

Xcel Energy Comments to the CAISO on the Revised EIM Straw Proposal
June 14, 2013

General Comments

These comments do not provide relines with respect to typographical errors.

Xcel Energy has prioritized its comments into three categories, High medium and low due to the short turn-around time under which the CAISO and stakeholders are operating. Xcel Energy considers those issues under the High priority critical to the efficient operation of the market and asks that these be addressed first.

High Priority Issues

Participant definitions, obligations and agreements

It seems that the CAISO expects the BA to be the primary settlement entity with the CAISO. As structured, the only entity submitting pre-operation settlement information is the BA. The resource owners will only be submitting offers. For settlements, the CAISO will settle with the Participating Resource SC for any difference between the EIM Entity SC schedule and the actual output. This creates many issues, including when the CAISO discusses potential disgorgement due to load forecast errors, and the development of the adjusted base schedules due to congestion within the EIM footprint especially with respect to the sufficiency of supply for a party with reduced base schedules. It is also unclear which entity will pay for the load service under the proposed methodology. Does the CAISO assume that all load will be settled with the EIM Entity and then the EIM entity will have to address load service within the BA? Xcel Energy proposes that the CAISO address these issues to ensure the market processes work smoothly across all market participants and does not end up in regulatory or legal proceedings.

As an example of the problem with the proposed process, in Section 3.3.5, the CAISO proposes that the EIM Entity will be responsible for submitting all load

information. If this load forecast is not accurate, the CAISO will impose penalties on the EIM Entity Scheduling Coordinator. However, the EIM Entity Scheduling Coordinator is not the owner of all loads and resources within the BAA. Does the CAISO expect the EIM Entity to submit a financially binding schedule for a resource that it does not own that differs from what the resource owner expects to be submitted? This could lead to extremely contentious conditions for EIM Entities and resource owners and may reduce market participation at both the resource and EIM Entity level.

Xcel Energy proposes the following means to address its concerns:

First: Require that all participating Load Serving Entities and Participating Resources be responsible for submitting balanced load and resource schedules, possibly in the role of Scheduling Coordinator. If there is congestion, the CAISO can inform the participant of the maximum generation from its generator(s) and notify them of adjustments to other resources the entity owns to address the congestion. If no resource owned by that participant can address the congestion, the CAISO would inform that entity it is at risk of being served from the EIM market without financial hedge or potential supply shortage requiring Reliability Coordinator intervention. The CAISO could also identify other resources participating in the EIM that might be able to serve the loads with a bilateral agreement between the two entities. Under this methodology, the CAISO would have the information necessary to address congestion without causing secondary settlement issues outside of the EIM settlement process.

Second: Xcel Energy recommends the CAISO adjust the proposed congestion management process. If a resource will be limited due to the system configuration, the CAISO must separate the reliability adjustments from the financially settled schedules. The use of the Adjusted Base Schedule for financial settlement is unacceptable as currently proposed. Under the proposed methodology, the Adjusted Base Schedules are likely to cause imbalance across the different resource owners in the EIM footprint. Due to the imbalance created, the EIM Entity will need a bilateral agreement or tariff schedule to address any

imbalance caused by adjustments made by the CAISO. This methodology will be extremely contentious if not unworkable. Therefore, the financially binding schedule must be one proposed by the resource owners/load serving entities, not the EIM Entity. If the CAISO sees congestion in the model runs, the CAISO can then notify the entities affected by the congestion that the proposed schedule is infeasible. However, the CAISO should use the Adjusted Base Schedule as reliability information only, not financial settlement. In this way, the process would notify the EIM participants that their financial hedge (the self-schedule) is infeasible but sufficient offered resources exist to serve the load. It would then be up to that entity to address the shortfall as it desires.

Finally, Xcel Energy understands that the CAISO may need to address issues raised in this section by redesigning the definitions and roles of the different entities. However, it would be appropriate to include draft agreements for each entity type identified in Section 3.1 and the EIM Service Agreement referenced in Section 3.3.1 as part of the next version of the Straw Proposal.

Congestion management

The congestion management process described in the revised Straw Proposal raises several questions. Specifically, how does the proposed congestion management process work in relation to loop flow, how is transmission priority for the different resources determined, and how is the congestion management coordinated with the WECC Reliability Coordinator?

If the CAISO identifies congestion, the cause of this congestion must be determined. If the cause is external loop flow, then an automatic adjustment to a proposed Base Schedule is problematic as it would either degrade the hedge value of the EIM-scheduled physical transmission service or it would create a revenue neutrality shortfall for the EIM redispatch. To address the hedge value the CAISO must determine the appropriate priority for the flows to determine which source of flow should be restricted. Otherwise, there is a potential for curtailments incurred by the party with a higher transmission priority. The revenue issue is discussed further below. (Related to our

comments above, the CAISO can better address this issue if the individual Load Serving Entities are responsible for providing balanced load and resource schedules.)

Throughout the document, base schedule adjustments are indicated as separate from reliability-based curtailments, as would be initiated through the UFMP. Additionally, the straw proposal indicates that the CAISO will exhaust market redispatch prior to coordinated reliability curtailments such as the UFMP or RC intervention. However, the proposal must address how loop flow impacts contribute to the need for base schedule adjustments and how mitigation of loop flow impacts will occur. **Without a simultaneous process to address loop flow impacts at the time of market redispatch, there will be an unacceptable potential for revenue insufficiency for redispatch and associated revenue neutrality uplift costs in the market footprint.** For example, Section 3.6.4 anticipates that EIM market dispatch is exhausted prior to recourse to the UFMP. This could create uplift for market participants. Will the CAISO offer a redispatch option to non-market areas in circumstances where the redispatch by the EIM is an efficient remedy for the external parties' curtailment obligations? If so, the proposal must address the interface for providing the cost allocation to the non-market entity associated with the redispatch service.

The proposed design seems permits the use of aggregate external systems response into the EIM dispatch (for example in Section 3.3.13). This may be a low-cost way for external systems to participate but could create some reliability and inefficiency problems and the CAISO should evaluate this sort of external interaction. For example, if there are situational awareness and dispatch efficiency concerns with the BA-based external resource dispatch utilizations.

Specific to Section 3.3.9.1 Minimum Shift Optimization Detail, what if the EIM must also relax the constraint (e.g. does not have sufficient resources to mitigate the problem), at what point does the RC process enter the picture?

Greenhouse Gas Issues

The CAISO is proposing to use a cost adder to account for the greenhouse gas (GHG) rules within the CAISO. As proposed, Xcel Energy understands that the CAISO will request emissions information for each registered resource. The CAISO will then use

the emissions information to add to the resource offer price a surcharge to cover the GHG certificate(s) that would be required if the generator provides energy to California. To ensure clarity, the CAISO needs to provide additional information, including all emissions types monitored under the California Air Resource Board (CARB) rules. The discussion is also unclear if there will be a fixed dollar adder for all units or if the process will multiply emissions certificate clearing price times the emissions rate of each unit, thereby creating a unique emissions charge for each unit. If a certificate price based on the CARB auction is to be used, the straw proposal needs to address when and how the price used for dispatch will change.

Xcel Energy is concerned with the GHG issue and the interaction with the EIM. As proposed, there could be significant gaming potential. The best, most practical solution would be for the CAISO to take on the obligation to provide to CARB the necessary certificates rather passing the obligation to the generator owner. In the alternative, could the CAISO provide the ability to exclude a resource from those dispatched to serve loads in California? If Xcel Energy's understanding related to the emissions level being use as a multiplier, the entry of an emissions level of 9999 (or similarly large number) could act as the switch for a non-participant in the California emissions market. This would allow the resource to participate in the EIM without requiring it to participate in the California emissions program. Alternatively, a simple check box in the unit registration information might also provide the necessary means for the CAISO systems to exclude generation from the market dispatch serving the CAISO.

Resettlement Process

In Section 3.7.9, Xcel Energy recommends that the straw proposal include a cap on the duration of retroactive resettlement exposure. Xcel Energy recommends a period of not to exceed 24 months.

Marginal Losses

Does the CAISO anticipate any problems or issues with respect to use of marginal losses associated with market dispatch as compared to hourly ex post loss resettlements

for the bilateral schedules under traditional OATT? The straw proposal would benefit from an expanded discussion of losses and how the CAISO will settle the losses.

Medium Priority Issues

Interaction with Reliability Coordinator (RC)

The straw proposal does not indicate specific process interactions with the RC. Has this issue been discussed inside the CAISO? When will this issue be included in the straw proposal?

As an example of the need to coordinate, in Section 3.3.7 the CAISO discusses supply adequacy and resource scheduling requirements. If non-participating resources cause “excessive energy supply”, does the CAISO plan to coordinate with the RC so the RC can issue directives to those non-participating resources?

Local Market Power Mitigation (LMPM) – Threshold/Definition

In Section 3.2.5, the CAISO discusses a market mitigation process but does not mention what reference price will be used or the basis for that price. This must be included in the straw proposal to ensure clarity. Additionally, Xcel Energy recommends a conduct and impact threshold test first, and only if thresholds are exceeded would the CAISO perform the competition analysis.

Xcel Energy supports CAISO’s proposal for use of a distributed reference bus in the EIM footprint. However, more detail such as the relevant market (each BAA, etc.) must be provided in the straw proposal.

Flexible Ramping

Does the multi-interval capability discussed in Section 3.4.1 include ramp look-ahead optimization? There needs to be more discussion to tie Section 3.4.1 to the Flexible

Ramping process discussed in Section 3.4.3. Additionally, please provide an example of the methodology used to determine the amount of Flexible Ramping discussed in Section 3.4.3.

Xcel Energy requests the CAISO add cost allocation examples related to Flexible Ramping to the straw proposal as well. Specific to Section 3.4.3, Please discuss the ability to assess the potential impacts and to perform shadow settlements for this proposal. Can the CAISO base the supply allocation on a market-price basis at the time rather than a daily or monthly average? Would the use of a simultaneous co-optimization from the unit commitment data rather than design a separate ramp product be feasible? Finally, will the EIM efforts be coordinated with the current WECC VGS efforts underway to establish a “flex reserve” operating criteria?

Real-Time Uplift Costs

The CAISO proposes in Section 3.7.8 an allocation methodology to split certain uplift charges between the CAISO BA and the EIM participants as well as a list of the charges that will be uplifted to the EIM participants. Please provide additional detail related to the CAISO reasoning for allocating any CAISO costs to the EIM participants.

Transmission Service

In Section 3.10, the CAISO discusses three options for transmission service charges related to EIM service. Xcel Energy supports Option 1 for transmission pricing. This option makes the market more transparent and less subject to gaming. As proposed, all loads within the EIM must meet a deliverability requirement for resources. In order to meet this obligation, the load serving entity must obtain transmission service from the generator to the load. This ensures the transmission provider collects its revenue requirement. Therefore, a transmission charge is not required. In addition, Xcel Energy does support a through and out transmission rate for the EIM footprint.

Variable Energy Resource (VER) Forecast and Attributes

What is the basis (or billing determinant) for the charge discussed in Section 3.3.14, the VER Forecast MWh or the VER actual MWh? Xcel Energy assumes the fee is

per MWH of VER output forecasted rather than produced but asks for clarity. The process for the CAISO to use load and VER forecasting by the market operator, including qualification criteria (if any) and other detailed process information still needs to be provided. Please clarify in the proposal that if a market participant provides its own forecast for variable generation the \$0.10/MWH fee is waived. (The proposal is not clear in this regard but does refer to the CAISO tariff for further details.)

Does the CAISO allow for dispatchable VER? If so, it would be appropriate to address the process in the EIM Straw Proposal. If not, does the CAISO anticipate dispatchable VERs in the future?

Section 3.2. subsection 1

At the top of page 11 Xcel Energy suggests the following edit: "...the EIM Entity Area from other (add) "*non-market*" BAAs.

Section 3.3.3. Behind-the-meter generators (BTMG) and net load calculations.

Will there be any differences in operating data supplied in real-time versus in settlements? Will all BTMG require real-time SCADA/telemetry? Will there be any market distinction between BTMG that can follow a dispatch signal versus price-taker resources such as non-dispatchable VER or QF resources?

Section 3.3.5. Load Scheduling Requirements

In the disgorgement discussion, PSCO applauds the CAISO for their proposal to provide an alternative to the flat percentage error basis for the disgorgement calculation and to permit use of the CAISO-supplied forecast as an alternative. With what frequency will CAISO permit market participants to alternate between the two options?

Section 3.3.6. Resource Plans.

Will the flex reserves (aka "load following reserves") maintained by a BA with high VER penetration be allowed for inclusion in the BA's ancillary service plan? If not, to what extent will the market rules require any non-NERC required reserves for the BAA? Does

the CAISO believe that the Flexible Ramping Constraint will address the VER integration issue?

Section 3.3.7. Supply Adequacy and Resource Scheduling Requirements

If excessive energy supply resources are curtailed by the market operator, what specific criteria will form the basis for the curtailment? This section also raises concerns with the proposed process for entities to participate in the EIM since only the EIM Entity Scheduling Coordinator will submit load information but the EIM Participating Resource Entities will be submitting resource offers. Since there is no connection between the resource owners and the loads required in the straw proposal, there is no clear way to determine which resources should curtail output. The proposed structure separates those entities that offer resources from the entities responsible for submitting load information. The methodology proposed by Xcel Energy related to the entity obligations above would address this issue with fewer related problems than the current proposal.

Section 3.3.12. Load Aggregation Points (LAPs)

The CAISO must reconcile two statements at the top of Page 29;

1. "There will be no two-way communication on what their load forecast is at the LDF level."
2. "The EIM Entity Scheduling Coordinator is encouraged to review and verify LDF accuracy."

How/where does the review go if there is no two-way communication? Also related to this section, will CAISO be able to address GDFs for Joint-Owned Units? The overall straw proposal does not yet have any discussion on the numerous issues that arise with respect to JOUs.

Section 3.3.18. Network Constraint & Contingency Definition

This is a good flexible proposal, much appreciated by Xcel Energy. However, there should be a process for review to consider circumstances where the level of generalization is too broad to accommodate the efficiency, reliability and situational awareness needs of the EIM. For example, a broad aggregation of multiple lines into a

multi-element flowgate would result in an inefficient calculation of distribution factor impacts and should not be acceptable if it results in inefficiency or unreliable redispatch impacts in the EIM. Xcel Energy also commends the CAISO on this section for proposing what appears to be a “flowgate-on-the-fly” capability as transmission providers encounter unanticipated conditions.

Section 3.5. EIM Output Results

Xcel Energy suggests that the CAISO add total VER output in the EIM footprint and the load-zone forecast data to the public information provided as output.

Section 3.5.1. 15 Minute Energy Schedule

Will there be potential for disgorgement in both the 15-minute and 5-minute settlements?

Section 3.6.4. Seams Coordination and Interaction with WECC Congestion

Management

The last paragraph, first sentence, seems to be missing the word “not” between explicitly and managed.

Section 3.6.7. Business Continuity

The CAISO needs to add more detail to this section. For example, what should the EIM Entity assume for net scheduled interchange (NSI) when communications are lost? Should the BA hold the NSI at the last scheduled value during interruption, the NSI goes to zero, or just the NSI associated with the EIM reduces to zero? Xcel Energy agrees that the EIM BAA will be responsible for managing its imbalance needs, but the process requires clear definition for both the EIM Entity and the CAISO.

Section 3.7.1. Settlement of Non-Participating Resources

This section needs more clarity with respect to applicability between an EIM Entity and an EIM Entity Scheduling Coordinator . Also the CAISO should use the term “ non-participating resources” anywhere the discussion refers to a resource not submitting

offers to the Market Operator. This will ensure clarity of understanding for all participants.

Section 3.7.3. Uninstructed Imbalance Energy

What meter value will be used for import/export tags? Does the CAISO intend to use the value shown on the tag after the hour?

Section 3.7.4. Unaccounted For Energy

The first paragraph does not define a difference between two measurements it only defines one measurement.

Section 3.7.5. Inadvertent Energy Accounting

This section needs more detail.

Section 3.7.6. Settlement Metering

This section needs to be reconciled with the last paragraph on page 40, and needs more clarity with respect to revenue neutrality.

Stakeholder Processes

The straw proposal does not yet define a stakeholder process to request improvements on market process or operating practices. This should be addressed in the next version of the straw proposal.

Lower Priority Issue

Outage Information

The CAISO needs to clarify when outages, as mentioned throughout the document, means generation outages, transmission outages or both.

