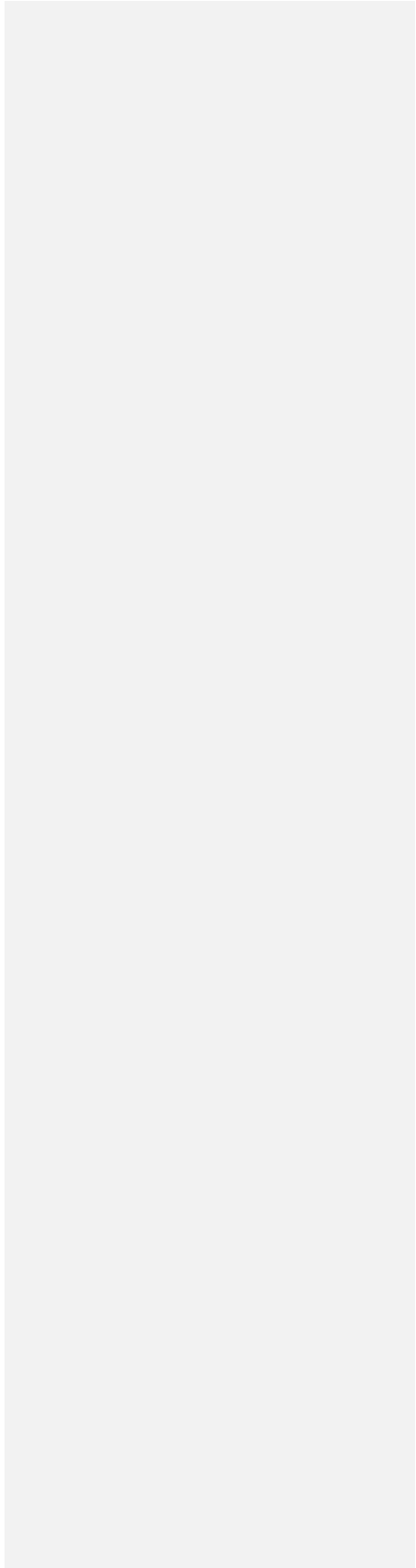
[Name of EIM Participating Resource Scheduling Coordinator]

By: _____

Name: _____

Title: _____

Date: _____



SCHEDULE 1

NOTICES

[Section 13.2]

EIM Participating Resource Scheduling Coordinator

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

CAISO

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

Fax: _____

Name of Alternative

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

Fax: _____