



California ISO

Western EIM Sub-Entity Scheduling
Coordinator Role
Issue Paper / Straw Proposal

November 5, 2020

Prepared by: Danny Johnson and James Lynn

California Independent System Operator

Table of Contents

Executive Summary..... 3

Scope of this proposal..... 3

Background..... 3

 EIM Entity Responsibilities 3

Proposal – EIM Sub-Entity Scheduling Coordinators 4

 Roles and Responsibilities 5

 Forecasting 5

 Meter Data, Settlements and Invoicing..... 6

 System Access 6

 Base Aggregation Scheduling Portal (BSAP)..... 7

 Customer Market Results Interface (CMRI) 7

 Settlements 7

 webOMS 7

 Energy Transfers..... 7

 Outage Management 8

 New Pro Forma EIM Sub-Entity Agreement and EIM Sub-Entity Scheduling Coordinator Agreement 8

Stakeholder engagement and next steps 8

 Energy Imbalance Market Governing Body 9

 Schedule 9

Executive Summary

The CAISO is proposing to create a new EIM sub-entity scheduling coordinator (SESC) role that would allow for multiple scheduling coordinators within a single EIM entity balancing authority area (BAA) to schedule and financially settle non-participating loads and resources directly in the EIM. The current EIM rules require these non-participating loads and resources to be scheduled and settled through the EIM entity representing the BAA.

There are several entities embedded within a future EIM BAA that are interested in representing their loads and non-participating resources within the EIM. This new functionality necessitates the creation of a new role within the EIM that allows for a flexible relationship between these EIM sub-entities and the EIM entity they reside within as well as the CAISO.

The EIM sub-entity scheduling coordinator role would be responsible for scheduling and settling supply, load and interchange that would otherwise be the responsibility of their EIM entity scheduling coordinator. The EIM sub-entity scheduling coordinator would submit base schedules, including scheduling interchange, to both the CAISO as well as their host EIM entity. Settlements and invoicing associated with loads and resources would be performed at the EIM entity and the EIM sub-entity scheduling coordinator level, depending on the scheduling coordinator the resource is associated with.

Scope of this proposal

This initiative is in response to the WEIM implementation agreement between CAISO and Public Service Colorado (PSCo). In that agreement, the CAISO committed to pursuing in a stakeholder process, a new EIM role that will allow separate scheduling and settlement for entities within an EIM entity balancing authority area. The proposal details the delegation of authority and responsibilities between EIM entity scheduling coordinators and this new role.

Background

EIM Entity Responsibilities

Currently, EIM entities are responsible for the scheduling, bidding and settling all loads, interchange transactions and non-participating resources within their balancing authority area. Each EIM entity, through its scheduling coordinator, is responsible for all EIM area generation via the submission of generation base schedules for non-participating resources as well base schedules for participating resources. Each EIM entity is responsible for its area demand forecast should it choose not to use the forecast provided by the CAISO. The EIM entity scheduling coordinator is also responsible for the submission of base schedules for the base scheduling energy transfer system resource (ETSR). All resource sufficiency evaluations (RSE), which are used to

validate that EIM entities are able to meet their own capacity and flexible ramping requirements, are performed at an EIM entity level. The ability to access additional quantities of EIM transfers is predicated on the EIM entity's ability to pass the RSE¹.

Under the current market paradigm, the CAISO market settles the energy differences between resource meter and the resource base schedule of participating resources, flexible ramp movement, bid cost recovery payments, flexible ramp uncertainty award and allocation, and relevant grid management charges with the participating scheduling coordinator(s) (PRSC) allocations. The participating resource scheduling coordinator receives daily/monthly statements as well as weekly invoices associated with the participating resources' charges and payments.

For non-participating resources, the ISO settles the energy difference between the resource meter and the resource base schedule with the EIM Entity scheduling coordinator. In addition, the EIM Entity scheduling coordinator is responsible for balancing area costs such as over-scheduling/under-scheduling charges and payments, real time market offsets, bid cost recovery allocations, flexible ramp movement allocation, flexible ramp uncertainty allocation, and non-participating grid management charges. The EIM entity scheduling coordinator receives daily/monthly statements as well as weekly invoices associated with the non-participating resources' charges and payments, as well as balancing authority areas costs.

The EIM entity then sub-allocates the payments and charges associated with the non-participating resources as well as BAA costs to its customers based upon its BAA's open access transmission tariff (OATT).

Outage coordination is also performed at the EIM entity level. CAISO provides an outage management system that allows EIM entity scheduling coordinators to submit approved transmission and generation outages for the EIM entity BAA.

Proposal – EIM Sub-Entity Scheduling Coordinators

The CAISO proposes to create a new scheduling coordinator type for EIM participation. In addition to the EIM entity scheduling coordinator role that is currently specified in the EIM design, the CAISO proposes that an EIM balancing authority area will have the ability to enable one or more "sub-entity scheduling coordinators" within its EIM balancing authority area. These EIM sub-entity scheduling coordinators will interact both with the CAISO directly, as well as the EIM entity scheduling coordinator representing the balancing authority area within which they have a load or resource.

The following sections outline the CAISO's proposal.

¹ <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Energy%20Imbalance%20Market>. Section 11.3.2

Roles and Responsibilities

Each EIM sub-entity scheduling coordinator will function as its own load serving entity (LSE) within their EIM sub-entity area. To facilitate this, each EIM sub-area scheduling coordinator will have its own load aggregation point (LAP) and will be responsible for the submission of demand forecasts to both the CAISO and the EIM entity within whose balancing authority area they reside.

Each EIM sub-entity scheduling coordinator will also be responsible for the submission of base schedules through the CAISO base schedule aggregation portal (BSAP) for resources within their area for which they serve as the scheduling coordinator. For supply resources within an EIM BAA to be settled directly with the CAISO, the resources will need to have either the EIM sub-entity or a participating resource scheduling coordinator as their registered scheduling coordinator. The scheduling coordinator will submit bids, or schedules where appropriate, to the CAISO using the scheduling infrastructure business rules (SIBR) application.

Base schedules submitted by the sub-entity scheduling coordinator can be modified by the EIM entity scheduling coordinator; any modification should be communicated to the EIM sub-entity. This design allows for EIM sub-area scheduling coordinators to maintain flexibility and control of the resources by updating their base schedules prior to the T-55 RSE, while also allowing the EIM entity scheduling coordinator to retain reliability control. EIM entities are ultimately responsible for the capacity and flexible ramping tests which are performed as part of the RSE at the EIM entity level and are generally associated with their balancing authority function.

Forecasting

The CAISO will support an EIM sub-entity scheduling coordinator's ability to use their own forecasting services for variable energy resources' supply output. To facilitate this, each resource within a sub-entity scheduling coordinator will need its own unique resource ID, as well as telemetry if required². The CAISO also proposes to support hybrid and co-located resources, and will offer persistence forecasting for resources within a sub-entity as is done currently for EIM entity scheduling coordinator resources.

Load forecasts will be submitted by the schedule coordinator for its respective LAP. Should an EIM sub-entity scheduling coordinator elect not to submit a forecast, it will retain the ability to elect to use the CAISO-created forecast; similar to the functionality currently offered to EIM entity scheduling coordinators. The CAISO proposes that the EIM entity scheduling coordinator will then use these forecasts to create a forecast for

² <http://www.caiso.com/Documents/Section29-EnergyImbalanceMarket-asof-Sep9-2020.pdf>. Section 29.10

the EIM entity control area which will, in turn, be used as an input into the CAISO's day ahead reliability assessment process.

Meter Data, Settlements and Invoicing

The EIM sub-entity coordinator will submit meter data to the CAISO for the non-participating resources within its area. Additionally, each EIM sub-entity scheduling coordinator will be required to submit meter data for its associated load serving entity in the same manner as the EIM entity scheduling coordinator.

The CAISO settlements process will create invoices at the EIM sub-entity scheduling coordinator level as well as the EIM entity level, with both groups receiving statements of costs for LSE area load. The CAISO is proposing to continue allocating bid cost recovery (BCR) charges at the EIM entity level with sub-allocations to EIM sub-entity scheduling coordinators performed according to the EIM entity's OATT. This approach will allow for flexibility between EIM entities and their potential sub-entity scheduling coordinators.

Over-scheduling and under-scheduling assessment will be based upon the net balancing authority area load deviation, if deviation exceeds a threshold, the over-scheduling and under-scheduling charges will be determined at the EIM entity level. If the balancing authority area passes the balancing test or is within the threshold, the EIM sub-entity level will be allocated a portion of the over-scheduling and under-scheduling total costs based on the metered demand within the sub-entity as well as the sub-entity's submitted base schedule.

Flexible ramp movement allocation and flexible ramp uncertainty allocation will also be settled at the sub-entity level for resources the sub-entity is serving as the scheduling coordinator for, as they are calculated at a resource specific level.

Each EIM sub-entity scheduling coordinator will be responsible for ensuring all generation and load within its area is metered in accordance with Section 29.10³ of the CAISO tariff. Each sub-entity scheduling coordinator will also submit settlement quality meter data (SQMD) as described in Section 8 of the CAISO BPM for the Energy Imbalance Market.

System Access

The proposed EIM sub-entity scheduling coordinator role will have access to the following CAISO systems:

³ <http://www.caiso.com/Documents/Section29-EnergyImbalanceMarket-asof-Sep9-2020.pdf>

Base Aggregation Scheduling Portal (BSAP)

- EIM sub-entity scheduling coordinator will have access to BSAP to submit base schedules at T-75 minutes and T-55 minutes prior to the operating hour

Customer Market Results Interface (CMRI)

- EIM sub-entity scheduling coordinator will have access to CMRI for the purposes of viewing submitted load, generation, and intertie base schedules, as well as the results of the T-75 resource sufficiency evaluation

Market Results Interface – Settlements (MRI-S)

- EIM sub-entity scheduling coordinator will have access to invoices of load, generation and interties that are associated with the EIM sub-entity scheduling coordinator. An invoice reflecting these values will also be available at the balancing authority area level for review by the EIM entity scheduling coordinator.
- EIM sub-entity scheduling coordinator will have access to MRI-S for the purposes of submitting required meter data for the non-participating resources within its area and for its associated load serving entity

webOMS

- EIM sub-entity scheduling coordinators will have access to webOMS where appropriate, based on existing participation in RC West. Whether sub-entity scheduling coordinators utilize webOMS to perform their outage coordination is an open question that the CAISO requests comment on.

Energy Transfers

The CAISO proposes an EIM sub-entity scheduling coordinator have the ability to submit intertie schedules as part of their initial base schedule at T-75. These base schedules will be submitted to both the CAISO and the EIM entity scheduling coordinator. The EIM entity scheduling coordinator will then be responsible for the approval of sub-entity base schedules prior to the T-55 deadline for base schedule submission. The EIM entity is responsible for ensuring balanced schedules, net interchange, and tagging within its balancing authority area. The EIM entity will retain responsibility for the scheduling of base ETSRs and associated ETSR EIM energy transfer system resources. The CAISO believes this design will allow flexibility in scheduling for EIM sub-entity scheduling coordinators while also ensuring that the EIM entity retains the tools, adequate time, and authority necessary to ensure reliability for their balancing authority area.

Outage Management

EIM entities that are RC West members will submit outages in accordance with the Reliability Coordinator Services BPM and the Outage Coordination RC0320 and RC0630 operating procedures.⁴ Outage data submitted by the EIM sub-entity scheduling coordinator will be available within the CAISO webOMS system for review by the EIM entity.

For EIM entities and their subsequent sub-entity scheduling coordinators that are EIM members but not RC West participants, the CAISO asks for comment on whether they would have interest in utilizing webOMS to perform outage coordination. The EIM entity scheduling coordinator will ultimately be responsible for the submission of approved outages for its control area submitted to the CAISO using webOMS as described the EIM BPM.⁵

New Pro Forma EIM Sub-Entity Agreement and EIM Sub-Entity Scheduling Coordinator Agreement

Establishing the EIM sub-entity scheduling coordinator relationship will require new *pro forma* agreements. These agreements will conform to CAISO standards for *pro forma* service agreements and their companion scheduling coordinator agreements. As such, these agreements will be similar to the *pro forma* EIM entity agreement and EIM entity scheduling coordinator agreement with modifications to account for the different roles and responsibilities associated with a sub-entity and representation of a sub-entity. As with other CAISO *pro forma* agreements, the EIM sub-entity agreement and companion EIM sub-entity scheduling coordinator agreement will reference the CAISO tariff provisions that support the roles and responsibilities outlined in this proposal. The details of these new *pro forma* agreements will be developed as part of the tariff stakeholder process associated with this initiative.

Stakeholder engagement and next steps

⁴ <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability%20Coordinator%20Services>: Section 7

⁵ <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Energy%20Imbalance%20Market>: Section 10.1

Energy Imbalance Market Governing Body

The CAISO believes the EIM Governing Body should have primary authority in the approval of the proposed changes.

The rules that govern decisional classification were amended in 2019 when the Board adopted changes to the Charter for EIM Governance and the Guidance Document. An initiative proposing to change rules of the real-time market now falls within the primary authority of the EIM Governing Body either if the proposed new rule is EIM-specific in the sense that it applies uniquely or differently in the balancing authority areas of EIM Entities, as opposed to a generally applicable rule, or for proposed market rules that are generally applicable, if “an issue that is specific to the EIM balancing authority areas is the primary driver for the proposed change.”

This initiative satisfies both tests. The tariff rules to create a new type of scheduling coordinator role would be EIM-specific, because it would be available only to represent market participants within the balancing authority areas of EIM Entities and not across the entire market footprint. In addition, the primary driver for addressing this topic is to resolve an issue that is specific to one EIM balancing authority area. Accordingly, this initiative would fall within the primary authority of the EIM Governing Body.

Stakeholders are encouraged to submit a response to the EIM classification of this initiative as described above in their written comments, particularly if they have concerns or questions.

Schedule

The schedule for stakeholder engagement is provided below. The CAISO targets the May 6, 2021 EIM Governing Body and May 19-20, 2021 CAISO Board of Governors’ meeting.

Date	Event
November 5, 2020	Post Issue Paper / Straw Proposal
November 12, 2020	Stakeholder Call
December 3, 2020	Comments on Straw Proposal Due
January 14, 2021	Publish Revised Straw Proposal
January 21, 2021	Stakeholder Call
February 11, 2021	Comments on Revised Straw Proposal
March 18, 2021	Publish Draft Final Proposal
March 25 or 26, 2021	Stakeholder Call
April 9, 2021	Comments on Draft Final Proposal

May 6, 2021	EIM Governing Body Meeting
May 19-20, 2021	CAISO Board Meeting

Stakeholders should attend the stakeholder conference call on November 12, 2020 and submit written comments using the online template on the initiative [webpage](#) by December 3, 2020.