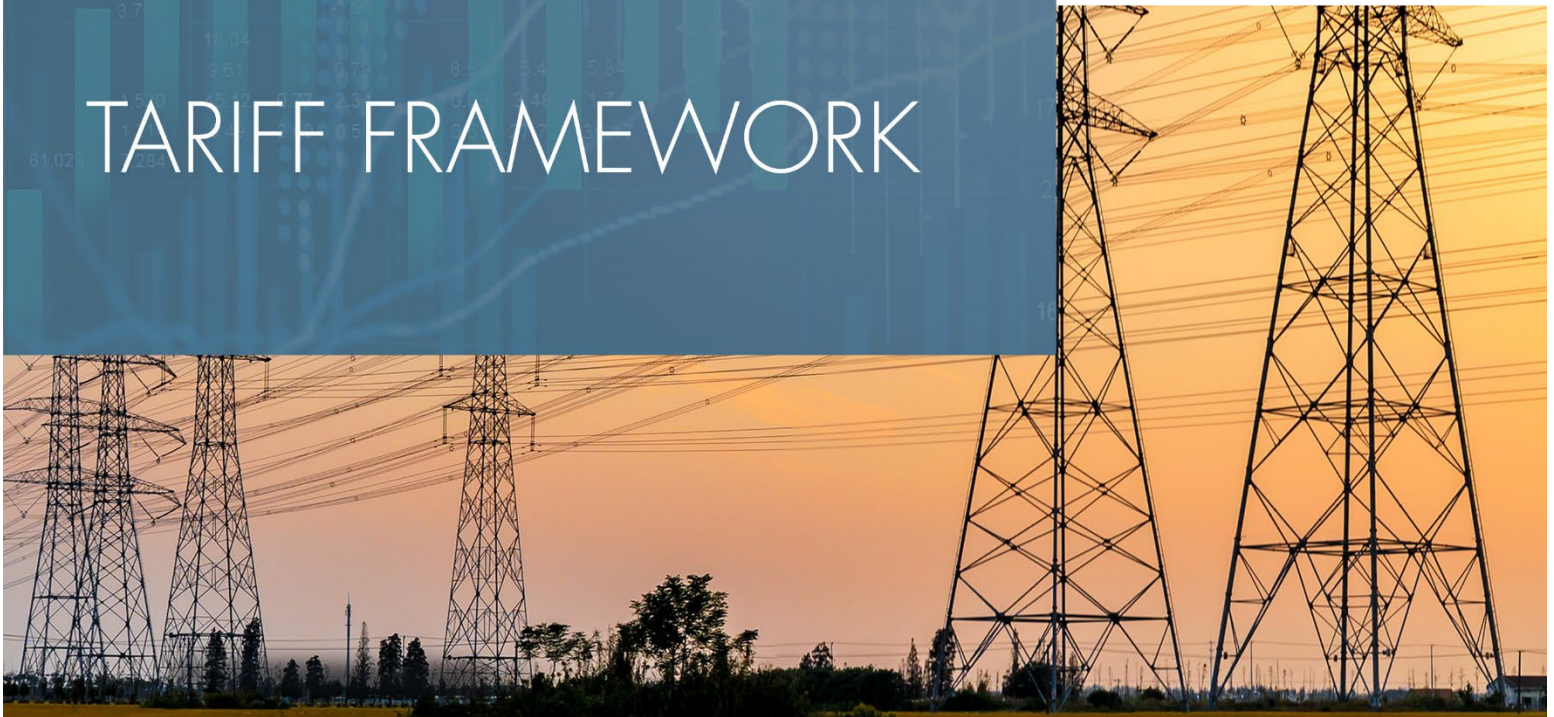


# EDAM

EXTENDED DAY-AHEAD MARKET

# TARIFF FRAMEWORK



November 7, 2022



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## Introduction

The California Independent System Operator Corporation (ISO), as part of its proposal to extend its day-ahead market to interested entities in the Western Energy Imbalance Market (WEIM), will include the applicable rules in a discrete part of the ISO tariff similar to how the WEIM tariff rules are reflected in the ISO tariff. This paper presents an Extended Day-Ahead Market (EDAM) tariff framework that lays the foundation for the draft ISO tariff language to follow. This framework will support, but not necessarily prescribe, EDAM entity consideration of transmission service OATT amendments required to implement the EDAM in each WEIM entity balancing authority area that participates.

This framework is based on the EDAM Draft Final Proposal dated October 31, 2022 and breaks down the elements of the EDAM proposal into its discrete components, reorganizing this information into a structure that mirrors the existing ISO tariff numbering scheme in the currently blank section 33 of the ISO tariff.<sup>1</sup> For example, provisions related to EDAM market operation would be included in subsection 33.31 to mirror the existing day-ahead market provisions found in section 31 of the ISO tariff.<sup>2</sup> We have included EDAM-specific headings from the draft final proposal to help identify discrete concepts and distinctions among the various component parts of the proposal. The tariff framework is inherently illustrative and may not include all elements of the design ultimately included in the final proposal or in the draft tariff.

The next step will be publication of draft tariff language to reflect the final proposal. The draft tariff language is targeted for publication in the first quarter of 2023, and it will be based on the final EDAM proposal, which is targeted for publication in late 2022, and discussion by the WEIM Governing Body and Board of Governors at a meeting in December 2022 and considered for approval at a meeting in January/February 2023. We believe that considering this tariff framework as a first and second step in the tariff development process will help stakeholders better understand how the EDAM rules will be structured and incorporated into the ISO tariff. In turn, this will help prospective EDAM entities understand the scope of the commitment and how they may need to amend their respective OATTs to support EDAM participation.

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<sup>1</sup> This framework is presented as section 33 of the ISO tariff because this section is “not used” in the general ISO tariff, while the real-time market WEIM tariff rules will remain in section 29.

<sup>2</sup> Other sections and appendixes of the ISO tariff that may require modification are also included in the outline to more fully reflect the structure and scope of potential tariff changes.

## Guiding Objectives for the Tariff Framework

In developing the EDAM tariff framework, the ISO pursued four objectives:

- a. Clarity:** The tariff framework should offer a clear guide to the sections and subjects of the ISO tariff applicable to the EDAM. This will ensure stakeholders and potential participants in EDAM understand the scope of the ISO tariff under review and the general requirements for participation.
- b. Consistency:** The tariff framework should reference provisions in the current ISO tariff that apply equally to the EDAM and to current market participants. This will reduce redundancy and the potential for inconsistency between rules that apply to all market participants and the rules that apply only to EDAM participants.
- c. Comprehension:** The tariff framework should provide an opportunity for stakeholders to comprehend the relationship between the market design and the anticipated tariff provisions. This will facilitate identifying rules that may be missing and need further definition.
- d. Certainty:** The tariff framework should provide a reference point for application of the associated market design elements and the scope of the EDAM governance design being considered in parallel with this initiative.<sup>3</sup>

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<sup>3</sup> The tariff framework does not represent the views of the Governance Review Committee, the WEIM Governing Body, or the CAISO Board of Governors with respect to governance or the EDAM design.



## Tariff Framework Rules of Construction

This section describes the relationship between the EDAM tariff rules, the ISO tariff rules, and EDAM participant OATTs. The ISO provides this to help stakeholders understand these relationships prior to presenting the draft ISO tariff provisions.

### EDAM Specific Rules

The EDAM rules will be part of the ISO tariff; not a separate tariff. This means the EDAM rules will apply equally to all participants no different than any other provision of the ISO tariff. However, the EDAM rules may be limited in their application through the use of appropriately defined terms, specific references, or exclusions. Participating EDAM entities will amend their OATTs to reflect the EDAM tariff rules.<sup>4</sup> The EDAM rules included in an OATT will provide for EDAM transmission service and other related matters not addressed in the ISO tariff, and they will defer to the ISO tariff concerning EDAM matters addressed in the ISO tariff. In the event of a conflict between an EDAM entity OATT and an EDAM rule in the ISO tariff, the provisions of the ISO tariff will govern over the OATT provisions to the extent of any inconsistency.

### ISO Tariff General Rules

Generally applicable provisions of the ISO tariff will apply to EDAM participants. For example, all participants in the EDAM will be considered “market participants” and all ISO tariff provisions applicable to market participants will apply to EDAM participants unless otherwise specifically excluded. Likewise, an EDAM scheduling coordinator will be considered a “scheduling coordinator,” and all ISO tariff provisions applicable to scheduling coordinators will apply unless otherwise specifically excluded.

### EDAM Specific Agreements

All agreements necessary for participation in the EDAM will be *pro forma* service agreements included within the ISO tariff. To the greatest extent possible, operative provisions will be included in the ISO tariff and incorporated by reference. These service agreements will be considered through the tariff stakeholder process and will not be individually negotiated.<sup>5</sup> Accordingly, the ISO encourages stakeholders to comment on these agreements when published as part of the draft tariff language.

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<sup>4</sup> Ideally, the ISO and potential EDAM entities will collectively develop a common set of OATT provisions that address EDAM transmission service issues that the CAISO tariff defers to the OATT. Understanding differences among EDAM entities will nevertheless be appropriate to address operational and customer related issues unique to their balancing authority area. This coordination and collaboration should be considered further as the EDAM design development continues.

<sup>5</sup> Specific provisions accepted by FERC regarding WEIM participation by public power entities and federal entities will be extended to their EDAM participation as appropriate. Consideration of whether these provisions can be included as alternative *pro forma* language and avoid Commission filings of non-confirming agreements for known issues will be undertaken in the tariff development process.

## EDAM Tariff Framework

The ISO tariff framework below is based on the EDAM draft final proposal dated October 31, 2022. The objective at this stage is to establish a solid foundation and common understanding upon which the initial EDAM tariff rules will be drafted and presented for further comment. We welcome stakeholder comments and suggestions regarding this framework as part of any comments on the draft final proposal, which are due on November 22, 2022. The formal tariff development stakeholder initiative will start with publication of the draft tariff language based on the final proposal according to the overall initiative timeline published on the ISO website.

The ISO tariff framework is formatted to assist in understanding the organization and ultimate scope of the EDAM rules, including the relationship with generally applicable ISO tariff rules and, specifically, the ISO tariff rules applicable to the EDAM. Each section heading aligns with a corresponding section of the general ISO tariff rules and the specific EDAM rules. Following each heading is a short narrative that describes this relationship, where appropriate, and provides some context for the scope of rules that will be included in each section. Next, we have included an italicized parenthetical in some places noting that additional development is underway and which section of the EDAM rules may be referenced as relevant for this effort. Each of these outlined areas will be further developed and organized in the draft tariff language based on the EDAM final proposal.

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### **33 Extended Day-Ahead Market**

Pursuant to Section 33, the CAISO shall expand operation and settlement of the Day-Ahead Market in any Balancing Authority Area for which the Balancing Authority executes an EDAM Entity Agreement with the CAISO.

#### **33.1 General Provisions**

Participation, operation, and settlement of the EDAM will be subject to the provisions of CAISO Tariff Section 33, and to all other provisions of the CAISO Tariff to the extent those provisions are, by their terms, applicable to the EDAM. The provisions of Section 33 will apply only to the EDAM.

EDAM Market Participants will comply with the provisions of Section 33, and other applicable provisions of the CAISO Tariff to the extent such provisions expressly refer to Section 33 or EDAM Market Participants, are cross referenced in Section 33, or are not limited in applicability to the CAISO Controlled Grid, the CAISO Balancing Authority Area, or CAISO Markets other than the Day-Ahead Market or Real-Time Market.

If there is an inconsistency between a provision in Section 33 and another provision of the CAISO Tariff regarding the rights or obligations of EDAM Market Participants, except in their capacity as EIM Market Participants under Section 29, the provisions in Section 33 will prevail to the extent of the inconsistency. If there is an inconsistency between a provision in Section 33 and a provision in Section 29, the provisions will be given equal consideration.

##### **33.1.1 Suspension of EDAM Entity Participation**

The CAISO may, within 60 days following an EDAM Entity Implementation Date for an EDAM Entity, and pursuant to the terms of a Market Notice, temporarily suspend the participation of that EDAM Entity in the Day-Ahead Market for a period not to exceed 60



days if market or system operational issues adversely impact any portion of the EDAM Area, provided that the CAISO may continue operation of the Day-Ahead Market without the participation of the EDAM Entity for a reasonable additional period of time in order to implement a resolution of the market or system operational issues.

If the CAISO is not able to identify a resolution of the EDAM related market or system operational issues within 60 days after issuance of the Market Notice of temporary suspension of EDAM participation by an EDAM Entity, the CAISO may, upon issuance of a subsequent Market Notice, terminate participation by the EDAM Entity in the Day-Ahead Market and may extend the suspension of EDAM participation by the EDAM Entity for a time sufficient to process the termination of the EDAM Entity Agreement.

The CAISO may reinstate EDAM operations after a temporary suspension of EDAM participation by an EDAM Entity by issuing a Market Notice announcing the intended reinstatement no less than 5 days in advance of the reinstatement date. The CAISO may only reinstate EDAM operations with respect to an EDAM Entity after termination of EDAM participation by an EDAM Entity pursuant to an EDAM Entity Agreement accepted by FERC in accordance with its terms if the original EDAM Entity Agreement has terminated.

In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the EDAM Entity shall continue participation as an EIM Entity, specifically 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 suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity shall return to normal; or (ii) EDAM participation by the EDAM Entity has been terminated.

**33.1.1.1 EDAM Entity Action.** In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the EDAM Entity shall continue to submit EDAM Bids, forecast information and the associated meter data to enable continued operation of the Day-Ahead Market until the CAISO issues a subsequent Market Notice either that (a) the cause of the temporary suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity shall return to normal, or (b) EDAM participation by the EDAM Entity has been terminated.

**33.1.2.1 CAISO Action.** In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the CAISO shall (a) prevent EDAM Transfers and separate the EDAM Entity Balancing Authority Area from operation of the Day-Ahead Market in the EDAM Area in accordance with the provisions of the Business Practice Manual for the Extended Day-Ahead Market, (b) suspend Settlement of Day-Ahead Market charges with respect to the EDAM Entity in accordance with the provisions of the Business Practice Manual for the Extended Day-Ahead Market, and (c) issue a subsequent Market Notice either that the cause of the temporary suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity shall return to normal, or EDAM participation by the EDAM Entity has been terminated.

*[The scope of rules applicable to EDAM Market Participants and the EDAM more broadly will be further considered and set forth in Section 33.1 similar to the content and structure of the WEIM tariff Section 29.1]*

## **33.2 Access To EDAM**

Section 2 of the CAISO Tariff will not apply to EDAM Market Participants; rather, the specific

provisions of Section 33.2 will apply to EDAM Market Participants.

The CAISO will provide open and non-discriminatory access to the Day-Ahead Market, including the Extended Day-Ahead Market for Balancing Authorities that also participate in the Energy Imbalance Market, in accordance with the provisions of the CAISO Tariff. EIM Entities shall have no obligation to participate in the Extended Day-Ahead Market and may continue to participate solely in the Energy Imbalance Market.

**33.2.1 EDAM Implementation Agreement.** A Balancing Authority that wishes to become an EDAM Entity must first execute an EDAM Implementation Agreement with the CAISO that establishes the Implementation Date, an obligation to sign an EDAM Entity Agreement, the onboarding fee for its implementation, and the scope of work required for its participation in the EDAM. A prospective EDAM Entity may terminate its EDAM Implementation Agreement at any time and for any reason.

**33.2.2 Implementation Date.** The CAISO shall in its discretion determine the EDAM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems and the planned timing of the CAISO's implementation of software enhancements. The EDAM Entity Implementation Date must be not less than six months and not more than twenty-four months after the date that the EDAM Implementation Agreement between the CAISO and the Balancing Authority becomes effective in accordance with its terms. Once established, the EDAM Entity may request a change in the EDAM Entity Implementation Date to account for any circumstances that may impact affecting the implantation timeline.

**33.2.3 Market Simulation and Parallel Operations.** The CAISO and the prospective EDAM Entity shall engage in (a) market simulation that accounts for the prospective EIM Entity's implementation circumstances and (b) at least 30 days of parallel operations representing the Extended Day-Ahead Market to support the CAISO and the prospective EDAM Entity's implementation.

**33.2.4 Reporting.** The CAISO shall report on the CAISO Website periodically, but not less than once during market simulation on progress towards completing the implementation activities and once again during parallel operations confirming completion of the implementation activities.

**33.2.5 Implementation Activities.** The CAISO and the prospective EDAM Entity will engage in the following implementation activities: *[to be further considered]*

**33.2.6 Readiness.** No later than 10 days prior to the prospective EDAM Entity Implementation Date as established in the EDAM Entity Implementation Agreement, the CAISO will determine, in consultation with the prospective EDAM Entity, whether the systems and processes of the prospective EDAM Entity will be ready for the prospective EDAM Entity's participation in the Extended Day-Ahead Imbalance Market.

**33.2.7 Delay.** If, subsequent to readiness determination, the CAISO or the prospective EDAM Entity determines that it cannot proceed with implementation on the EDAM Entity Implementation Date, the CAISO and the prospective EDAM Entity will establish a new EIM Entity Implementation Date as soon as it can be determined and reflect that date in an updated version of the EDAM Entity Implementation Agreement.

*[The specific readiness process of EDAM Entities will be further considered and set forth in Section 33.2 similar to the content and structure of the WEIM tariff Section 29.2]*

### **33.3 [Not Used]**

The provisions applicable to transmission facilities owned by a Local Furnishing PTO or other

Tax-Exempt PTO in CAISO Tariff Section 3 do not apply to the EDAM.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.4 Roles And Responsibilities**

Section 4 will apply to EDAM Market Participants to the extent the roles and responsibilities are included the Extended Day-Ahead Market, in addition to the provisions in Section 33.4.

Nothing in Section 33 will alter the CAISO's responsibilities under the other sections of the CAISO Tariff, under any agreement not required by Section 33, or under NERC Reliability Standards or any other Applicable Reliability Criteria as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled Grid. During any interruption of the normal operation of the Day-Ahead Market, the CAISO as Balancing Authority will 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.

Nothing in Section 33 will alter an EDAM Entity's responsibilities under NERC Reliability Standards as the Balancing Authority for the EDAM Entity Balancing Authority Area and, to the extent applicable, as the transmission operator for transmission facilities within its Balancing Authority Area. During any interruption of the normal operation of the Day-Ahead Market, the EDAM Entity as Balancing Authority will remain responsible in accordance with Section 33.7 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. During any interruption of the normal operation of the Day-Ahead Market, the EDAM Entity as Balancing Authority shall remain responsible in accordance with Section 33.7 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.

#### **33.4.1 EDAM Entity**

An EDAM Entity must be a Balancing Authority registered and certified as such under the applicable authorities and execute an EDAM Entity Agreement no later than ninety (90) days before the Implementation Date. An EDAM Entity that wishes to terminate participation in the Day-Ahead Market must terminate the EIM Entity Agreement pursuant to its terms *[six months notice]*. Upon receipt of such notice, the CAISO shall undertake all necessary preparations to disable the Day-Ahead Market within the EDAM Entity Balancing Authority Area, as outlined in the Business Practice Manual for the Extended Day-Ahead Market, including issuance of a Market Notice within five Business Days after receipt of such notice.

An EDAM Entity shall:

- (a) perform the obligations of an EDAM Entity in accordance with the EDAM Entity Agreement, Section 33, and other provisions of the CAISO Tariff that by their terms apply to EDAM Entities, subject to the limitations specified in Section 33.1.x;
- (b) ensure that each EDAM Transmission Service Provider in its Balancing Authority Area has provisions in effect in the EDAM Transmission Service Provider's transmission tariff, as necessary or applicable, to enable operation of the Day-Ahead Market in its Balancing Authority Area;
- (c) qualify as or secure representation by no more than one EDAM Entity Scheduling Coordinator;

- (d) review and validate information about available transmission capacity submitted to it by an EDAM Transmission Service Provider and transmit such validated information to its EDAM Entity Scheduling Coordinator;
- (e) provide the CAISO and its EDAM Entity Scheduling Coordinator with information regarding the transmission capacity available to the Day-Ahead Market, including any information regarding Transmission Constraints of which it is aware;
- (f) define Load Aggregation Points in its Balancing Authority Area and be responsible for the associated Demand [*need to determine the roles and responsibilities for a Scheduling Coordinator representing demand within the EDAM Entity Balancing Authority Area if the EDAM Entity authorizes load aggregations to separately participate in the Day-Ahead Market*];
- (g) determine and inform the CAISO which resource types are eligible to participate in the Day-Ahead Market as resources and which transmission service providers or holders of transmission rights are EDAM Transmission Service Providers; and
- (h) inform the CAISO whether or not the EDAM Entity intends to utilize the CAISO's Demand Forecast consistent with Section 33.31.x.

### **33.4.2 EDAM Entity Scheduling Coordinator**

An EDAM Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator, and enter into an EDAM 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 EDAM Entity.

An EDAM Entity Scheduling Coordinator may represent a Market Participant other than an EDAM Entity if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant or more than one EDAM 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 EDAM Entity of the multiple representation. However, an EDAM Entity Scheduling Coordinator may not also be an EDAM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for a Participating Generator, Participating Load, or Demand Resource Provider, unless the EDAM Entity Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358 or is a governmental entity that agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358.

### **33.4.3 EDAM Participating Resources**

The owner or operator of a resource is required to (a) meet the eligibility requirements established by the EDAM Entity in whose Balancing Authority Area the resource is located or scheduled or to which it may be dynamically transferred, and (b) register with the CAISO as an EDAM Participating Resource if it is capable of delivering Energy, Imbalance Reserves, Flexible Ramping Capability, Ancillary Services, Curtailable Demand, Demand Response Services (or similar services) within the Day-Ahead Market timeframe.

**33.4.3.1 EDAM Participating Resource Agreement.** An EDAM Participating Resource must execute an EDAM Participating Resource Agreement and (a) perform the obligations of an EDAM Participating Resource under the EDAM Participating Resource Agreement and Section 33, (b) perform the obligations applicable to Market Participants and resources under the provisions of the CAISO Tariff described in Section 33.1x; and (c) if it represents a Generating Unit, Load of a Participating Load, Proxy Demand

Resource, or other qualified resource, perform the obligations required for the resource under the provisions of the CAISO Tariff described in section 33.1x.

**33.4.4 EDAM Participating Resource Scheduling Coordinator.** An EDAM Participating Resource Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator, and enter into an EDAM 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 EDAM Participating Resource.

An EDAM Participating Resource Scheduling Coordinator may represent more than one EDAM Participating Resource or a Market Participant other than an EDAM Participating Resource, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant. However, an EDAM Participating Resource Scheduling Coordinator may not also be an EDAM Entity Scheduling Coordinator unless the EDAM Participating Resource Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358 or is a governmental entity that agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358.

An EDAM Participating Resource Scheduling Coordinator must (a) perform the obligations of an EDAM Participating Resource Scheduling Coordinator under the EDAM Participating Resource Scheduling Coordinator Agreement and Section 33, (b) perform the obligations of a Scheduling Coordinator under the provisions of the CAISO Tariff described in Section 33.1x, (c) ensure that the entity it represents has obtained any transmission service necessary to participate in the Extended Day-Ahead Market under the terms of the CAISO Tariff or the tariff of another transmission service provider, as applicable, and (d) register in the manner set forth in the Business Practice Manual for the Extended Day-Ahead Market all EDAM Participating Resources that it represents, provide such information to the EDAM Entity Scheduling Coordinator, and update such information with the CAISO in a timely manner.

*[The specific roles and responsibilities of EDAM Market Participants will be further considered and set forth in Section 33.4 similar to the content and structure of the WEIM tariff Section 29.4]*

### **33.5 [Not Used]**

The provisions applicable to black start and system restoration in Section 5 do not apply to the EDAM.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.6 Communications**

Section 6 will govern communications and information availability regarding the participation of EDAM Market Participants in the Day-Ahead Market, except as Section 33.6 specifically provides.

**33.6.1 Technical Requirements.** The EDAM Entity shall meet the technical and communication requirements specified in the Business Practice Manual for the Extended Day-Ahead Market, which shall be based on the Inter-Control Center Communication Protocol and Reliability Standards.

**33.6.2 Communications and OASIS.** Section 6 shall govern communications and information availability regarding the participation of EDAM Market Participants in the Day-Ahead Market except that (a) references to internal resources shall be deemed to include EDAM Participating Resources, (b) 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, and (c) the provisions of Section 6.3.1 that authorize the CAISO to communicate directly with Generators and Demand Response Providers to ensure System Reliability shall not apply to Generators and Demand Response Providers in the EDAM Entity's Balancing Authority Area or pseudo-tied from an external Balancing Authority Area to the EDAM Entity Balancing Authority Area.

**33.6.3 Loss of Communications.** The CAISO and each EDAM Entity and EDAM Entity Scheduling Coordinator shall establish procedures to address an interruption of Day-Ahead 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 33. An EDAM Entity that loses communication with the CAISO remains responsible for managing its Balancing Authority Area without the Day-Ahead Market, and each EDAM Entity shall have communication procedures to address such circumstances.

**33.6.4 Variable Energy Resource Forecast Communications.** If the EDAM Participating Resource Scheduling Coordinator for a 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 Extended Day-Ahead Market.

**33.6.5 Hybrid Resource Forecast Communications.** If the EDAM Participating Resource Scheduling Coordinator for a Hybrid 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 Extended Day-Ahead Market.

*[The specific communication protocols and requirements of EDAM market participants will be further considered and set forth in Section 33.6 similar to the content and structure of the WEIM tariff Section 29.6]*

### **33.7 EDAM Operations Under Normal And Emergency Conditions**

Section 7 of the CAISO Tariff will not apply to EDAM Market Participants; rather, the specific provisions of Section 33.7 will apply to EDAM Market Participants.

#### **33.7.1 Normal Operations**

The CAISO will administer the transmission capacity made available to the Day-Ahead Market to support transfers of Energy, Reliability Capacity and Imbalance Reserves in the EDAM Area under normal operations. The CAISO will not issue Dispatch Instructions to an EDAM Entity Scheduling Coordinator for Load or Demand that has not been bid into the Day-Ahead Market. The CAISO will not issue Dispatch Instructions to an EDAM Resource Scheduling Coordinator for Supply, Reliability Capacity or Imbalance Reserves that have not been bid into the Day-Ahead Market.

**33.7.1.1 EDAM Transfer Modeling.** EDAM transfers exchange Energy, Imbalance Reserves, Reliability Capacity, Demand obligations, and Ancillary Services requirements between Balancing Authority Areas in the EDAM Area. The scheduling limit for each EDAM Transfer will be enforced in the IFM. The CAISO will model changes in the scheduled EDAM Transfers that result from the Day-Ahead Market as a Dynamic Schedule and will calculate the dynamic net scheduled EDAM Transfers for the CAISO and each EDM Entity Balancing Authority Area and derive from these dynamic net scheduled EDM Transfers the Dynamic Schedules on EDAM Internal Inertias for E-Tag purposes. The CAISO will manage EDAM Transfers in the Day-Ahead Market as



Dynamic Schedules with each EDAM Entity Balancing Authority Area, which (1) shall not require individual resource E-Tags, (2) shall reflect incremental EDAM Transfers between the CAISO Balancing Authority Area and each EIM Entity Balancing Authority Area scheduling limit for each EDAM Transfer will be enforced in the IFM.

**33.7.2 Manual Dispatch.** The EDAM Entity may issue an EDAM Manual Dispatch to an EDAM Participating Resource in its Balancing Authority Area, outside of the Market Clearing of the Day-Ahead Market, and enforce Transmission Constraints when necessary to address issues in the EDAM Entity Balancing Authority Area that the CAISO is unable to address through normal economic Dispatch and Congestion Management. The EDAM Entity will immediately inform the CAISO of the EDAM Manual Dispatch and if the EDAM Entity Balancing Authority Area is under manual operation. Upon receiving notice of an EDAM Manual Dispatch, the CAISO will reflect the EDAM Manual Dispatch in the applicable CAISO Market depending upon when the notice is received and only to the extent that reflection of the EDAM Manual Dispatch in the market is practicable.

### **33.7.3 EDAM Disruption.**

The CAISO may declare an interruption of EDAM Entity participation in the Day-Ahead Market when in its judgment (a) operational circumstances (including a failure of the Day-Ahead Market operation to produce feasible results in the EDAM Area or other CAISO Market Disruption) in the EDAM Area have caused or are in danger of causing an abnormal system condition in the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area that requires immediate action, or (b) communications between the CAISO and EDAM Market Participants are disrupted and prevent an EDAM Entity, EDAM Entity Scheduling Coordinator, or EDAM Participating Resource Scheduling Coordinator from accessing CAISO systems to submit or receive information. The CAISO shall reinstate normal operation of the Day-Ahead Market in the EDAM Area at such time as it determines that the conditions that caused the interruption of EDAM Entity participation in the Day-Ahead Market have been resolved.

**33.7.3.1 CAISO Response to EDAM Disruption.** If the CAISO declares an interruption of EDAM Entity participation in the Day-Ahead Market, the CAISO may in its judgment, among other things, (a) separate the affected EDAM Entity Balancing Authority Area from the EDAM Area and maintain the Day-Ahead Market for other Balancing Authority Areas in the EDAM Area by enforcing a net transfer constraint for the affected Balancing Authority Area to separate it from the remainder of the EDAM Area, (b) reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area with authorization from the impacted EDAM Entities and communication and coordination with all EDAM Entities to assess and mitigate potential issues within the EDAM Area [*need to further consider appropriate operational procedures with respect to curtailment of transfers in the EDAM Area to maintain reliability and confidence in transfers*], (c) instruct one or more EDAM Entities to maintain system balance within their Balancing Authority Area without Day-Ahead Market results, (d) in addition or as an alternative, use market results in the Day-Ahead Market in accordance with Section 7.7.9 or take any of the actions specified in Section 7.7.6 with respect to the Day-Ahead Market, except that if Section 7.7.6 calls for the use of Day-Ahead Market results, (e) suspend or limit the ability of all Scheduling Coordinators to submit Virtual Bids on behalf of Convergence Bidding Entities at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes, or (f) postpone the publication of Day-Ahead Market results.

**33.7.3.2 EDAM Entity Responsibility.** In response to an interruption of EDAM Entity

participation in the Day-Ahead Market by the CAISO, all EDAM 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 and all EIM Entity Scheduling Coordinators shall promptly inform the CAISO of actions taken by the EDAM Entities they represent in response to an interruption of EDAM Entity participation in the Day-Ahead Market by the CAISO through updates to their Schedules, Interchange E-Tags, transmission limit adjustments, or Outage and derate information, as applicable. If it is necessary for an EDAM Entity to reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area, the EDAM Entity must communicate and coordinate the CAISO and impacted EDAM Entities prior to curtailing EDAM Transfers, and should continue to communicate and coordinate with the CAISO and all EDAM Entities to assess and mitigate potential issues within the EDAM Area. *[Need to further consider appropriate operational procedures with respect to curtailment of transfers in the EDAM Area to maintain reliability and confidence in transfers]*

*[The specific procedures under normal and emergency conditions applicable to the CAISO and EDAM market participants will be further considered and set forth in Section 33.7 similar to the content and structure of the WEIM tariff Section 29.7]*

### **33.8 [Not Used]**

Ancillary services are not procured through the EDAM, and the ancillary services provisions of Section 8 do not apply to the EDAM.

*[Hold open for specific rules associated with Ancillary Services should further proposals implement procurement through the EDAM, meaning until such time the provisions of Section 8 applicable to Scheduling Coordinators will not apply to EDAM Entity Scheduling Coordinators and each EDAM Entity will remain responsible for procuring and maintaining its own ancillary services to meet its obligations.]*

### **33.9 Outages and Critical Contingencies**

Section 9 will not apply to EDAM Market Participants except as referenced in Section 33.9 *[adjust if alternatively this section references Section 29.9]*.

The EDAM Entity is responsible for performing engineering studies and approving Outages on transmission facilities for maintenance purposes and EDAM Resources within the EDAM Entity Balancing Authority Area. This includes making any necessary arrangements for this purpose regarding the transmission capacity made available by an EDAM Transmission Service Provider to the Day-Ahead Market. The EDAM Entity Scheduling Coordinator shall submit notice of transmission Outages approved by the EDAM Entity to the CAISO by the means set forth in the Business Practice Manual for the Extended Day Ahead Market and at least seven Business Days prior to the planned Outage. The CAISO will implement the transmission and Generation Outages approved by the EDAM Entity through the Day-Ahead Market process and will inform the EDAM Entity of any anticipated overloads.

An EDAM Entity Scheduling Coordinator will comply with the reporting provisions of Section 9 regarding Forced Outages of transmission facilities within the EDAM Entity Balancing Authority Area they represent, and an EDAM Resource Scheduling Coordinator will comply with the reporting provisions of Section 9 with regard to Forced Outages of Generating Units it represents as EDAM Resources. An EDAM Entity Scheduling Coordinator must notify the CAISO by the means specified in the Business Practice Manual for the Extended Day Ahead Market regarding transmission limits on the transmission capacity made available to the Day-Ahead Market within the EIM Entity Balancing Authority Area that need to be enforced in the Day-Ahead Market.

*[The specific outage and critical contingency procedures applicable to EDAM Entities and the CAISO will be further considered and set forth in section 33.9 similar to the content and structure of the WEIM tariff section 29.9]*

### **33.10 Metering and Settlement Data**

The metering and settlement data requirements provisions of Section 10 will apply in the EDAM, including any exceptions provided in Section 10.

The EDAM Entity will ensure telemetry meeting the requirements of the Business Practice Manual for the Extended Day-Ahead Market is available from (1) each EDAM Participating Resource in an EDAM Entity Balancing Authority Area that is not a Generating Unit or is a Generating Unit with a rated capacity of 10 MW or greater (including storage resources), (2) each aggregated resource with a total rated capacity of 10 MW or greater, and (3) each EIM Intertie.

The EDAM Entity will ensure that any Load Aggregation Point in its Balancing Authority Area not represented by the EDAM Entity Scheduling Coordinator is separately metered so that the associated Demand may be settled. *[Need to determine the metering and other requirements applicable to a scheduling coordinator representing load within the EDAM Entity Balancing Authority Area if the EDAM Entity authorizes load aggregations to separately participate in the Day-Ahead Market.]*

The EDAM Entity will ensure each EDAM Market Participant in an EDAM 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 33.10.x. Metering for Settlement purposes is required for all EDAM Interties. For each EDAM External Intertie Bid that clears the IFM resulting in a 15-minute EDAM External Intertie schedule, the EDAM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags. These must reflect the Point of Receipt and Point of Delivery that was declared in the IFM Bid submittal, at least 20 minutes before the start of the Operating Hour, and the EDAM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.5.7.

*[The specific metering and settlement data requirements will be further considered and set forth in Section 33.10 similar to the content and structure of the WEIM tariff Section 29.10]*

### **33.11 Settlements And Billing for EDAM Market Participants**

The EDAM will extend the existing Day-Ahead Market settlement practices and timelines and develop some new settlement practices for EDAM Entity Balancing Authority Areas and EDAM Market Participants. Section 33.11, rather than Section 11, will apply to CAISO Settlement with EDAM Entity Scheduling Coordinators, EDAM Participating Resource Scheduling Coordinators and EDAM Market Participants, except as otherwise provided in Section 33.11.

*[Section 29.11 references Section 11 with respect to settlement rules that apply to the determination of prices and the allocation of costs among BAAs in the EDAM Area. It will be necessary to further consider the relationship between Section 33.11 and Section 11 to ensure appropriate inclusion of EDAM settlement rules within the CAISO Tariff.]*

#### **33.11.1 Transfer Revenue and Congestion Revenue Allocation**

The CAISO will model internal transmission constraints, internal transmission limits, and transmission transfer limits in the EDAM. If these internal transmission limitations or constraints are reached – the constraint or limit binds – the market will seek to re-dispatch around these constraints and the marginal cost of congestion (MCC) component within the LMP accounts for differences between the incremental cost to serve demand and recovers

these costs as congestion revenues.

Transmission available at EDAM Internal Interties will similarly have constraints, largely informed by the amount of transmission capacity made available across the transfer interface; *i.e.*, a scheduling limit. When a transfer scheduling limit is reached, *i.e.*, becomes binding, the market will seek to re-dispatch to meet the obligations across the footprint and may award capacity from higher cost resources within the BAA to meet demand and other requirements, resulting in price separation of the marginal energy component (MEC) of the LMP for the binding BAA and the rest of the EDAM Area, which represents the accrual of transfer revenue.

### **33.11.1.1 Transfer Revenue**

The EDAM will incorporate a power balance constraint in the Marginal Cost of Congestion (MCC) component of the Locational Marginal Price (LMP) for each Balancing Authority Area in the EDAM Area. The EDAM will also retain the transmission constraint violation in the MCC component of the LMP, such that the marginal cost of Energy (MEC) in each Balancing Authority Area reflects the shadow price of the power balance constraint of that Balancing Authority Area. The MCC reflects the shadow price of a binding transmission constraint, and Energy transfer revenue will be collected from price differences between the MEC component of the LMP across BAAs, which is caused by transfer schedules reaching their scheduling limits. The CAISO will calculate transfer revenues for energy transfers, imbalance reserve transfers, and/or reliability capacity transfers for all participating BAAs when the transfer scheduling limit is binding.

Transfer revenue for energy occurs when the EDAM BAA net transfer scheduling limit binds as market clearing bid in supply against bid in demand. This binding constraint manifests as a separation of the marginal energy price of the binding EDAM BAA from the marginal energy price of neighboring EDAM BAAs. There will be a 50:50 sharing between EDAM BAAs of transfer revenues accruing at transmission interfaces supporting EDAM transfers. The exception to the sharing of transfer revenue 50:50 between two EDAM BAAs is when transmission across an interface is made available by a transmission customer under pathway 2. The CAISO will allocate those transfer revenues to the EDAM entities and transmission providers supporting the transfer. Where the transmission customer releases its transmission rights for EDAM optimization in advance of the market run at 10 a.m., the CAISO will allocate 100 percent of full transfer revenues associated with the released transmission rights directly to the respective transmission customer. In unique instances where a 50:50 sharing of transfer revenue does not align with the commercial arrangement for the transfer transmission (*i.e.*, specific contracts between entities), different transfer revenue sharing arrangements can be accommodated.

#### **33.11.1.1.1 Imbalance Reserve Transfer Revenue**

Transfer revenue for imbalance reserve up and imbalance reserve down (IRU/IRD) manifests when a transfer scheduling limit binds while optimizing capacity to meet BAA uncertainty requirement. The binding constraint manifests as separation of imbalance reserve up price/imbalance reserve down price (IRUP/IRD) in the binding EDAM BAA from the IRUP/IRD. The CAISO will calculate an hourly transfer revenue for IRU/IRD for each transfer point in which the transfer scheduling limit is binding. The transfer revenue equals the product of the transfer quantity and the difference between the transfer import IRUP/IRD price and transfer export IRUP/IRD. The transfer revenue for energy is distributed to the EDAM BAAs including the CAISO BAA at a 50:50 ratio. EDAM BAA transfer revenue will be

distributed to the EDAM Entity for sub-allocation per its OATT. CAISO BAA transfer revenue is further distributed to metered demand.

### **33.11.1.1.2 Reliability Capacity Transfer Revenue**

Transfer revenue for reliability capacity up and reliability capacity down (RCU/RCD) manifests when transfer scheduling limit binds in RUC. The binding constraint manifests as separation of reliability capacity up price/reliability capacity down price (RCUP/RCDP) in the binding EDAM BAA from the RCUP/RCDP. The CAISO will calculate an hourly transfer revenue for RCUP/RCDP for each transfer point in which the transfer scheduling limits is binding. The transfer revenue equals the product of the transfer quantity and the difference between the transfer import RCUP/RCDP and transfer export RCUP/RCDP. The transfer revenue for energy is distributed to the EDAM BAAs including the CAISO BAA at a 50:50 ratio. EDAM BAA transfer revenue will be distributed to the EDAM Entity for sub-allocation per its OATT. CAISO BAA transfer revenue is further distributed to transmission rights holders, if applicable, or to scheduling coordinators in proportion to metered demand compared to CAISO total metered demand.

### **33.11.1.2 Congestion Revenue**

Congestion revenue will be collected from price differences in the MCC of the LMP across nodes within a BAA or between intertie scheduling points at the boundary of an EDAM BAA and internal nodes, the latter of which is caused by binding scheduling limits at the intertie (*i.e.*, the ITC/ISL). If there is a binding intertie transmission constraint/intertie scheduling limit constraint (ITC/ISL), the CAISO will allocate 100 percent of the full (100:0) congestion revenue to the EDAM BAA or CAISO BAA where the constraint is modeled. *[Note: This approach differs from how these revenues are allocated in the WEIM today, but the WEIM would be modified to adopt the proposed EDAM congestion revenue allocation method.]*

**33.11.1.2.1 Multiple Transmission Owners.** The accrual and disposition of congestion revenues associated with multiple transmission owners within an EDAM BAA depends on the individual ownership rights, contractual arrangements and physical aspects of the transmission system and as such would be addressed and delineated during the implementation and onboarding process of an EDAM entity and the associated circumstances and arrangements.

### **33.11.2 RSE Surcharge**

An EDAM Entity that fails the EDAM RSE for its Balancing Authority Area will be assessed a surcharge based on the direction of the failure (*i.e.*, upward or downward), the magnitude of the failure, and the hour(s) in which the failure occurs. Failure in the upward direction in an off-peak hour results in an off-peak upward surcharge in that failed hour. Failure in upward direction in at least one hour of a 16 hour on-peak period results in an on-peak upward surcharge for each hour within the 16-hour peak block period. Failure in the downward direction results in a downward surcharge for each failed hour.

*[Note: The CAISO is also working with stakeholders on a WEIM RSE energy assistance transfer option that would have some settlement implications that may need to be reflected in Section 33 or 29.]*

#### **33.11.2.1 RSE Surcharge Calculation**

The RSE off-peak upward surcharge is the product of the hourly RSE deficiency quantity, the Balancing Authority Area load weighted average LMP, and the RSE failure



multiplier adjusted by any scaled persistent RSE failure factor. The RSE failure consequence multiplier will depend upon the amount of deficiencies cured by the market and will be 0, 1.25, or 2. The persistent RSE failure factor is calculated on a rolling prior 30 day window and is the product of the number of daily upward RSE tier two or above RSE failure consequences levels in that rolling 30 day period less RSE threshold and a configurable RSE scaling factor.

The RSE on-peak upward surcharge for each hour within the 16 hour block on-peak period is the product of the highest RSE deficiency quantity across the on-peak hours, the higher of the bilateral hub price of MID-C or bilateral hub price at Palo Verde, and the RSE failure multiplier adjusted by any scaled persistent RSE failure factor. Tier 2 and Tier 3 failure multiplier will be scaled prospectively for every daily failure during the retroactive 30-day period. For every additional failure over a rolling 30-day window, 1% will be added to the surcharge starting with the second failure. These parameters can be adjusted in the future as necessary, based on EDAM experience to discourage repeated and systemic failures.

For hours within the 16 hour block period where the Balancing Authority Area passed the RSE upward test, the hourly surcharge will be adjusted by the RSE pass credit amount, which is the product of the highest deficiency quantity and the Balancing Authority Area load weighted average LMP of the passed hour. If this credit exceeds the surcharge, the surcharge will be capped at zero.

The RSE downward surcharge in each failed hour is the product of the hourly RSE deficiency quantity and the marginal energy cost for that BAA.

### **33.11.2.2 RSE Surcharge Distribution**

On an hourly basis, the CAISO will sum the RSE off peak upward surcharge revenue of the Balancing Authority Areas that failed the RSE upward test and distribute the revenue to Balancing Authority Areas that passed the RSE upward test pro-rata based upon a Balancing Authority Area's total net export transfer to total net export transfer of all the Balancing Authority Areas that passed the RSE upward test. On an hourly basis, the CAISO will calculate the sum of the RSE on-peak surcharge revenue of the Balancing Authority Areas that failed the RSE upward test and distribute the revenue to Balancing Authority Areas that passed the all-peak hour RSE upward tests pro-rata based upon a Balancing Authority Area's total net export transfer to total net export transfer of the Balancing Authority Areas that passed the RSE upward test. In addition, the total net export transfer equals the sum of the net energy transfer plus net imbalance reserve transfer. On an hourly basis, the RSE downward surcharge revenue will be distributed to those Balancing Authority Areas, in that hour, that passed the RSE downward test pro-rata based on their load forecast in relationship to total load forecast of those Balancing Authority Areas that passed the RSE downward test. After distributing the RSE administrative penalty revenue to the Balancing Authority Areas, the CAISO will distribute the total Balancing Authority Area RSE surcharge revenue to the EDAM Entity for sub-allocation per the EDAM Entity tariff. For the CAISO Balancing Authority Area, the total RSE surcharge revenue will be allocated to participants within the CAISO BAA *[to be determined in an upcoming CAISO BAA implementation initiative]*

### **33.11.2.3 RSE Surcharge Allocation**

EDAM Entity Balancing Authority Area failure surcharges will be allocated directly to the EDAM Entity for allocation pursuant to its tariff. CAISO Balancing Authority Areas failure surcharges will be allocated by the CAISO through a two-tiered approach, with the first-



tier allocation to the Resource Adequacy resources that contribute to the CAISO deficiency up to the higher of the bilateral hub price at MID-C or the bi-lateral price at Palo Verde, and the second tier for any surcharge not allocated under tier one allocated to CAISO Metered Demand.

### **33.11.3 Day-Ahead Market Settlement**

The CAISO will determine charges and payments based on Day-Ahead Market outcomes and transmission made available to support EDAM Transfers, and will settle the results of the IFM and RUC processes as described in the following sub-sections.

#### **33.11.3.1 Integrated Forward Market (IFM)**

IFM hourly day-ahead energy schedules will have an explicit settlement, while IFM commitment costs will be considered in bid cost recovery calculations.

##### **33.11.3.1.1 Energy Schedules and Convergence Bids**

Generation that clears the Day-Ahead Market is paid the LMP at the relevant pricing node location. An import schedule is paid the LMP at the relevant scheduling point-intertie pricing location. Virtual supply is paid the LMP at the relevant pricing node, trading hub, or aggregated pricing node location in which the virtual supply cleared the Day-Ahead Market.

Demand that clears the Day-Ahead Market will be charged the LMP at the relevant load aggregation point (LAP). An export schedule will be charged the LMP at the relevant scheduling point-intertie pricing location. Virtual demand is charged the LMP at the relevant pricing node, trading hub, or aggregated pricing location, including load aggregation points in which the virtual demand cleared the Day-Ahead Market.

Energy transferred between BAAs in the EDAM Area will settle both as an export energy transfer and import energy transfer. These import and export energy transfers will be paid and charged at the LMP at their relevant scheduling point-intertie locations.

##### **33.11.3.1.2 Greenhouse Gas (GHG)**

Resources that receive a day-ahead GHG attribution to serve demand in a GHG region will receive a GHG payment. The GHG payment is the product of the IFM GHG obligation and the IFM marginal GHG price. The GHG region load being served by non-GHG supply will have its GHG charge settlement embedded within the overall load energy schedule settlement.

##### **33.11.3.1.3 EDAM Legacy Contracts, EDAM Ownership Rights and Pathway 1 Day-Ahead Schedules**

Scheduling Coordinators who self-schedule energy in the IFM using their qualified and registered rights will settle at the LMP in a manner similar to all other day-ahead schedules. However, the balanced portion of the schedule is eligible for mitigation against congestion. The CAISO will facilitate this mitigation by reversing the marginal cost of congestion component of the LMP difference between the balanced source day ahead schedule and sink day ahead schedule. The CAISO will include these congestion costs in the calculation of Day Ahead Congestion revenue. In addition, long-term contracts with special marginal losses provision will have a similar settlement mechanism apply to the marginal cost of losses component of LMP.

##### **33.11.3.1.4 Neutrality**

Settlements will consider the energy settlement of each component of the LMP to ensure neutrality: marginal energy cost, marginal cost of congestion, marginal cost of losses, and marginal cost of GHG.

#### **33.11.3.1.4.1 Marginal Loss Offset**

The CAISO will calculate an hourly day-ahead marginal loss offset amount for each BAA. The hourly day-ahead marginal loss offset amount will equal the sum of the product of day-ahead energy schedules, including virtual schedules and transfer energy schedules, and the marginal cost of losses at their relevant pricing location. The CAISO will allocate the hourly day-ahead marginal loss offset amount to the EDAM Entity and, for the CAISO BAA, to measured demand. The hourly day-ahead marginal losses offset amount will also include any marginal losses reversal from balanced schedule portions of EDAM Legacy Contracts and Pathway 1 transmission rights.

#### **33.11.3.1.4.2 Greenhouse Gas Offset**

The CAISO will calculate an hourly day-ahead marginal GHG offset amount for the EDAM Area in relationship to GHG region(s) vs the non-GHG region. The hourly day-ahead marginal GHG offset amount will equal the sum of the product of day-ahead energy schedules, including virtual schedules and energy transfer schedules, the GHG transfer schedule, and the marginal cost of GHG. The CAISO will allocate the BAA hourly day-ahead marginal GHG offset amount to a GHG region's metered demand. If more than one GHG region exists with different GHG accounting rules, this will require calculation of a separate GHG marginal offset amount for each GHG region.

#### **33.11.3.1.4.3 Marginal Congestion Offset**

The CAISO will calculate an hourly day-ahead marginal congestion offset revenue for each EDAM BAA. The hourly day-ahead marginal congestion offset revenue will equal the sum of the product of day-ahead energy schedules, including virtual schedules and energy transfer schedules, and the marginal cost of congestion contribution for each EDAM BAA at its relevant pricing location and considering relevant intertie transmission constraints. The hourly day-ahead congestion revenue amount will also include any ETC/TOR marginal congestion reversal amounts. The CAISO will allocate the hourly day-ahead marginal congestion revenue amount to each EDAM Entity and the hourly day-ahead marginal congestion revenue amount allocated to the CAISO BAA will be distributed first to CRRs and then to any surplus allocated to measured demand per the CAISO tariff.

#### **33.11.3.1.4.4 Marginal Energy Offset**

The CAISO will calculate an hourly day-ahead marginal energy offset amount for each EDAM BAA. The BAA hourly day-ahead marginal congestion offset amount will equal the remainder of the hourly day-ahead energy settlement less the offset amounts attributed to BAA day-ahead marginal cost of losses, BAA day-ahead marginal cost of greenhouse gas, and the BAA day-ahead marginal cost of congestion. The CAISO will allocate the hourly day-ahead marginal energy offset amount to the EDAM Entity and for the CAISO BAA to metered demand.

#### **33.11.3.1.5 Transmission Revenue Recovery**

*[Transmission revenue recovery is outlined in Section 33.26, understanding that*

*associated settlement rules would be addressed in Section 33.11 as appropriate, which will be reflected after the proposal is further developed.]*

#### **33.11.3.1.6 Imbalance Reserve Settlement**

Resources that receive an imbalance reserve upward (IRU) capacity award will be paid the applicable nodal imbalance reserve upward price (IRUP). These resources will have a must offer obligation to bid the IRU capacity into the real-time market (RTM). If the resource does not meet its must offer obligation, the CAISO will assess a non-compliance rescission charge for the 10-minute-ramp-capable portion not bid into the RTM. EDAM transfer resources that received an IRU capacity award will be charged the IRUP of the BAA out of which the capacity requirement is transferring and be paid the IRUP of the BAA into which the capacity requirement is transferring.

Resources that receive an IRD capacity award will be paid the applicable nodal IRDP. These resources will have a must offer obligation to bid the IRD capacity into the RTM. If the resource does not meet its must offer obligation, the CAISO will assess a non-compliance rescission charge for the 10-minute-ramp-capable portion not bid into the RTM. EDAM transfer resources that received an IRD capacity award will be charged the IRDP of the BAA out of which the capacity requirement is transferring and be paid the IRDP of the BAA into which the capacity requirement is transferring.

The CAISO will separately allocate each EDAM BAA's IRU and IRD costs through a two-tier allocation methodology under development in the DAME initiative. The allocation methodology adopted from the DAME initiative will be considered for inclusion in Section 33.11 as appropriate.

#### **33.11.3.1.7 Ancillary Service Settlement**

The IFM will initially co-optimize energy and imbalance reserve for each EDAM BAA and energy, ancillary services, and imbalance reserves for the CAISO BAA. During this time, the CAISO will settle CAISO ancillary service awards and self-provisions associated with EDAM in same manner it does today.

The CAISO will not settle Ancillary Services in the EDAM because the IFM does not procure Ancillary Services for EDAM BAAs nor do EDAM Participating Resource Scheduling Coordinators submit Bids for Ancillary Services or self-provide Ancillary Services to the IFM.

#### **33.11.3.1.8 Bid Cost Recovery**

The CAISO will provide EDAM Participating Resources Bid Cost Recovery in accordance with Section 11.8, treating EDAM Participating Resources as BCR Eligible Resources.

For each trading hour, the CAISO will calculate the total IFM bid cost recovery amount (IFM BCR amount) for each EDAM BAA. For a BAA with net energy export transfer, which is the sum of BAA net energy transfer plus the BAA net imbalance reserve transfer is the export direction, the CAISO will transfer a portion of the BAA's IFM BCR amount to BAAs receiving net import transfers, where sum of BAA net energy transfer plus the BAA net imbalance reserve transfer is the import direction. This IFM BAA BCR transfer adjustment amount will equal the product of the BAA hourly IFM BCR amount and the BAA net transfer export divided by the sum of the BAA net energy transfer plus day-ahead load schedule and day-ahead export schedules. The IFM BAA BCR adjustment amount will be allocated to BAAs with net

transfers in the import direction and added to the BAA IFM BCR amount. For EDAM BAAs, the adjusted BAA IFM BCR amounts will be allocated to the EDAM Entity for allocation under its tariff and, for the CAISO BAA, through the current two-tier IFM BCR allocation in the CAISO tariff.

#### **33.11.3.1.9 Reliability Capacity**

Resources that received a reliability capacity up (RCU) award will be paid the marginal reliability capacity up price. Resources that received a reliability capacity down (RCD) award will be paid the marginal reliability capacity down price. Resources that receive a RCU award or RCD award have a real-time must offer obligation. Resources that do not submit RCU/RCD quantities in accordance with their RTM must offer obligation will be subject to a non-compliance charge.

The CAISO will calculate the total BAA net reliability capacity up amount as the sum of the EDAM BAA resource reliability capacity up settlement, BAA resource reliability capacity up non-compliance amount, and the BAA reliability capacity up transfer amount. The CAISO will calculate the total BAA net reliability capacity down capacity amount as the sum of the EDAM BAA resource reliability capacity down settlement, BAA resource reliability capacity down non-compliance amount, and the BAA reliability capacity down transfer amount. The total BAA net reliability capacity up capacity amount and the total BAA net reliability capacity down amount will be allocated according to the two-tier allocation being developed in the DAME initiative.

#### **33.11.3.1.10 RUC Bid Cost Recovery**

The CAISO will calculate BCR for each eligible resource. The CAISO will calculate the RUC shortfall and RUC surplus for each trading hour of trading day. In addition, the CAISO will apply the BCR netting process between net RUC BCR shortfalls and RTM surpluses and net RUC surplus and RTM shortfalls. If the total net RUC surplus over a trading day does not exceed the resource's daily RUC shortfalls, the resource is eligible to recover the daily RUC shortfall in the trade hours in which the resource was short revenue.

For each Trading hour, the CAISO will calculate the total BAA RUC bid cost recovery amount (RUC BCR net amount). The total BAA RUC BCR amount will be allocated to the appropriate BAA according the two-tier RUC allocation methodology being developed in DAME initiative.

### **33.11.3.2 Real-Time Market Settlement**

The RTM is composed of the real time resource sufficiency evaluation (EIM RSE), hour-ahead scheduling process (HASP), short-term unit commitment process (STUC), fifteen minute market (FMM), and real time dispatch process (RTD). The RTM co-optimizes energy bids, greenhouse gas bids, and ancillary service bids to meet demand forecast and uncertainty needs and real time ancillary service requirements. For EDAM Market Participants, RTM settlement is mainly an imbalance settlement of energy, ancillary services, and flexible ramp product from day-ahead schedules and awards because base schedules no longer serve as the reference point.

#### **33.11.3.2.1 Under-scheduling and Over-scheduling Charge**

EDAM BAAs will no longer be subject to the over-scheduling/under scheduling charge, nor will they be eligible to receive any funds collected via the over-scheduling/under-scheduling charge structure in place for the EIM.

#### **33.11.3.2.2 Imbalance Energy**

The CAISO settles imbalance energy for each resource within the EIM/CAISO BAA dispatched in real-time. There are four categories of imbalance energy: FMM instructed imbalance energy, RTD instructed imbalance energy, uninstructed imbalance energy, and unaccounted for imbalance energy. In addition, the CAISO will account for any non-zero neutrality amounts which materialize from imbalance energy settlement.

#### **33.11.3.2.2.1 Fifteen Minute Market (FMM)**

The FMM IIE settlement will resemble current FMM IIE settlement, except the reference point for FMM IIE settlement will be the resource's day-ahead schedule, not its real-time base schedule. Intertie schedules awarded an energy schedule in the day-ahead market that subsequently have an incremental/decremental FMM schedule change in the RTM, and did not submit an energy profile tag prior to HASP, will be subject to the HASP reversal rule applied through settlement. FMM energy transfer schedules will settle as FMM IIE at the LMP for the applicable scheduling point-ties between EDAM BAAs.

#### **33.11.3.2.2.2 Real-Time Dispatch (RTD)**

The RTD IIE settlement will resemble current RTD IIE settlement. The EDAM proposal also introduces a new RTM RTD settlement charge. RTD energy transfer schedules will settle as RTD IIE at the LMP of applicable scheduling point-tie(s) between EDAM BAAs.

#### **33.11.3.2.2.3 Uninstructed Imbalance Energy (UIE)**

The UIE will be the same as today. Resource specific UIE will settle at the RTD LMP, and load UIE will settle at the RTM hourly LAP LMP.

#### **33.11.3.2.2.4 EDAM Legacy Contracts, EDAM Ownership Rights and Pathway 1 Real-Time Schedules**

Scheduling Coordinators who self-schedule energy in the RTM using their registered rights will settle any imbalance energy at the relevant LMP in a manner similar to all other imbalance energy settlement. Because the imbalance settlement reflects the imbalance energy between day ahead schedules and meter/tags, the CAISO will derive the incremental/decremental imbalance ETC/TOR balanced quantity. These resource imbalance ETC/TOR quantities are eligible for mitigation against RTM congestion. The CAISO will facilitate this mitigation by reversing the marginal cost of congestion component of the LMP difference between the balanced source imbalance energy quantity and sink imbalance energy quantity. The CAISO will include these congestion costs in the calculation of real time congestion offset. In addition, long-term contracts with special marginal losses provision will have a similar settlement mechanism apply to RTM marginal cost of losses component of LMP.

#### **33.11.3.2.2.5 Unaccounted for Energy (UFE)**

UFE will settle at the hourly RTM LAP LMP and will be allocated to relevant metered demand depending upon the EDAM Entity election regarding its Unaccounted for Energy election.

#### **33.11.3.2.3 Greenhouse Gas (GHG)**

RTM GHG settlement is considered an imbalance settlement from day-ahead GHG settlement. If the RTM dispatches energy from a non-GHG Regulation Area to



support a transfer to a GHG Regulation Area, this energy will be attributed to resources based upon their GHG bids and the least cost solution.

The FMM will attribute GHG MWs to resources based upon the least cost solution and GHG bid. The GHG settlement for the resource will be an imbalance settlement from its day-ahead GHG attribution. The FMM GHG settlement will equal the product of the FMM GHG attribution less the day-ahead attribution and the FMM marginal cost of GHG.

RTD GHG settlement is also an imbalance settlement, but the reference point is the FMM GHG attribution MWs. Similar to FMM GHG settlement, the RTD GHG settlement will equal the product of the RTD GHG attribution less FMM attribution and the RTD marginal cost of GHG.

#### **33.11.3.2.4 Real-Time Offsets**

The BAA real-time marginal loss offset settlement and BAA real-time congestion offset settlement will account for any ETC/TOR marginal losses reversal and ETC/TOR real time congestion reversal, if applicable. The CAISO will calculate these offsets for each BAA based upon the nodal energy dispatch, the relevant FMM or RTD marginal cost of losses price, and the relevant FMM or RTD BAA marginal cost of congestion price. For EDAM BAAs, the CAISO will allocate the BAA level offsets directly to the EDAM BAA and, for the CAISO BAA, to measured demand. The CAISO will not include the calculation for financial transfer amounts, and will develop a RTM GHG offset charge code.

#### **33.11.3.2.5 Ancillary Services**

EDAM BAAs will provide the RTM with total ancillary service self-provision. This RTM self-provision should equal the day-ahead self-provision or day-ahead self-provision plus any incremental real-time self-provision if ancillary service requirements increase in the RTM. Resources that receive a RTM ancillary service award will be paid the RTM ancillary service marginal price. These RTM ancillary service awards will be subject to the same non-compliance provision as the day-ahead ancillary service awards. The CAISO will allocate the ancillary service cost less the payment rescission to scheduling coordinators based upon ancillary service obligations netted against ancillary service self-provision.

#### **33.11.3.2.6 Intertie Deviations**

The intertie deviation penalty (IDS) is a charge applied to intertie resources that receive an award in HASP and submit an after-the-fact tag that deviates from that HASP schedule. However, if the deviation results from a reliability curtailment, the resource's reliability curtailment is excluded from the penalty. The IDS penalty is calculated for each deviating intertie resource as the product the IDS deviation quantity, which is the difference between resource e-tag and HASP award, and the IDS price. The IDS price is 50% of the greater of the FMM LMP or RTD LMP for of that settlement interval. In addition, a 25% charge applies if the resource accepted the award but does not tag its accepted award. The IDS penalty is then allocated to the BAA measured demand. The IDS penalty will not be assessed at the start of EDAM except for the CAISO Balancing Authority Area.

#### **33.11.3.2.7 Flexible Ramping Product**

The CAISO will settle forecasted movement and flexible ramping up and down capacity as the CAISO does today for the Day-Ahead Market.



#### **33.11.3.2.7.1 Forecasted Movement**

Resources that receive a FMM forecasted movement award will receive a settlement charge or payment equal to the difference of the FMM forecasted movement from the day-ahead market forecasted movement and the price differential between relevant FMM flexible ramping up and FMM flexible ramping down prices, respectively. In addition, resources receiving a RTD forecasted movement award will receive a settlement charge or payment equal to the difference of the FMM forecasted movement from the day-ahead market forecasted movement and the price differential between relevant FMM flexible ramping up and FMM flexible ramping down prices. The sum of FMM and RTD forecasted movement settlement will be allocated to the relevant EDAM BAA(s) metered demand based upon the results of the flexible ramp resource sufficiency evaluation.

#### **33.11.3.2.7.2 Flexible Ramp Up/Down Uncertainty (FRU/FRD)**

Because of the imbalance reserve product being developed as part of the DAME initiative, resources receiving a FMM FRU/FRD award will receive an imbalance settlement that will be provided in Section 11. The resource will settle the FRU/FRD award equal to the difference between the five minute ramp IRU/IRD award and the FMM FRU/FRD award multiplied by the FMM FRU/FRD LMP. The CAISO will calculate the RTD FRU/FRD award settlement as it does today. RTD FRU/FRD settlement will be the product of the difference between the FMM FRU/FRD award and the RTD FRU/FRD LMP.

The total flexible ramp up/down uncertainty award cost, which is the sum of FMM FRU/FRD settlement plus RTD FRU/FRD settlement, will be allocated to relevant BAA(s) and uncertainty movement categories. The FRU/FRD category costs are further allocated to resources based upon decremental/incremental uninstructed imbalance energy, respectively, plus uncertainty movement or operational adjustment.

#### **33.11.4 Implementation Fee**

The CAISO will recover an implementation fee through the EDAM Implementation Agreement to recover its actual costs incurred to onboard each EIM Entity into EDAM based on the CAISO's cost of service. For projection purposes, the CAISO used an hourly rate of \$200 for all onboarding activities. This fully burdened rate is calculated based on the most recently published triennial Grid Management Charge Update Cost of Service Study. For billing purposes, the CAISO will determine hourly rates for onboarding on an annual basis based on current aggregated and burdened labor rates, and estimates that the average cost to onboard an EDAM Entity is projected to be \$1,200,000 with the actual onboarding costs per EDAM entity varying depending on the size and complexity of the onboarding. A \$300,000 deposit will be collected from prospective EDAM Entities to cover the actual start-up costs incurred. If the deposit exceeds the actual cost incurred to provide onboarding services, the CAISO will refund the excess amount including any interest accrued on the remaining deposit. If the actual cost of performing the service exceeds the deposit, additional deposits in \$300,000 increments will be required, which the EDAM entity must pay within thirty (30) calendar days of invoice. Any invoice payment past due will accrue interest, per annum, calculated in accordance with 5 C.F.R. §1315.10. If the EDAM Entity fails to timely pay any undisputed costs, the CAISO will not be obligated to continue performing onboarding activities unless and until the EDAM Entity has paid all undisputed amounts. The CAISO will provide a report that details deposit(s) received, actual costs

incurred, and applicable interest earnings (on deposit balance) for each onboarding project and return any unused deposit remaining after onboarding, plus interest on the remaining deposit (based on the average interest rate earned), to the EDAM Entity within ninety (90) calendar days after onboarding is completed and acknowledged by both the CAISO and EDAM Entity.

### **33.11.5 Administrative Charge**

The EDAM Administrative Charge will apply to EDAM Market Participants and consist of the existing market services charge and a new EDAM system operations charge, both volumetric charges. The market services charge represents fees for the Real-Time Market and the Day-Ahead Market services that EDAM offers, and applies to awarded MWh of energy and MW of capacity. The EDAM systems operations charge will represent the fees for real-time dispatch services that EDAM offers, and it applies to metered flows in MWh of supply and demand. Once an EIM Entity begins participating in the EDAM, it will no longer pay the EIM Administrative Charge, only the EDAM Administrative Charge.

**33.11.6 Transmission Service.** The CAISO will charge EDAM Market Participants for transmission service according to Section 33.26 and CAISO Market Participants according to Section 26.

**33.11.7 Flexible Ramping Product.** The CAISO will allocate and settle payments and charges for the Flexible Ramping Product according to Section 11.25.

### **33.11.8 Settlement**

With regard to the CAISO's assessment and payment of charges to, and collection of charges from, EDAM Market Participants pursuant to Sections 11 and 33.11, the CAISO shall assess, pay and collect such charges, address disputed invoices, assess, pay and collect Settlement-related fees and charges, including those under Sections 11.21, 11.28, and 11.29, and make any financial adjustments in accordance with the terms and schedule set forth in Section 11.

*[The specific settlement rules will be further considered and set forth in Section 33.11 similar to the content and structure of the WEIM tariff Section 29.11]*

### **33.12 Creditworthiness**

EDAM Entity Scheduling Coordinators and EDAM Resource Scheduling Coordinators must comply with the creditworthiness requirements of CAISO Tariff. In the event EDAM Entity Scheduling Coordinators and EDAM Resource Scheduling Coordinators fail to satisfy the credit or other requirements in Section 12, the consequences specified in Section 12 will apply.

*[The specific creditworthiness rules, particularly with respect to convergence bidding, will be further considered and set forth in Section 33.12 similar to the content and structure of the WEIM tariff Section 29.12]*

### **33.13 Dispute Resolution**

Confirmation and validation of any dispute associated with the participation of EDAM Market Participants in the Day-Ahead Market is subject to Section 11.29.8 and will be managed through the CAISO's customer inquiry, dispute, and information system and as provided in the Business Practice Manual for the Extended Day-Ahead Market. EDAM Market Participants will be subject to dispute resolution pursuant to Section 13.

### **33.14 Force Majeure, Indemnity, Liabilities, and Penalties**

The provisions of Section 14 regarding Uncontrollable Forces, indemnity, liability, and penalties

will apply to the participation of EDAM Market Participants in the Day-Ahead Market.

### **33.15 [Not Used]**

The regulatory filings provisions of Section 15 will apply to the EDAM by default as they govern the CAISO regulatory filing process.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.16 Legacy Transmission Contracts and Ownership Rights in EDAM**

Section 16 and Section 17 will apply to EDAM Market Participants as referenced in Section 33.16. The CAISO will administer EDAM Legacy Contracts and EDAM Transmission Ownership Rights in accordance with Section 16, Existing Contracts, and Section 17, Transmission Ownership Rights, respectively, for purposes of scheduling and settlement in EDAM as provided in this Section 33.16.

With respect to Section 16: (a) references to Existing Contracts shall be read as references to EDAM Legacy Contracts; (b) references to Participating TO shall be read as references to EDAM Transmission Service Provider; (c) references to the CAISO Controlled Grid shall be read as references to EDAM Transmission Service Provider facilities; and (d) references to the CAISO Balancing Authority or CAISO Balancing Authority Area shall be read as references to EDAM Balancing Authority or EDAM Balancing Authority Area, respectively.

With respect to Section 17: (a) references to Transmission Ownership Rights shall be read as references to EDAM Transmission Ownership Rights; (b) references to Participating TO shall be read as references to EDAM Transmission Service Provider; (c) references to the CAISO Controlled Grid shall be read as references to EDAM Transmission Service Provider facilities; and (d) references to the CAISO Balancing Authority or CAISO Balancing Authority Area shall be read as references to EDAM Balancing Authority or EDAM Balancing Authority Area, respectively.

#### **33.16.1 Alternative Treatment for EDAM Legacy Contracts**

EDAM Legacy Contract rights holders may, as an alternative to CAISO administration of their rights in accordance with Section 16, make capacity available for EDAM Transfers in accordance with Section 33.17.x *[pathway 2]*.

#### **33.16.2 Alternative Treatment for EDAM Transmission Ownership Rights**

EDAM Transmission Ownership Rights holders may, as an alternative to CAISO administration of their rights in accordance with Section 17, make capacity available for EDAM Transfers in accordance with Section 33.17.x *[pathway 2]*.

*[The specific requirements for the treatment of pre-OATT transmission contracts and transmission ownership rights at EDAM Internal Interties will be further considered and set forth in Section 33.16, with reference to Section 16 or Section 17 as appropriate, perhaps moving the EDAM Transmission Ownership Rights provisions to Section 33.17 and the transmission availability provisions in Section 33.17 to 33.18.]*

### **33.17 EDAM Transmission Commitment and Availability**

Section 17 will not apply to EDAM Market Participants except as referenced in Section 33.16.

An EDAM Transmission Service Provider and its transmission customers will make transmission capacity available for the Day-Ahead Market to commit supply within each EDAM Balancing Authority Area and support EDAM Transfers between Balancing Authority Areas in the EDAM Area. *[Need to further consider the CAISO BAA transmission availability procedures]*

Each EDAM Transmission Service Provider will administer transmission service in accordance with its tariff and consistent with Section 33. Transmission supporting EDAM Transfers must be firm or conditional firm as provided in the EDAM Transmission Service Provider tariff, with its priority determined consistent with this Section 33. Non-firm transmission service within an EDAM Balancing Authority Area may support a Bid in the Day-Ahead Market; however, this Section 33 and the CAISO Markets will not establish different priority levels based on different types of non-firm transmission rights. The EDAM Transmission Service Provider will retain authority to curtail schedules supported by non-firm transmission consistent with its tariff. *[Need to further consider expression of the relationship between transmission service scheduling priority under the OATT and under EDAM.]*

### **33.17.1 EDAM Transmission Service Information**

Each EDAM Entity will provide the CAISO with EDAM Transmission Service Information for the transmission system associated with the EDAM Transmission Service Providers within its Balancing Authority Area.

### **33.17.2 EDAM Transmission Availability**

Each EDAM Entity will ensure all EDAM Transmission Service Providers in its Balancing Authority Area make available for use in the Day-Ahead Market transmission capacity that is included in the EIM Transmission Service Information.

#### **33.17.2.1 Internal Transmission Rights**

EDAM Transmission Service Provider customers can use their transmission rights within an EDAM Entity Balancing Authority Area by scheduling EDAM Resources associated with the use of their transmission rights in accordance with Section 33.17.x *[pathway 1]*. Transmission rights within an EDAM Balancing Authority Area include firm rights from (a) a source to sink within an EDAM Balancing Authority Area, (b) a source to an intertie location with a non-EDAM Balancing Authority Area, (c) an intertie location with a non-EDAM Balancing Authority Area to a sink within the EDAM Balancing Authority Area, and (d) a wheel through an EDAM Balancing Authority Area from an intertie location with a non-EDAM Balancing Authority Area to another intertie location with a non-EDAM Balancing Authority Area.

#### **33.17.2.2 Registration of Internal Transmission Rights**

EDAM Transmission Service Providers will coordinate with their transmission customers and the EDAM Entity to register the customers' point to point transmission rights within the EDAM Balancing Authority Area consistent with the process for registration of EDAM Legacy Contracts in Section 33.16. Network integration transmission service customers will follow the EDAM Transmission Service Provider tariff for designation and undesignation of network resources. *[Need to further consider the appropriate procedures for the registration of internal transmission service arrangements]*

### **33.17.3 EDAM Transfers**

EDAM Transfers may be supported by firm or conditional firm point to point transmission rights, network integration transmission service associated with a designated network resource, or EDAM Legacy Contracts and EDAM Transmission Ownership Rights made available by the rights holder or owner. Each EDAM Entity Scheduling Coordinator will identify the firm and conditional firm point to point transmission capacity and network integration transmission service associated with a designated network resource that will be available to the Day-Ahead Market at EDAM Internal Interties.

#### **33.17.3.1 Transmission to Support Resource Sufficiency (bucket 1)**

Each EDAM Entity must make firm or conditional firm point to point transmission or network integration transmission service associated with a designated network resource available from the source Balancing Authority Area to the sink Balancing Authority Area at the time of bid submission into the Day-Ahead Market to support delivery of supply external to its Balancing Authority Area included in the EDAM Resource Sufficiency Evaluation.

### **33.17.3.2 Transmission Rights Held by Transmission Customers Not Needed for the EDAM RSE (bucket 2)**

EDAM Transmission Service Provider customers must take one of three pathways prior the start of the Day-Ahead Market to schedule their firm and conditional firm point to point transmission rights that are not required to support the EDAM Resource Sufficiency Evaluation under Section 33.17.x.

EDAM Transmission Service Provider customers with network integration transmission service will follow the EDAM Transmission Service Provider tariff designation procedures and, to the extent a designated network resource is not required to support the EDAM Resource Sufficiency Evaluation under Section 33.17.x, the associated transmission capacity must be associated with a Self-Schedule under Section 33.17.x [*pathway 1*] or it will be released through the un-designation process and made available for EDAM Transfers under Section 33.17.x [*pathway 3*].

#### **33.17.3.2.1 Pathway 1**

A transmission customer may submit a Self-Schedule associated with its registered transmission rights prior to the start of the Day-Ahead Market.

#### **33.17.3.2.2 Pathway 2**

A transmission customer may release long-term (one year and longer) and monthly firm and conditional firm point to point registered transmission rights for EDAM Transfers prior to 09:00 the morning of the Day-Ahead Market. The transmission customer may determine, on a daily basis, whether to make the full amount or only a portion of its registered transmission rights available to the EDAM for the day or a longer timeframe. Released transmission rights cannot be reclaimed or scheduled for the duration and trade date(s) for which they have been released, although releasing transmission rights does not preclude the transmission customer from submitting a Bid in the Day-Ahead Market not associated with its registered transmission rights.

Each EDAM Transmission Service Provider must amend its tariff to recognize the CAISO and the Extended Day-Ahead Market as an “eligible customer” with respect to the release of registered transmission rights.

#### **33.17.3.2.3 Pathway 3**

The transmission customer may chose not to schedule its registered transmission rights by the start of the Day-Ahead Market, in which case the unscheduled transmission rights will be available for EDAM Transfers. If the transmission customer schedules its registered transmission rights after the start of the Day-Ahead Market in accordance with the EDAM Transmission Service Provider tariff, the CAISO Markets will seek to accommodate the transmission customer schedule if practicable, by re-dispatch if necessary.

### **33.17.3.3 Unsold Available Transfer Capability (bucket 3)**

The EDAM Entity Scheduling will determine the amount of unsold available transfer



capability that the CAISO can make available for EDAM Transfers in accordance with its tariff and communicate that limit to the CAISO prior to the start of the Day-Ahead Market.

#### **33.17.3.4 CAISO Transmission Available for EDAM Transfers**

The CAISO will make transmission capacity on the CAISO Controlled Grid available for EDAM Transfers as required to support the EDAM Resource Sufficiency Evaluation for the CAISO Balancing Authority Area at EDAM Internal Interties.

**33.17.3.4.1 Wheeling Through.** EDAM Participating Resources wheeled through or exported from the CAISO Balancing Authority Area would need to (a) demonstrate establishment of a wheeling through priority (equal to load) across the CAISO Controlled Grid and have designated transmission service under Section 33.17.x [bucket 1] to an EDAM Balancing Authority Area based upon the CAISO process for establishing scheduling priorities, or (b) demonstrate establishment of high priority export status to export non-resource adequacy supply from the CAISO Balancing Authority Area and meet the requirements under Section 33.17.x [bucket 1].

**33.17.3.4.2 ETC/TOR.** The CAISO will make transmission associated with Existing Contracts and Transmission Ownership Rights available to the Day-Ahead Market consistent with the Section 16 and Section 17.

**33.17.3.4.3 Available Transfer Capability.** The CAISO will make Available Transfer Capability available to the Day-Ahead Market for EDAM Transfers consistent with Section 33.17.x [bucket 3], Section xx and Appendix L of the CAISO Tariff.

#### **33.17.4 EDAM Transfer Priority.**

EDAM Transfers will have a priority equal to load in the EDAM Area. The Extended Day-Ahead Market will include a constraint to ensure each EDAM Entity first meets its Balancing Authority Area obligations before supporting EDAM Transfers. If it is necessary for an EDAM Entity or the CAISO to reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area, the EDAM Entity must communicate and coordinate with the CAISO and impacted EDAM Entities prior to curtailing EDAM Transfers, and should continue to communicate and coordinate with the CAISO and all EDAM Entities to assess and mitigate potential issues within the EDAM Area. Any reduction or suspension of EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area should be proportional to any involuntary curtailment of load within a Balancing Authority Area [Need to further consider appropriate operational procedures with respect to curtailment of transfers in the EDAM Area to maintain reliability and confidence in transfers]

*[The specific requirements for the modeling and management of transmission rights at EDAM Interties will be further considered and set forth in Section 33.7 and Section 33.17 similar to the content and structure of the WEIM tariff Section 29.7 and Section 29.17]*

#### **33.18 [Not Used]**

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33, perhaps moving the transmission availability provisions in Section 33.17 to 33.18 and moving the EDAM Transmission Ownership Rights provisions to Section 33.17.]*

#### **33.19 [Not Used]**

The Reliability Coordinator function does not apply to EDAM Market Participants.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*



### **33.20 Confidentiality**

The confidentiality provisions in Section 20 will apply to participation of EDAM Market Participants in the Day-Ahead Market.

*[Note: The CAISO may propose language regarding aggregated data release as part of Section 33.20 to address GHG compliance reporting requirements under Section 33.32]*

### **33.21 [Not Used]**

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.22 Miscellaneous**

Section 22 and the additional miscellaneous provisions of Section 33.22 will apply to the EDAM.

To the extent that the CAISO would incur any tax liability as a result of the participation of EDAM Market Participants in the Day-Ahead Market, for example as market operator or as central counterparty to EDAM transactions, the CAISO will pass those taxes on to the EDAM Entity Scheduling Coordinator for the EDAM Entity area where the transactions triggered the tax liability.

Neither the CAISO nor the EDAM Entity is a “Purchasing Selling Entity” for purposes of E-Tagging or EDAM Transfers, nor will either be listed as a “Purchasing Selling Entity” for purposes of E-Tagging or EDAM Transfers.

Title to Energy in the Day-Ahead Market passes directly from the entity that holds title when the Energy enters the CAISO Controlled Grid or the transmission system of an EDAM Transmission Service Provider, whichever is first following Dispatch, to the entity that removes the Energy from the CAISO Controlled Grid or the transmission system of a EDAM Transmission Service Provider, whichever last precedes delivery to Load.

*[The specific miscellaneous requirements will be further considered and set forth in Section 33.22 similar to the content and structure of the WEIM tariff Section 29.22]*

### **33.23 [Not Used]**

The categories of transmission capacity are associated with CAISO transmission service on the CAISO Controlled Grid and do not apply to the EDAM.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.24 [Not Used]**

The EDAM does not include transmission planning related functions and Section 24 does not apply.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.25 [Not Used]**

The EDAM does not include generator interconnection related functions and CAISO Tariff Section 25 does not apply.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.26 Transmission Rates And Charges**

Transmission service charges for Day-Ahead Market transactions serving Load within the CAISO Balancing Authority Area that use the CAISO Controlled Grid are governed by Section 26. Transmission service charges for Day-Ahead Market transactions serving Load within an EDAM Entity Balancing Authority Area are governed by the applicable EDAM Transmission Service Provider OATT.

Transmission service charges for Day-Ahead Market transactions supported by an EDAM Transfer are addressed in Section 33.26. Transmission revenue recovery and allocation for EDAM Transfers would also be addressed in the EDAM Transmission Service Provider OATT.

Transmission service charges for Real-Time Market transactions are governed by Section 26 or 29.26, as applicable.

#### **33.26.1 EDAM Historical Transmission Revenue Recovery**

Through the EDAM, the CAISO will recover for each EDAM Transmission Service Provider through a revenue recovery mechanism:

- (a) associated with the EDAM Transmission Service Provider short-term firm and non-firm point-to-point sales revenue, and for the CAISO, the Wheeling Access Charge (WAC);
- (b) attributed to short-term firm and non-firm point to point transmission service on approved new transmission projects that increase transfer capability on EDAM Internal Interties; and
- (c) wheeling-through volumes that exceed the total imports and exports from its EDAM Entity Balancing Authority Area.

##### **33.26.1.1 EDAM Recoverable Transmission Revenue**

Each EDAM Transmission Service Provider will forecast its EDAM recoverable revenue on an annual basis. The CAISO will assess an EDAM Access Charge to recover the EDAM recoverable revenue to Gross Load across the EDAM Area. The CAISO will true-up actual revenue recovery through an EDAM Balancing Account. EDAM recoverable revenue will consist of:

- (a) costs associated with the short-term firm and non-firm point-to-point products, and for the CAISO, foregone reduction in wheeling access charge (WAC) revenues;
- (b) costs attributed to short-term firm and non-firm point to point transmission service on approved new transmission builds that increase transfer capability between EDAM BAAs; and
- (c) costs for wheeling-through volumes for EDAM BAAs that exceed the total imports/exports from the EDAM entity BAA.

##### **33.26.1.2 Component 1: Short-Term Firm and Non-Firm Point to Point Transmission & Wheeling Access Charge (WAC) Revenues**

EDAM recoverable revenue may only be associated with the costs of historical transmission sales to third parties, not costs related to sales to the EDAM Entity's merchant function. The following non-firm point to point transmission products, which may have lower sales volumes, would also be eligible for historical revenue recovery and be included in the EDAM recoverable revenue: hourly non-firm point to point, daily non-firm point to point, weekly non-firm. Similarly, the following short-term firm point to point transmission products would also be considered EDAM recoverable revenue:

hourly firm point to point (if product is offered by the transmission provider), daily firm point to point, weekly firm point to point.

Foregone CAISO Participating Transmission Owner (PTO) wheeling access charge (WAC) revenues associated with third-party wheels through or exports from the CAISO BAA will be eligible for historical revenue recovery and be included in the EDAM recoverable revenue.

#### **33.26.1.2.1 Calculating the EDAM Recoverable Revenue**

The EDAM recoverable revenue represents the total historical transmission costs associated with those transmission products eligible for recovery through the EDAM. For EDAM Transmission Service Providers operating under an OATT, the EDAM recoverable revenue is the historical transmission revenue requirement for facility costs associated with short-term firm point to point (hourly, daily, weekly) and non-firm point to point transmission (hourly, daily, weekly) associated with sales to third parties (non-merchant).

For the CAISO, the EDAM recoverable revenue is the total historical WAC revenues associated with third parties.

#### **33.26.1.2.2 Calculating and Updating EDAM Recoverable Revenue**

Each EDAM Transmission Service Provider will calculate the EDAM recoverable revenue based on the transmission provider's average FERC-approved (or applicable regulatory authority-approved) revenue requirement associated with non-firm and short-term firm point to point transmission services for the most recent three years. The CAISO PTO EDAM recoverable revenue amount will be equal to the average FERC-approved transmission revenue balance account adjustment from wheeling third party transactions or the most recent three years.

EDAM recoverable revenue be reviewed and updated after two-years of participating in the EDAM. The total costs recoverable through the EDAM consist of the difference between the EDAM recoverable revenue and actual transmission costs eligible for recovery pursuant to Section 33.26.

#### **33.26.1.2.3 EDAM Recoverable Revenue Limits**

The EDAM recoverable revenue for each EDAM Entity will not exceed the product of (a) EDAM recoverable revenue and (b) the ratio of exports from the EDAM Entity to the EDAM Area and exports from the EDAM Entity to outside of the EDAM Area.

### **33.26.1.3 Component 2: Percentage of New Transmission Build Revenue Requirement**

The second EDAM recoverable revenue component is associated with new transmission construction approved via applicable regulatory processes. New transmission facility upgrades that increase the transfer capability between EDAM BAAs would be recoverable based on the ratio of the non-firm and short-term firm point to point revenue requirement, associated with third-party sales on the new transmission facilities, to the total EDAM Transmission Service Provider recoverable revenue.

### **33.26.1.4 Component 3: Recovery of Transmission Costs Associated With EDAM Wheeling Through Volumes Net of Imports/Exports**

The third EDAM recoverable revenue component eligible for recovery is associated with wheels through an EDAM Transmission Service Providers' system in excess of the total net transfers of the EDAM BAA. In periods where a net difference occurs, the EDAM

Transmission Service Provider will be compensated for the excess transmission use supporting net wheels through its system based on the EDAM Access Charge. .

### **33.26.2 Allocating Revenue Shortfalls in the EDAM**

Each EDAM Transmission Service Provider will recover any EDAM recoverable revenue shortfall through an annual true-up, allocated to the Gross Load of the EDAM Area on a monthly basis.

#### **33.26.2.1 Allocation Method 1 – Revenue Shortfall Allocated to Gross Load**

The CAISO will derive an annual EDAM entity-specific rate in the EDAM Area. This rate would be derived by (1) allocating each EDAM Transmission Service Provider revenue shortfall to the other EDAM Transmission Service Provider in proportion to (a) its Gross Load divided by (b) the total EDAM Area Gross Load minus Gross Load of the EDAM Transmission Service Provider; (2) calculating the total revenue shortfall allocation; and (3) dividing the total revenue shortfall by the EDAM Transmission Service Provider's Gross Load.

#### **33.26.2.2 Truing Up the Forecasted Revenue Shortfall with Actual Shortfall**

Each EDAM Transmission Service Provider may recover any delta between the actual revenue shortfall and the amount of revenue it collected toward its EDAM recoverable revenue. The EDAM Transmission Service Provider will do so by including delta in the following year's forecasted recoverable revenue.

*[The specific transmission service charges for EDAM Transfers will be further considered and set forth in Section 33.26 and Section 26]*

### **33.27 CAISO Markets And Processes**

The provisions of Section 27 that apply to the Day-Ahead Market will apply to EDAM Market Participants, except as provided in Section 33.27.

#### **33.27.1 Transitional Process.**

For a period of six months following the EDAM Implementation Date of a new EDAM Entity, the provisions of Section 27.x shall not apply to constraints that are within the Balancing Authority Area of the new EDAM Entity or affect EDAM Transfers between the Balancing Authority Areas of the new EDAM Entity. For those intervals that experience infeasibilities described in those provisions, the CAISO shall instead determine prices consistent with the provisions of Sections 27, 34, and Appendix C, that would apply in the absence of Section 27.x constraints.

In addition, for a period of six months following the EDAM Implementation Date of a new EDAM Entity, when the transmission and/or power balance constraints as specified in Sections 27.x are relaxed, the CAISO shall set the Flexible Ramping Product parameter for pricing purposes, for the new EDAM Entity Balancing Authority Area, at an amount between and including \$0 and \$0.01.

Sixty days prior to the expiration of the transition period, the CAISO will post on the CAISO website an assessment of whether an extension of the transition period, for up to an additional six months, is needed for the applicable EDAM Entity. The CAISO will post an update to such assessment prior to the expiration of the transition period should there be any changes to its posted conclusions. Any extensions of the initial six month transition period must be approved by the Federal Energy Regulatory Commission.

*[The specific rules and procedures applicable to the Day-Ahead Market will be further*

*considered and set forth in Section 33.27 similar to the structure of WEIM tariff Section 29.27]*

### **33.28 Inter-SC Trades**

EDAM Entity Scheduling Coordinators and EDAM Participating Resource Scheduling Coordinators may not submit inter-SC trades, and Section 28 will not apply to EDAM.

### **33.29 EDAM Relationship with the EIM**

The provisions in Section 29 will apply to EDAM Market Participants to the extent of their terms as applied to EIM Market Participants.

*[The relationship between the EDAM rules in Section 33 and the WEIM rules in Section 29 will be further considered and set forth in Section 33.29 to the extent they are not addressed in another subsection of Section 33]*

### **33.30 Bid And Self-Schedule Submission For CAISO Markets**

The provisions of Section 30 that are applicable to the Day-Ahead Market, as supplemented by Section 33.30, will apply to EDAM Market Participants.

#### **33.30.1 Convergence Bidding**

For all EDAM Entity Balancing Authority Areas with convergence bidding, Convergence Bidding Entities may submit Virtual Bids pursuant to Section 30.9 of the CAISO Tariff.

##### **33.30.1.1 Optional Convergence Bidding Transition Period**

For their first year in the Day-Ahead Market, each EDAM Entity may participate in the Day-Ahead Market without Virtual Bids in its Balancing Authority Area. Alternatively, each EDAM Entity may elect to forego a transition period and commence Day-Ahead Market participation with Virtual Bids in its Balancing Authority Area.

##### **33.30.1.2 Suspension or Limitation of Convergence Bidding**

The CAISO has the authority to suspend or limit convergence bidding pursuant to Tariff Section 7.9 and this authority will extend to EDAM Entities participating in the Day-Ahead Market with Virtual Bids.

*[The specific supplemental bidding and self-schedule submission procedures applicable to the EDAM will be further considered and set forth in Section 33.30, particularly with respect to convergence bidding.]*

### **33.31 Extended Day-Ahead Market (EDAM)**

The Extended Day-Ahead Market (EDAM) will operate in accordance with the timelines, inputs and processes for the Day-Ahead Market in Section 31, as supplemented by provisions in Section 33.31 within the EDAM Area.

#### **33.31.1 EDAM Resource Sufficiency Evaluation**

The EDAM RSE ensures the CAISO and EDAM Entities can meet their Balancing Authority obligations prior to participating in the Day-Ahead Market through a test that determines whether each participating BAA has sufficient supply and reserves to meet forecasted demand and uncertainty. Passing the EDAM RSE ensures that all resulting EDAM Transfers facilitate beneficial economic displacement among BAAs that pass, while failing the EDAM RSE imposes consequences.

##### **33.31.1.1 Conducting the EDAM RSE**



The binding EDAM RSE will occur at 10:00 a.m., prior to running the Day-Ahead Market, following the opportunity for EDAM Entities to receive advisory EDAM RSE results at 6:00 a.m. and 9:00 a.m., with further results available on demand. The demand forecast and variable energy supply forecast used in advisory runs will be taken from the last valid forecasts, and to lock all forecasts used in the EDAM RSE at 9:00 a.m.

Imbalance Reserve requirements will be calculated using a balancing area ramp requirement application, which will run at 6:00 a.m. and 9:00 a.m. The results obtained in the 6:00 a.m. advisory run can be used in all on-demand advisory runs by an EDAM entity prior to 9:00 a.m. The results at 9:00 a.m. will provide an updated uncertainty requirement that the CAISO will use in the 9:00 a.m. advisory run and the final binding EDAM RSE run shortly after the day-ahead market submission process closes at 10:00 a.m., but immediately prior to running the day-ahead market. An EDAM Entity may access to the tool so they can test their sufficiency on an advisory basis outside of the 6:00 a.m. and 9:00 a.m. advisory runs.

### **33.31.1.2 Optimization**

The EDAM RSE will optimally determine if an EDAM BAA can achieve a feasible operating schedule across the entire 24-hour horizon given its obligations using submitted bids. The application will not include transmission constraints and will model all of an EDAM BAA's load and supply on a single bus to perform a unit commitment optimization with cost minimization as the objective. The application will model all of an EDAM BAA's load and supply on a single bus; then it will perform a unit commitment optimization using all of the existing CAISO resource models. The objective function will be set to minimize the total cost, as a means to determine the most efficient use of the varying resources types and capabilities made available to the EDAM. The results will be reflected as the quantity of insufficiency across the day-ahead horizon, with a requirement to minimize the shortfall across the entire 24-hour optimization horizon. The EDAM RSE accomplishes this by minimizing the total cost utilizing a BAA's available resources across the day, irrespective of that BAA's ability to pass the EDAM RSE in any particular interval.

#### **33.31.1.2.1 Resource Deliverability in the EDAM RSE**

The CAISO will monitor the results of the EDAM RSE to assess whether capacity that is regularly shown is stranded and undeliverable. If monitoring highlights concerning volumes or repeated showings of supply that was ultimately undeliverable, the CAISO would evaluate revisions to EDAM RSE deliverability.

### **33.31.1.3 EDAM RSE Requirements**

The EDAM RSE will test whether an EDAM Entity and the CAISO can meet its BAA requirements including demand and ancillary service obligations, in each of the 24 hours of the Day-Ahead Market, as well as the flexibility to ramp between these requirements in each hour. The BAA requirements that will be tested include:

(1) Forecasted Demand: Each BAA must meet its forecasted demand requirement and ensure sufficient supply is available to meet forecasted energy usage. The CAISO will offer a demand forecast for each EDAM Entity BAA. If an EDAM Entity chooses not to utilize the CAISO forecast, it can submit its own forecast with the understanding that referencing the most accurate forecast is the objective. The forecast should contain the average loss factors as defined by each EDAM Entity in its tariff.

(2) Imbalance Reserves: Each BAA must have sufficient supply and flexibility necessary to meet its imbalance reserve obligations and cover its upward and downward uncertainty requirements.

(3) Flexibility Requirement: Each BAA must meet its forecasted ramping requirements across the 24-hour period, which will be assessed by testing whether the BAA has a feasible schedule, ramping between hourly requirements across this same time period.

(4) Ancillary Service Requirements: Each BAA will provide its ancillary service requirements prior to the EDAM RSE, which may be updated until 9:00 a.m. when all inputs are fixed. The EDAM RSE will test and validate whether a BAA has self-provided sufficient capacity to meet its requirements that does not overlap with supply made available to the EDAM. The EDAM will accommodate ancillary service requirements that are satisfied through participation in a reserve sharing group. If multiple EDAM BAAs participate in a reserve sharing group, they must identify the transmission that will be utilized to ensure delivery of the shown reserve capacity, consistent with existing practices the entities may have in place today for delivery of the reserves. This transmission capacity will be withheld from the market optimization to ensure the deliverability of the reserve sharing obligations in real time.

(5) Reliability Capacity Bidding: EDAM Market Participants that submit a Bid into the Integrated Forward Market (IFM) must also submit a bid for a matching quantity of reliability capacity in the Residual Unit Commitment (RUC) process. Availability bids for any portion of the forecasted supply of variable energy resources will be inserted for any forecasted quantity that does not have a bid.

#### **33.31.1.4 EDAM RSE Inputs**

The EDAM RSE will utilize Bids and Self-Schedules to determine feasible operating schedules, assuming all owned and contracted resources are available and including third party EDAM Participating Resources within the BAA that are with submitted Bids into the EDAM but not otherwise Self-Scheduled. An EDAM Entity will have access to validate the contractual status of all resource bids and self-schedules within its BAA, without pricing information.

##### **33.31.1.4.1 Resource Specific Energy Bids – Gas Optimization**

The CAISO will share the advisory D+2 market results with Scheduling Coordinators that request the information for their specific gas generators no later than 05:00 of the day-ahead market run; i.e., 05:00 on D+1. Limited results would also be shared with the EDAM Entity. Advisory day-ahead results to D+3 will also be provided to help inform gas procurement over the weekend period.

##### **33.31.1.4.2 Resource Specific Energy Bids – Hydro Operation**

EDAM Entities can manage their hydro resources through daily energy limits, which set a limitation on the total discharge of individual resources, and hourly energy bids, which inform minimum discharge obligations and availability to discharge. Participants can use these constraints in combination to meet a hydro project's underlying requirements and efficiently schedule their resource through the day-ahead market process. The CAISO will facilitate hydro resource modeling that allows multiple related resources comprising an aggregated resource to function as a single resource.

### **33.31.1.4.3 Variable Energy Resource (VER) Supply Bids**

The CAISO will create default supply bids for the difference between the bid in and forecast quantity for use exclusively in the EDAM RSE. EDAM Participating Resource Scheduling Coordinator for each VER must also submit RUC availability bids up to its variable energy forecast. The Day-Ahead Market will utilize the bid in supply and convergence bids, as applicable, within its optimal clearing process and, for EDAM Entities that have not yet enabled convergence bidding, bidding limitations will exist in the IFM to ensure demand cannot be scheduled above the supply brought by the BAA. These load bidding rules will be based on the difference between the bid-in VER supply and the forecast VER output; however, the market operator will work with each BAA to adjust this quantity for forecast supply forecast that may not be deliverable because of system conditions. It remains the responsibility of each EDAM BAA to develop rules for how they or load serving entities embedded within their footprint account for the reduced ability to bid in load. Further, Scheduling Coordinator for each VER must submit RUC availability bids up to the resource's variable energy forecast. Otherwise, the CAISO will insert a zero dollar availability bid for that VER into the RUC.

### **33.31.1.4.4 Non-resource Specific Supply**

EDAM BAA day-ahead supply plans consist of resource or load modification programs that cannot explicitly be modeled in in the EDAM. This circumstance generally arises when the source or transmission is unknown in the day-ahead timeframe or the load modification program does not conform to existing demand response models developed by the CAISO. The proposal is to account for these resources in the EDAM RSE as described below.

#### **33.31.1.4.4.1 Delivered Firm Energy Contracts**

Delivered firm energy contracts will count towards the EDAM RSE, including WSPP-C arrangements, CAISO resource adequacy imports, and similar forward contracted supply. All source-specific forward contracted supply will count towards the EDAM RSE and, if possible, will be modeled in the EDAM. When the source cannot be identified, assumptions will be made regarding the source of the supply. To the extent forward contracted supply is offered to the CAISO through an intertie bid, the CAISO will provide functionality to associate that intertie bid with a forward contract for purposes of counting in the EDAM RSE. Source BAAs will have access to incorporate additional resource bids into its EDAM RSE supply to offset the bucket 1 transfer to reduce the potential double counting of resources.

#### **33.31.1.4.4.2 Non-Source Specific E-Tag Requirements.**

All energy scheduled from non-source specific forward supply contracts must be tagged within three hours following publication the Day-Ahead market results. The CAISO will publish an EDAM BAA's quantity of import supply that does not have a day-ahead e-tag for situational awareness of BAAs that participate in the EDAM. An EDAM entity will have until the start of the short term unit commitment horizon (STUC), *i.e.*, the final four intervals which correspond to the trade hour, either to submit e-tags and/or replace the capacity with other firm schedules or physical resources for schedules that lack a valid day-ahead e-tag within the timeframe. If the EDAM BAA does not tag the outstanding schedules prior to the start of the STUC run, the CAISO will remove the BAA from the

pooled EIM RSE approach.

An EDAM BAA that fails to cure its untagged supply will not be a party to the shared uncertainty requirement or incremental imbalance reserves procured above the upward uncertainty requirement procured for the EDAM Area. The failed and excluded EDAM BAA will instead receive a pro-rata credit for the imbalance reserves schedules that were procured from elsewhere in the EDAM Area for purposes of passing the EIM RSE.

If supply without a supporting valid e-tag causes the EDAM BAA to fail the EIM RSE, the EDAM import/export energy and capacity transfers to/from the failed BAA would nonetheless be supported through the market optimization. If conditions necessitate manual curtailment of load in the EDAM BAA, imports into the failed BAA would be curtailed prior to load, but exports out of the BAA would be honored before serving deficient BAA load. This differs from the transfer priority otherwise accorded EDAM BAA load and EDAM export transfers in the EDAM.

#### **33.31.1.4.4.3 Day-Ahead Intertie Bids at CAISO Interties**

Economic supply offers at CAISO EDAM External Interties will count towards the EDAM RSE (i.e., “intertie bids”), if those supply offers are associated with a forward contract with a LSE within the CAISO BAA or otherwise have a reasonable expectation of delivery.

#### **33.31.1.4.4.4 Load Modification/Demand Response Programs**

EDAM Entity BAA may represent demand response and load modification programs through a demand forecast adjustment similar to that used in the EIM. The demand forecast adjustment represents an expectation the EDAM BAA will utilize these programs in real-time. The volume of load that can be bid into the EDAM to the load forecast minus the demand response adjustments will be limited.

#### **33.31.1.5 RSE Obligation Trading Platform**

EDAM BAA’s can make hourly residual supply and firm transmission available for usage by any neighboring EDAM BAA for a preset price, which will offset obligations in the EDAM RSE.

#### **33.31.1.6 Failure to Pass the EDAM RSE**

A BAA that is deficient in the EDAM RSE can cure, if possible, in the Day-Ahead Market through a surcharge from surplus supply Bids offered for this purpose. The surcharge would be based on the maximum hourly deficiency as determined by the EDAM RSE application. The quantity of the EDAM RSE failure in any interval is determined as the summation of the under-supply power balance constraint, imbalance reserves in the upward direction, regulation, spinning reserve, and non-spinning reserve relaxation. If the IFM can fully resolve the deficiency and cure the EDAM BAA through the market optimization, the EDAM BAA would be treated as a member of the pool of passing BAAs as the EDAM results are used in the EIM RSE. If the market is unable to resolve the entire deficiency, the EDAM BAA would retain the ability to participate in the pool of passing BAAs if, by the STUC horizon ending in the hour of their shortage, it can backfill the deficiency with supply.

The surcharge will be settled in accordance with Section 33.11.x [*need to confirm alignment of the surcharge calculation and settlement.*]

### **33.31.1.6.1 Consequences for Upward Insufficiency.**

Three tiers of varying consequence for upward insufficiencies during on-peak hours (6:00 a.m. – 10:00 p.m.) will be applied depending on the ability to cure the deficiency through the Day-Ahead Market. These multipliers represent as starting point which, over time may evolve to ensure they provide the proper incentive for EDAM BAAs to enter into the EDAM resource sufficient. Similarly, this approach will be monitored to evaluate whether the size of the de minimis failure threshold and the Tier 2 and Tier 3 failure thresholds are appropriately sized to provide the proper incentives.

Tier 1: EDAM BAA has a de minimis RSE failure within 10MW or the forecast error associated with each BAA's upward imbalance reserve requirement.

- Consequence: No consequences for failures within this range.
- This tier excuses de minimis failures within a narrow band from a surcharge. Failures within this band should not cause insufficient supply to clear the market.

Tier 2: EDAM BAA fails the RSE but the market is able to meet demand, ancillary services, and 50% of the BAA's upward imbalance reserve requirement. The failure does not otherwise fall within Tier 1.

- Consequence: Cure insufficiency at the prescribed surcharge with a multiplier of 1.25.
- This tier is intended to incentivize forward procurement yet not be overly punitive.

Tier 3: EDAM BAA fails the RSE and the market cannot meet demand, ancillary services, and 50% of the BAA's upward imbalance reserve requirement.

- Consequence: Cure insufficiency at the prescribed surcharge with a multiplier of 2.0.
- This tier incentivizes forward procurement. A high surcharge for this tier recognizes the potential tighter market conditions affecting the reliability and/or higher marginal prices for the remainder of the EDAM footprint.

Off Peak: Depending on the magnitude of failure that occurs in off-peak hours (10:00 p.m. - 6:00 a.m.), a penalty of 1.25 or 2.0 will be applied exclusively to the load weighted average of LMP's within the deficient BAA asymmetrically from any on-peak failure.

### **33.31.1.6.2 Consequences for Downward Insufficiency.**

The consequence for a downward insufficiency failure will be an hourly surcharge to claw back the energy revenue that would otherwise have been derived.

### **33.31.1.7 EDAM Area Pooled EIM RSE**

All BAAs in the EDAM Area that pass the EDAM RSE will be tested as a pool in the EIM RSE.

#### **33.31.1.7.1 Failure of the EDAM Area Under a Pooled Approach**

The BAAs remaining in the pool remain collectively responsible for curing any shortfall in the EIM RSE



### **33.31.1.7.2 Diversity Benefit and Linkages to EIM RSE**

The EIM RSE would be considering all day-ahead awards, imbalance reserves, and reliability capacity prior to determining if it needs to test an individual EDAM BAA for EIM resource sufficiency. Each participating BAA is expected to address any intra-day outages that render any of the capacity used to back EDAM schedules prior to the running of the EIM RSE.

### **33.31.1.7.3 Hybrid diversity benefit and pooled EIM RSE**

The EIM RSE would hold a portion of the diversity benefit from allocation and reflect this quantity as additional global procurement of imbalance reserves for the EDAM Area to use as a whole. The CAISO would have the opportunity to configure this quantity and provide the EDAM BAAs a collective mechanism to adjust imbalance reserve requirements dynamically.

### **33.31.1.8 Management of Supply in Excess of RSE Requirements**

The EDAM will include a net EDAM export transfer limit that would permit the CAISO and EDAM Entities to identify a limit on the amount of EDAM net export transfers in the day-ahead market during a defined period. An EDAM Entity that wants to use the net EDAM export transfer constraint must:

- (1) indicate its intent to use the constraint to the CAISO, and
- (2) describe either in its OATT or business practice manuals (a) the formulation for deriving the confidence factor applicable to non-RSE eligible bid in supply and (b) factors/criteria for deriving the additional margin that further reduces the constraint limit.

The CAISO will include formulation of these components of the export constraint for the CAISO BAA in an upcoming implementation initiative that will consider this element and other aspects of CAISO BAA specific rules associated with participation in EDAM including, the ability of the CAISO to cure RSE deficiencies and allocate administrative surcharges resulting from the CAISO RSE failure.

#### **33.31.1.8.1 Net EDAM Export Transfer Constraint**

The net EDAM export transfer constraint is dynamic and would apply in the base scenario of the IFM for the net energy transfer - on an hourly basis - to ensure adherence to the constraint when scheduling EDAM import and export energy transfers. The net EDAM export transfer constraint is based on the difference between bid in supply and the RSE obligation and provides the option for additional adjustment as described below:

Formulation:  $(\text{RSE Eligible Supply} + \text{Non RSE Eligible Supply} \times \text{Confidence Factor}) - \text{RSE Obligation} - \text{Additional Margin}$  [*The mathematical formulation for the constraint is described in detail in Appendix 4 of the Draft Final Proposal.*]

Where:

RSE eligible supply = supply that counts toward the EDAM entity RSE.

Non RSE eligible supply = supply that is ineligible to count toward the EDAM entity's RSE. For the CAISO, intertie bids from supply not under contract are ineligible RSE supply.

Confidence Factor = an optional factor that accounts for confidence in delivery associated with a portion of the non-RSE eligible supply. For example, in

the CAISO BAA the confidence factor could be used to adjust for the risk of untagged intertie day-ahead schedules.

RSE Obligation = the day ahead RSE obligation for the EDAM entity based upon forecasted load, positive uncertainty requirement, and upward ancillary services requirements. It includes high priority exports (PT exports to non-EDAM BAAs) since they are considered in the RSE.

Additional Margin = represents an additional amount of capacity established by the EDAM BAA to reduce the limit on the BAA net export transfer, if necessary, to account for reliability risk and the ability to replace reserves—particularly during tight supply system conditions.

For the CAISO BAA, the constraint would consist of all supply bid into the CAISO counting toward the RSE plus economic intertie import bids that represent non-contracted supply offered at the CAISO interties from non-EDAM BAAs. If there is observed and empirical evidence of a non-deliverability risk of these intertie schedules or risk of non-performance by supply overall, the BAA may introduce a confidence factor less than 100%. In the case of the CAISO, if there is evidence to support a non-delivery risk with cleared economic intertie bids, the bid in supply amount can be reduced by a confidence factor representing the risk of non-delivery. Once the upper bound limit of the net EDAM export transfer constraint is derived, the BAA can further reduce the limit by an additional margin - that reflects an amount of non-exportable capacity held back in anticipation of needing to respond to reliability conditions.

The constraint limit cannot be reduced below the shown bucket 1 transfers out of the EDAM BAA. If an EDAM entity relies on exports to meet the RSE from the EDAM BAA imposing the net export transfer constraint, the EDAM BAA sourcing the supply cannot reduce the net export transfer below the export committed for RSE purposes.

### **33.31.2 Participation in the Day-Ahead Market**

EDAM Market Participants shall comply with Section 31 as applicable to their participation in the Day-Ahead Market.

EDAM Entity Scheduling Coordinators and EDAM Participating Resource Scheduling Coordinators will submit Bids and other necessary information to the CAISO for use in the Day-Ahead Market. Day-Ahead Market schedules of EDAM Entity Scheduling Coordinators and EDAM Participating Resource Scheduling Coordinators will constitute an EIM Base Schedule for use in the Real-Time Market pursuant to Section 29.34.

If an EDAM Entity Scheduling Coordinator or EDAM Participating Resource Scheduling Coordinator does not receive a Day-Ahead Market award due to a market interruption declared in accordance with Section 33.7.x, it may submit an EIM Base Schedule according to the timelines established in Section 29.34 and the CAISO will accept the EIM Base Schedule for use in the Real-Time Market and derive an initial EIM Base Load Schedule for the EDAM Entity from the Demand Forecast used for the EDAM Entity Balancing Authority Area. *[Need to consider additional operational details for the Day-Ahead Market and transition to the Real-Time Market.]*

**33.31.2.1 CAISO Demand Forecast.** In accordance with procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market, the CAISO will develop Demand Forecasts by Demand Forecast zone within each EDAM Entity Balancing Authority Area, separately from the CAISO Balancing Authority Area. *[Need to consider*

*forecasting details for the Day-Ahead Market and transition to the Real-Time Market.]*

**33.31.2.2 Interchange Schedules with Other Balancing Authorities.** EDAM Entity Scheduling Coordinators must submit Interchange Schedules with other Balancing Authority Areas at the relevant EDAM Interties and must update these Interchange Schedules with any adjustments, when applicable, at least hourly. *[Need to consider interchange details for the Day-Ahead Market and transition to the Real-Time Market.]*

### **33.31.2.3 Integrated Forward Market (IFM)**

The CAISO will operate the IFM across the EDAM BAAs according to Section 31.2 and Section 31.3 with the following exceptions. The IFM does not procure Ancillary Services for EDAM BAAs nor do EDAM Participating Resource submit Bids for Ancillary Services or self-provide Ancillary Services to the IFM. The EDAM includes an additional element in the market power mitigation process outlined in Section 31.2. The CAISO performs a DCPA test when there are binding transfer limits in the import direction to a BAA that restricts external resources from meeting internal demand. The DCPA tests if the supply in that individual EIM BAA can meet the demand competitively or provide counter-flow on congested transmission constraints within the BAA. When this test fails, the energy bids of all supply resources in the respective EIM BAA are mitigated.

#### **33.31.2.3.1 IFM Unit Commitment**

IFM unit commitment calculates a resource's hourly optimal unit commitment status (on/off) considering the resource's bids (startup, minimum load, and energy) in conjunction with initial commitment status before the start of the trading day and registered unit commitment constraints such as minimum up/down times, maximum number of daily startups, and other operating characteristics.

#### **33.31.2.3.2 Energy Schedules**

The IFM produces hourly day-ahead energy schedules for all resources with energy bids and self-schedules, including load resources, as well as virtual supply and demand. Generating resources that are not committed in the IFM will have 0 MW energy schedules in the relevant hour. A resource may submit both an economic energy bid and self-schedule for the same hour. In such cases, the economic energy bid must be for the operating range above the self-schedule.

#### **33.31.2.3.3 Imbalance Reserves**

The CAISO will procure Imbalance Reserves across the EDAM BAAs according to Section 31.x. The CAISO will procure Imbalance Reserves under Section 33 for the EDAM Area, rather than just for the CAISO Balancing Authority Area, which will include a diversity benefit.

The CAISO procures imbalance reserves sufficient to meet an hourly uncertainty requirement, which is based on historical forecast deviations between the day-ahead and real-time markets. The CAISO reduces the uncertainty requirement in each BAA by a pro rata allocation of the EDAM diversity benefit. The EDAM diversity benefit is the positive difference between the sum of the uncertainty requirements of all individual BAAs in EDAM (without accounting for a diversity benefit) and the uncertainty requirement for the entire EDAM Area. *[Need to consider imbalance reserve diversity benefit details here or elsewhere.]*

#### **33.31.2.3.4 IFM Transfers**

EDAM transfers involve the exchange of energy, imbalance reserves, reliability

capacity, demand obligations, and ancillary services requirements between BAAs in the EDAM footprint. In the IFM, the market would enforce the scheduling limit for each transfer.

#### **33.31.2.4 Residual Unit Commitment (RUC)**

The CAISO will operate RUC across the EDAM BAAs according to Section 31.5 and 31.9 with the following additional qualifications. The CAISO will establish separate Reliability Capacity requirements for each EDAM BAA but will meet those individual requirements from resources across the EDAM footprint, considering transmission constraints within EDAM BAAs and across EDAM BAAs.

##### **33.31.2.4.1 Offers to RUC**

- RUC procures RCU and RCD from resources offering reliability capacity bids.
- All resources offering energy bids in the IFM must submit bids for reliability capacity in the RUC at the same quantity as their energy bid plus ancillary service self-provision. Submission of reliability capacity bids is otherwise optional for resources.
- Imports.
  - Imports from non-EDAM BAAs can provide RCU and RCD at CAISO interties. The corresponding intertie schedule must be tagged after RUC with a transmission profile equal to the sum of the day-ahead energy schedule, plus the reliability capacity award, if any.
- Exports.
  - Exports to non-EDAM BAAs can also provide reliability capacity up at CAISO interties, with the obligation to provide a decremental energy bid to dispatch down the export schedule in the FMM if needed.

##### **33.31.2.4.2 Receiving an RCU & RCD Award**

- A resource may receive a reliability capacity award for an hour in only one direction, up or down.
- An RCU or RCD award obligates a resource to provide an economic offer in the real-time market incremental or decremental, respectively, to its IFM award.
- The CAISO will pay all resources receiving a reliability capacity up or down award the locational marginal price for reliability capacity up or down, respectively.
- RUC issues binding start-up instructions for resources with a startup time longer than six hours and advisory start-up instructions for all other resources.
- RUC may adjust the commitment of multi-stage generators (MSG) by transitioning them to a different configuration, either higher or lower, than the configuration that cleared the IFM.
- Commitment costs due to binding commitment decisions in RUC are eligible for BCR subject to certain eligibility requirements.

##### **33.31.2.4.3 Determining RUC Awards**

- The EDAM procures RCU and RCD as needed based on the difference between the amount of physical energy that clears the IFM in relation to each EDAM BAA's load forecast.
- RUC will use transfer capacity that remains unscheduled after the IFM or counter-flow on energy transfers that clear the IFM.

- The RUC optimization will consider transmission constraints when scheduling reliability capacity, resulting in locational marginal prices (LMP).
- The net of all reliability capacity awards in an EDAM BAA will be in the direction of the total RUC requirement, although some resources in an EDAM Entity can have RCU awards and others RCD awards.

### **33.31.2.5 External Resource Participation**

Resources outside of an EDAM Entity may participate in the EDAM subject to certain restrictions. Those restrictions depend on whether the resource is imported into the EDAM at an external intertie with the CAISO as opposed to an external intertie with another EDAM Entity.

#### **33.31.2.5.1 EDAM Entity Balancing Authority Area EDAM External Interties**

External resources that would be imported into an intertie with an EDAM Entity other than the CAISO are permitted if the resource is pseudo-tied into an EDAM Entity, dynamically scheduled into an EDAM entity, or are self-scheduled into the EDAM. Economic bids for non-source specific resources are not permitted for external interties into an EDAM Entity other than the CAISO.

#### **33.31.2.5.2 CAISO Balancing Authority Area External Interties**

External resources that would be imported into the EDAM at an external intertie with the CAISO are permitted for resources pseudo-tied or dynamically scheduled into the CAISO. Imports from non-source specific resources into the EDAM at an external intertie with the CAISO are also permitted and may be self-scheduled or economically bid into the EDAM

### **33.31.2.6 Exports from the EDAM Area**

An EDAM Entity may facilitate energy exports from its BAA out of the EDAM Area pursuant to that EDAM Entity's OATT or, in the case of the CAISO, this CAISO Tariff.

*[The specific EDAM RSE and Day-Ahead Market procedures and requirements applicable to the CAISO and EDAM Market Participants will be further considered and set forth in Section 33.31 similar to the content and structure of the WEIM tariff Section 29.34]*

## **33.32 Greenhouse Gas**

### **(a) EDAM Bid Adders**

**(1) In General.** EDAM Participating Resources will have an opportunity to recover costs of compliance with greenhouse gas regulations adopted by the California Air Resources Board and Washington Department of Ecology, which may include the cost of allowances, uncertainty regarding the final resource-specific emission factor, and other costs of greenhouse gas regulation compliance

**(2) Bid Adders.** The EDAM will use EDAM Bid Adders submitted by EDAM Participating Resource Scheduling Coordinators for EDAM Participating Resources located outside of a GHG Regulation Area to optimize the attribution of EDAM Transfers into a GHG Regulation Area. For purposes of this Section, a GHG Regulation Area will reflect the Nodes within a state jurisdiction that has priced greenhouse gas emissions as part of a state carbon reduction law or regulation.



**(A) Bid Submission.** EDAM Participating Resource Scheduling Coordinators for EDAM Participating Resources located outside of GHG Regulation Area may submit an EDAM Bid Adder as a separate hourly Bid component specific to each GHG Regulation Area to recover costs of compliance with greenhouse gas regulations adopted by the California Air Resources Board or the Washington Department of Ecology. The EDAM Bid Adder will consist of a price and MW quantity. The price included in the EDAM Bid Adder will not be less than \$0/MWh and not greater than 110% of the EDAM Participating Resource's greenhouse gas maximum compliance cost as determined in accordance with Section 33.32(a)(3).

**(B) Default Treatment.** If an EDAM Participating Resource located outside of GHG Regulation Area does not submit an EDAM Bid Adder to serve Demand within a specific GHG Regulation Area, the optimization will not attribute the EDAM Participating Resource as supporting an EDAM Transfer into that specific GHG Regulation Area.

**(3) Determination of Maximum GHG Cost.** The CAISO will calculate a maximum daily EDAM Bid Adder for each EDAM Participating Resource in relation to each GHG Regulation Area based on the EDAM Participating Resource's highest incremental heat rate, the applicable Greenhouse Gas Allowance Price, and the EDAM Participating Resource's emission rate. The CAISO will also provide for an option to negotiate a maximum daily EDAM Bid Adder for each GHG Regulation Area.

**(b) Consideration of EDAM Bid Adders in Market Clearing.**

**(1) Dispatch of EDAM Participating Resources with Nonzero Bid Adders.** The Integrated Forward Market will take into account EDAM Bid Adders in selecting Energy produced by EDAM Participating Resources located outside of a GHG Regulation Area up to the associated MW quantity included in the EDAM Bid Adder. The Integrated Forward Market will not consider EDAM Bid Adders when selecting EDAM Participating Resources to serve Demand outside of GHG Regulation Areas.

**(2) EDAM Participating Resources EDAM Bid Adder MW Quantity.** The EDAM will limit the maximum EDAM Bid Adder MW quantity of an EDAM Participating Resource to a value equal to the EDAM Participating Resource's dispatchable Bid range between the EDAM Participating Resource's GHG Counterfactual schedule and the EDAM Participating Resource's effective upper economic Bid, considering any applicable derates and Ancillary Services capacity reservations, for the relevant Operating Hour.

**(3) GHG Counterfactual.** The GHG Counterfactual is an optimal market run that occurs before the Integrated Forward Market. The GHG Counterfactual clears an optimal supply schedule to meet Demand in the EDAM outside of GHG Regulation Areas to approximate how EDAM Entities with Demand outside a GHG Regulation Areas will serve that Demand with EDAM Participating Resources. The GHG Counterfactual establishes a baseline to determine what dispatch of EDAM Participating Resources would have occurred outside of GHG Regulation Areas without offers to serve Demand in GHG Regulation Areas. The GHG Counterfactual is identical to the IFM but does not allow net imports into a GHG Regulation Area and will not schedule Resource Adequacy resources to serve Demand in the EDAM outside of a GHG Regulation Area, which will allow Resource Adequacy resources to support an EDAM transfer into a GHG Regulation Area in the Integrated Forward Market.

**(4) Dispatch of EDAM Participating Resources with Bid Adders of Zero.** The Integrated Forward Market will not dispatch EDAM Participating Resources outside of GHG Regulation Area for delivery into a GHG Regulation Area if the MW quantity included in the EDAM Bid Adder is zero.

**(c) GHG Marginal Price.** The Integrated Forward Market will optimally select EDAM Participating Resources outside of a GHG Regulation Area to support EDAM Transfers into a GHG Regulation Area. The selection will reflect EDAM Participating Resources' composite Energy and EDAM Bid Adder, lowest to highest, until the total MW of EDAM Transfers into the respective GHG Regulation Area is fully allocated. The shadow price of this allocation constraint is the marginal GHG price for the respective GHG Regulation Area.

**(d) Compensation.** When the Integrated Forward Market attributes an EDAM Participating Resource outside of a GHG Regulation Area to support an EDAM Transfer to serve Demand in a GHG Regulation Area will receive a payment equaling the product of the EDAM Participating Resource's IFM obligation to serve Demand in a GHG Regulation Area and the IFM marginal GHG price.

### **33.32.1 Additional Constraints**

**(a) GHG Net Export Constraint.** The CAISO will apply an hourly GHG net export constraint in the market optimization for EDAM Entity Balancing Authority Areas. This constraint will not allow aggregate attribution of EDAM Transfers to EDAM Participating Resources supporting Demand in a GHG Regulation Area to exceed the GHG net export for that hour. If the EDAM Entity Balancing Authority Area is a net importer in that hour, the market optimization will not attribute EDAM Transfers to EDAM Participating Resources in that Balancing Authority Area to support Demand in a GHG Regulation Area.

### **33.32.2 Data Availability**

**(a) Dispatch Instructions.** The CAISO will notify an EDAM Participating Resource Scheduling Coordinator through Dispatch Instructions of the megawatt quantity of any Energy of an EDAM Participating Resource located in an EDAM Entity Balancing Authority Area outside of a specific GHG Regulation Area that supports an EDAM Transfer to serve Demand in a GHG Regulation Area.

**(b) Reporting.** The CAISO will report to each EDAM Participating Resource Scheduling Coordinator the portion of an EDAM Resource's Day-Ahead Energy Schedule that supports a transfer into a GHG Regulation Area.

### **33.33 [Not Used]**

Section 33 is not used in the CAISO Tariff.

*[Section 33 will contain the EDAM rules and remain "not used" in Section 33.33]*

### **33.34 [Not Used]**

Section 34 contains the Real-Time Market Rules, including how the Day-Ahead Market results are incorporated into the Real-Time Market.

*[The relationship between the Real-Time Market rules in Section 34 and the EDAM rules in Section 33 will be further considered and set forth in Section 33.34 to the extent they are not addressed in another subsection of Section 33, although this relationship may be more*

*appropriately addressed in section 33.29]*

### **33.35 Market Validation And Price Correction**

The market validation and price correction provisions of Section 35 apply to the EDAM, except that, for a period not to exceed 180 days after an EDAM Entity Implementation Date, the time allowed for the CAISO's correction of Day-Ahead Market prices shall be 10 Business Days.

*[The specific market validation and price correction procedures applicable to the EDAM will be further considered and set forth in Section 33.35 similar to the content and structure of the WEIM tariff Section 29.35]*

### **33.36 [Not Used]**

Congestion Revenue Rights are not included in the EDAM and the provisions of Section 36 do not apply.

*[Hold open for specific rules associated with Congestion Revenue Rights should further proposals implement their auction, allocation and administration through the EDAM, meaning until such time the provisions of Section 36 will not apply to the EDAM]*

### **33.37 Rules Of Conduct**

All EDAM Market Participants will be subject to the provisions of Section 37 except for Section 37.2. *[Need to further consider sections 37.4.2]*

*[The specific rules of conduct applicable to the EDAM will be further considered and set forth in Section 33.37 similar to the content and structure of the WEIM tariff Section 29.37]*

### **33.38 Market Monitoring**

The CAISO Department of Market Monitoring is the market monitor for the EDAM and holds the same duties towards the EDAM as it holds under Appendix P, Section 5 towards the CAISO Markets. Any referral to FERC of a potential Market Violation or market design flaw shall be made under the procedures established in Appendix P, Section 11 and Appendix P, Section 12, respectively. The obligations the CAISO holds towards DMM under Appendix P, Sections 3 & 4 apply equally to DMM in its role as market monitor for the EDAM.

The CAISO Market Surveillance Committee holds the same duties towards the EDAM as it holds under Appendix O, Section 5 towards the CAISO Markets.

*[The specific market monitoring procedures applicable to the EDAM will be further considered and set forth in Section 33.38, perhaps similar to the content and structure of the WEIM tariff Section 29.38 or perhaps more as suggested here]*

### **33.39 Local Market Power Mitigation**

The CAISO will apply the Local Market Power Mitigation procedures set forth in CAISO Tariff Section 39.7 to the EDAM and using the methods and standards for setting default energy bids for LMPM in the EDAM set forth in CAISO Tariff Section 39.7.

*[The specific market power mitigation rules and procedures and default energy bid methods and standards applicable to the EDAM will be further considered and set forth in Section 33.39 similar to the content and structure of the WEIM tariff Section 29.39]*

### **33.40 [Not Used]**

The EDAM does not include resource adequacy requirements, and Section 40 will not apply to EDAM Market Participants [except to the extent a resource in an EDAM BAA is RA Capacity].

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well]*

*within the context of another subsection of Section 33]*

### **33.41 [Not Used]**

The EDAM does not include procurement of RMR generation and Section 41 will not apply to EDAM Market Participants.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.42 [Not Used]**

The EDAM does not enforce generation planning reserve criteria and Section 42 will not apply to EDAM Market Participants.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.43 [Not Used]**

The EDAM does not include the capacity procurement mechanism, and Section 43 will not apply to EDAM Market Participants.

*[Consider EDAM specific issues that may need to be addressed and do not otherwise fit well within the context of another subsection of Section 33]*

### **33.44 Flexible Ramping Product**

The CAISO will procure flexible ramping capability in the EDAM Area as set forth in Section 44.

*[The specific flexible ramping product rules and procedures applicable to the EDAM will be further considered and set forth in Section 33.44 as appropriate.]*

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## **Potential Changes to Other CAISO Tariff Sections and Appendixes**

**11. California ISO Settlement** *[changes to EDAM Area charge allocations between the Balancing Authority Areas may be considered in Section 11 to the extent the charges apply globally, which is similar to how some WEIM charges are allocated]*

**26. Transmission Rates and Charges** *[changes may be considered to recover historical transmission revenue associated with EDAM transfers on CAISO inerties]*

**29.32 Greenhouse Gas Regulation and EIM Bid Adders.** *[changes to reflect Washington's Department of Ecology cap and invest program, use of GHG Regulation Area to model transfers, use of the integrated forward market schedule for EDAM participating resources to limit attribution of transfers to serve demand in a GHG Regulation Area, use of GHG net export constraint, calculation of GHG marginal price]*

## **Appendix A**

### **Potential New Definitions**

#### **Extended Day-Ahead Market (EDAM)**

The Day-Ahead Market for EDAM Entities, as set forth in Section 33 of the CAISO Tariff.

#### **EDAM Administrative Charge**

The fee imposed on transactions in the EDAM, as described in Section 33.11.5.

**EDAM Area**

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

**EDAM Demand**

Energy delivered to Load in an EDAM Entity Balancing Authority Area.

**EDAM Entity**

A Balancing Authority that enters into an EDAM Entity Agreement with the CAISO to enable the operation of the Day-Ahead and Real-Time Markets in its Balancing Authority Area.

**EDAM Entity Agreement**

An agreement between an EDAM Entity and the CAISO to join and participate in the EDAM, a *pro forma* version of which is set forth in Appendix B. The EDAM Implementation Agreement precedes the EDAM Entity Agreement.

**EDAM Entity Implementation Date**

The first Trading Day for an EDAM Entity in the Day-Ahead Market.

**EDAM External Intertie**

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

**EDAM Implementation Agreement**

An agreement between a Balancing Authority seeking to become an EDAM Entity and the CAISO, a *pro forma* version of which is set forth in Appendix B. The EDAM Implementation Agreement precedes the EDAM Entity Agreement.

**EDAM Internal Intertie**

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

**EDAM Legacy Contract**

A transmission service contract entered into prior to the effective date of the EDAM Transmission Service Provider tariff (including any contracts entered into pursuant to such contracts) as may be amended in accordance with their terms or by agreement between the parties thereto from time to time.

**EDAM Manual Dispatch**

A Dispatch by an EDAM Entity to an EDAM Participating Resource or a non-participating resource for which it is responsible, outside of Market Clearing of the Day-Ahead Market. Manual Dispatches in the Real-Time Market are EIM Manual Dispatches or Exceptional Dispatches, as applicable.

**EDAM Market Participant**

**EDAM Measured Demand**

**EDAM Participating Resource**

An owner of, operator of, or seller of Energy, participating in the EDAM and located in an EDAM



Entity Balancing Authority Area.

### **EDAM Participating Resource Agreement**

### **EDAM Participating Resource Scheduling Coordinator**

### **DAIM Participating Resource Scheduling Coordinator Agreement**

### **Resource Sufficiency Evaluation (RSE)**

The RSE ensures the CAISO and EDAM Entities can meet their Balancing Authority obligations in the Day-Ahead Market through a test that determines whether each participating BAA has sufficient supply and reserves to meet forecasted Demand and uncertainty, as described in Section 33.31 and Section 29.34.

### **EDAM Transfer**

The scheduled transfer of Energy in the Day-Ahead Market between an EDAM Entity Balancing Authority Area and the CAISO Balancing Authority Area, or between EDAM Entity Balancing Authority Areas, using transmission capacity made available through the EDAM.

### **EDAM Transmission Ownership Right**

Ownership rights on third party transmission facilities within an EDAM Balancing Authority Area that are not subject to an EDAM Transmission Service Provider tariff.

### **EDAM Transmission Service Information**

Information provided by an EDAM Entity to the CAISO about transmission capacity available for use in the EDAM.

### **EDAM Transmission Service Provider**

An EDAM Entity or other party that owns transmission or has transmission service rights on an EDAM Intertie that makes transmission service available for use in the Day-Ahead Market through an EDAM Entity.

### **GHG Counterfactual**

### **GHG Regulation Area**

### **GHG Net Export Constraint**

## **Appendix A**

### **Potential Amended Definitions**

**Aggregate Capability Constraint** [*revise to include EDAM Participating Resources*]

**Base Model Market** [*revise to include EDAM Entity and EDAM Entity Balancing Authority Area*]

**CAISO Metered Entity** [*revise to include EDAM Participating Resources*]

**CAISO Markets** [*revise to include EDAM*]

**Co-located Resources** [*revise to include EDAM Participating Resources*]

**Connected Entity** [*revise to include EDAM Transmission Service Provider*]

**Curtailed Demand** [*revise to include EDAM Area*]

**Contingency** [*revise to include EDAM Balancing Authority Area*]

**EIM Bid Adder** *[revise to be inclusive of EDAM and other state GHG regulatory authorities]*  
**End-Use Customer or End-User** *[revise to include EDAM Transmission Service Provider]*  
**Generating Unit** *[revise to include EDAM Balancing Authority Area]*  
**Greenhouse Gas Emission Cost Revenue** *[revise to include EDAM Participating Resources]*  
**Interchange** *[revise to include EDAM Balancing Authority Area]*  
**Interchange Schedule** *[revise to include EDAM Balancing Authority Area]*  
**Load Serving Entity (LSE)** *[revise to include EDAM Balancing Authority Area]*  
**Marginal Greenhouse Gas Cost** *[revise to include EDAM Participating Resources]*  
**Market Participant** *[revise to include EDAM Market Participants]*  
**Net Imbalance Energy Export** *[revise to include EDAM Balancing Authority Area]*  
**Node** *[revise to include EDAM Area]*  
**Point of Interconnection** *[revise to include EDAM Participating Resources]*  
**Point(s) of Delivery (POD) or Withdrawal** *[revise to include EDAM Area]*  
**Point(s) of Receipt (POR) or Injection** *[revise to include EDAM Area]*  
**Participating Resource** *[revise to include EDAM Participating Resources]*  
**Reference Bus** *[revise to include EDAM Area]*  
**Scheduling Coordinator** *[revise to include EDAM Scheduling Coordinators]*  
**Scheduling Coordinator Metered Entity** *[revise to include EDAM Entity or EDAM Participating Resources]*  
**State Estimator** *[revise to include EDAM Entity an EDAM Entity Balancing Authority Area]*  
**System Resource** *[revise to include EDAM Balancing Authority Area]*

## **Appendix B**

### **Potential New Pro Forma Agreements**

**EDAM Entity Agreement**

**EDAM Entity Scheduling Coordinator Agreement**

**EDAM Implementation Agreement**

**EDAM Participating Resource Agreement**

**EDAM Participating Resource Scheduling Coordinator Agreement**

## **Appendix C**

### **Potential Changes to the LMP Formulation**

**LMP Formulation, Marginal Energy Cost, Marginal GHG Cost, Marginal Cost of Congestion** *[will be reviewed following the final market design]*

## Appendix F

### Potential Changes to the Rate Schedules

**Transmission Revenue Requirement Formulation, EDAM Fee Calculation** [*will be reviewed following the final market design*]