

**PACIFICORP'S COMMENTS
ON THE 3rd REVISED STRAW PROPOSAL
September 6, 2013**

I. INTRODUCTION

Pursuant to the schedule established by the California Independent System Operator Corporation ("ISO") for its Energy Imbalance Market ("EIM") Stakeholder Process, PacifiCorp submits the following comments to the ISO on the 3rd Revised Straw Proposal dated August 13, 2013. PacifiCorp has been an active participant in the ISO's Stakeholder Process, including submitting comments: on April 19, 2013, to the ISO's Initial Straw Proposal; on June 14, 2013, to the ISO's Revised Straw Proposal; and on July 26, 2013, to the ISO's 2nd Revised Straw Proposal. PacifiCorp appreciates the ISO's consideration of all stakeholder comments to date and these comments are offered in the spirit of further achieving the development of robust and effective EIM rules and practices.

To the extent PacifiCorp raised issues in prior comments that have not been addressed in the 3rd Revised Straw Proposal, PacifiCorp does not repeat them here. In doing so, PacifiCorp acknowledges the ongoing nature of the issues addressed herein and reserves the right to supplement, modify, amend, or otherwise present additional comments at a future time, as permitted. In addition, PacifiCorp respectfully requests that the ISO or interested stakeholders not perceive the absence of comments on any particular question, issue or other matter as a conclusive indication of PacifiCorp's lack of interest, support or opposition with respect thereto.

In Part II of these comments, PacifiCorp presents summary comments on five key issues:

- A. Significant Changes from the 2nd Revised Straw Proposal
- B. Unit Commitment
- C. List of EIM Charge Codes
- D. Definition of EIM Entity
- E. Settlement Metering

PacifiCorp strongly supports the ISO's ongoing efforts with respect to the development of the EIM and 3rd Revised Straw Proposal. PacifiCorp continues to appreciate the ISO's flexibility and responsiveness to comments made by PacifiCorp and other parties. PacifiCorp has found the ISO's stakeholder process to be informative and collaborative. While work remains, the results of the stakeholder process are demonstrated by the enhancements to the EIM design reflected in the 3rd Revised Straw Proposal.

Several parties, commenting on the drafts of the ISO's straw proposal, have raised concerns regarding the timing of the ISO's stakeholder process. Generally, these commenters suggest that the ISO's current schedule should be extended because it does not allow adequate time to develop high quality proposals. PacifiCorp continues to support the currently proposed timing for the stakeholder process and is seeking an implementation framework that will reduce

overall risk and allow for a smooth transition to a functional EIM. Once the EIM proposal is complete, the process will evolve to include testing and market simulation, the results of which will be reviewed to ensure a smooth transition. In light of this, the current schedule is reasonable and PacifiCorp is prepared to move forward as planned. This is also demonstrated by the relatively narrow and continually narrowing scope of remaining issues. Therefore, it is reasonable to continue in accordance with the ISO's plan to develop a draft tariff framework and the filing of modified tariffs with the Federal Energy Regulatory Commission ("FERC") for approval.

II. COMMENTS ON KEY ISSUES

A. Significant Changes from the 2nd Revised Straw Proposal

PacifiCorp supports the following significant changes reflected in the 3rd Revised Straw Proposal.

- The ISO's clarification that the EIM Entity will determine the eligibility of resources within its Balancing Authority Area ("BAA") to participate in the EIM;
- The determination to eliminate the minimum shift optimization and not to adjust base schedules;
- The decision to require that base schedules be submitted hourly;
- The expanded discussion of the reciprocity proposal not to apply an incremental transmission charge to EIM dispatches across BAA boundaries for the first year while data is gathered and future options regarding a potential transmission charge are considered; and
- The proposal that the Market Operator will not calculate the greenhouse gas ("GHG") emissions cost to be included in the market optimization, but rather the EIM Participating Resource will submit a separate bid for GHG compliance obligation costs.

B. Unit Commitment

The 3rd Revised Straw Proposal includes a number of references to the ability of an EIM Entity to elect whether or not to participate in the ISO's unit commitment process. The ISO makes it clear that if the EIM Entity elects to have the EIM commit generators in the real-time market, then the transfer will include bid cost recovery payment costs for both energy above minimum load and commitment costs. In section 3.4.3, the ISO also states that if the EIM Entity elects to allow unit commitment in RTUC, then all resources with economic bids that are available for the 15-minute RTUC commitment (online or offline) will be eligible to ensure sufficient ramping capability.

In commenting on drafts of the ISO's proposals on unit commitment, a number of parties raised concerns related to the ability of EIM Entities to choose whether or not to participate in unit commitment and the allocation of commitment costs. Upon review, and in order to resolve this key issue, PacifiCorp has decided that it will elect to have EIM Participating Resources within PacifiCorp's BAAs included in the ISO's unit commitment process. This decision is primarily based on the conclusion that this approach should provide the most efficient utilization of resources, especially with respect to management of flexible ramping needs across the EIM footprint. In addition, PacifiCorp is hopeful that resolution of this critical issue will narrow the list of remaining issues and may relieve some parties' concerns with respect to the ISO's stakeholder timelines.

This decision also contributes to the resolution of other issues potentially created by allowing EIM Entities to elect whether or not to participate in unit commitment. For instance, in section 3.7.8.3 of the 3rd Revised Straw Proposal, the ISO indicates that it will combine the energy and commitment components after considering BAA transfers in to a single real-time bid cost recovery allocation amount and will allocate this amount to measured demand. Further, this section states that the two components for an EIM Entity BAA will be allocated to the EIM Entity Scheduling Coordinator and then allocated by the EIM Entity according to its tariff. If the EIM Participating Resources in all EIM BAAs are required to participate in unit commitment, the separation of the energy and commitment components, which PacifiCorp understands is a relatively difficult process, would be unnecessary. Additionally, PacifiCorp understands that only units that are identified as Participating Resources, and are physically capable of starting within the real-time dispatch horizon, will be committed or decommitted as part of the EIM unit commitment process.

PacifiCorp understands that its decision to participate in the ISO's unit commitment process will result in a market and software design that will effectively require other EIM Entities to similarly participate in unit commitment to avoid having to implement additional functionality that may never be used. PacifiCorp requests that the ISO make this clear in the final draft proposal.

C. List of EIM Charge Codes

In its comments on the 2nd Revised Straw Proposal, PacifiCorp requested that the ISO include in the 3rd Revised Straw Proposal a section that sets forth a comprehensive list of all charge codes applicable to EIM Participating Resources and the EIM Entity, noting that this information is critical for purposes of system design, billing determinants, and setting expectations for potential participating resources. In response, the ISO included some explanation in the 3rd Revised Straw Proposal, and has hosted a number of workshops on key issues related to EIM charges and charge codes. PacifiCorp understands that the ISO has not yet finalized a comprehensive list of charge codes. However, even though a charge code list is likely to continue to develop as the EIM design and Order 764 implementation evolves, at least a preliminary list of charge codes would be useful for stakeholders. It should be understood that the list will continue to be refined and amended as the ISO finalizes its straw proposal and tariff language.

With respect to the discussions of specific charge types:

- In section 3.7.8.1.1, the ISO states, “The real-time net scheduled interface change settlement amounts represents settlement amounts for the energy which flows between the BAAs as a result of EIM. The real-time net scheduled interface settlement amount is calculated as the real-time net schedule interchange direction flow (MWhs) multiplied [by] the LMP of the pricing node at the corresponding intertie.” This section is unclear. Assuming that "change settlement amounts" should be interpreted as "charge settlement amounts", the ISO should clarify how this impacts settlements. BAA allocations are based on MWh net interchange volume, not on revenue. This could represent a fictitious transaction at the EIM boundary, the use of which is not clear.
- In section 3.7.8.2, the ISO states that if the virtual schedule creates a credit to the out-of-market congestion uplift, then no allocation is made to the virtual schedules. This section goes on to state that if the virtual schedule creates a charge to the out-of-market congestion uplift, then the virtual bucket is allocated to convergence bid schedules in proportion to each schedule's congestion revenue that is collected through the out-of-market congestion uplift. The proposed methodology for isolating real time congestion costs caused by convergence bidding is reasonable given that convergence bidding only occurs within the ISO markets and should not be allowed to have an impact on the EIM. As noted in prior comments on the Revised Straw Proposal, PacifiCorp supports this policy.

D. Definition of EIM Entity

The 3rd Revised Straw Proposal includes a number of references to the definition of EIM Entity, at least two of which include reference to the EIM Entity as a “balancing authority and transmission service provider.”¹ However, in its most recent matrix of responses to stakeholder comments, the ISO clarified that while the EIM Entity is a balancing authority, it does not imply that it must have both load and generation obligations.

PacifiCorp agrees that an EIM Entity must be a balancing authority but suggests that the definition of EIM Entity does not need to include a requirement to be a transmission service provider. PacifiCorp understands that an EIM Entity will be required to submit balanced base schedules and satisfy the resource sufficiency requirements, and therefore, would support modification of the definition to accommodate a generation- or load-only balancing authority. As noted in section 3.8 of the 3rd Revised Straw Proposal, concepts of reciprocity among the ISO and EIM Entities will inform ongoing consideration of potential transmission service requirements. PacifiCorp proposes that for initial EIM implementation it should be a transmission customer who voluntarily offers its transmission rights to be used for EIM dispatch

¹ 3rd Revised Straw Proposal, p2, 9.

between EIM Entities and between an EIM Entity and the ISO. With respect to intra-BAA transmission usage, the EIM Entity should establish the requirements for transmission usage within its BAA. The concept of reciprocity would apply as between EIM Entities and between EIM Entities and the ISO and should be designed to reflect non-discriminatory treatment of similarly situated participants. While PacifiCorp understands that a set of reciprocity rules still needs to be developed for all EIM Entities and the ISO, PacifiCorp recommends that the straw proposal include a modified definition of EIM Entity to accommodate a generation- or load-only balancing authority to encourage expanding the EIM footprint.

E. Settlement Metering

In Section 3.7.6 on settlement metering, the ISO writes, “Generators will have the option to either be Scheduling Coordinator Metered Entities (SCME) or [an] ISO Metered Entity (ISOME).” However, PacifiCorp understands that this election is made by the EIM Entity on behalf of all generators within its BAA. PacifiCorp requests that this be clarified in the draft final proposal.

The ISO states in the same section:

[c]oncurrent with its compliance with FERC Order No. 764, ISO is making 5-minute metering a requirement for generation resources. This 5-minute requirement will also apply to generating resources of the EIM Entity BAA. This includes all generators whether bidding into EIM or not bidding. This is to reduce the risk of neutrality. However, load resources will continue to be submitted in hourly values similar to today's market.

The language of this section *must be* clarified to allow explicitly for the option of 15-minute settlement meters in the EIM Entity to be disaggregated into 5-minute data for purposes of settlement of non-participating generating resources. This clarification would provide consistency between the straw proposal and the project scoping discussions PacifiCorp has had with the ISO.

III. ADDITIONAL COMMENTS AND QUESTIONS

Definitions.

PacifiCorp proposes adding a definition of “Base Schedules” (or “Base Forecasts”) and “Balanced Base Schedule” (or “Balanced Base Forecast”). A useful basis for this definition may be found on page 12, which states, “forward energy schedules, referred to as base schedules in this document, consist of hourly forecasts of load, generation, and interchange provided by the EIM Entity Scheduling Coordinator hourly granularity.” In addition, the term “base schedules” is used sometimes to refer to load plus supply plus interchange, sometimes just for load, sometimes just for interchange, and sometimes appears to be confused with the term “resource plan.” If it is the case, as it seems, that there are different types of base schedules, PacifiCorp recommends the

development of multiple definitions to clarify which type of base schedule (or resource plan) is required in a given context.

Page 3.

The day-ahead process description also should clarify that the EIM Entity Scheduling Coordinator is submitting balanced base schedules, as opposed to the more general language that is currently used. The same comment applies with respect to the definition of EIM Entity Scheduling Coordinator on page 9.

Section 2.1. New Terms

The definition of EIM Entity Scheduling Coordinator should state that it is responsible for settling uninstructed imbalance energy.

Section 3.1.4. Role as EIM Entity Scheduling Coordinator

PacifiCorp suggests adding the underlined language to the following statement, "The EIM Entity Scheduling Coordinator will be responsible for all financial obligations arising as a result of meeting these requirements, including financial settlement with non-participating resources, with load within its EIM Entity BAA, with interchange using dynamic schedules dispatched by the Market Operator, and neutrality charges and uplifts."

With respect to the role of the EIM Entity Scheduling Coordinator, PacifiCorp prefers a structured implementation that would not require the duplication of systems or resources between the ISO and the EIM Entities and would provide for a streamlined interface for submission of the base schedules and Operational Information Exchange that needs to occur. Streamlining the data flow while still providing the EIM Entity with the information it requires to perform its balancing authority responsibilities could be achieved with some modifications to the EIM Entity Scheduling Coordinator role and also could have the effect of reducing potential barriers to entry for EIM Entities.

Section 3.2.1. Operational Information Exchange

PacifiCorp proposes that, if possible, the ISO should modify the operational information exchange tables to clarify the procedures that will apply if the EIM Entity elects to use the Market Operator's forecast. The current version of the provision appears to assume the EIM Entity is using its own forecast.

Section 3.2.5. Local Market Power Mitigation

With respect to Default Energy Bids ("DEBs"), PacifiCorp understands that DEBs are unit-specific. Nevertheless, it may be useful for the ISO to include examples of DEB calculations for representative wind, solar, geothermal, hydro, natural gas and coal facilities.

Section 3.3.1. Registration of Market Resources

The ISO should clarify that the EIM Entity has discretion to determine which non-participating resources within its BAAs must register in the master file. For example, an EIM Entity should have discretion to determine a MW threshold or other rules it deems appropriate.

Section 3.3.3. Supply and Flexible Ramping Constraint Sufficiency

This section of the 3rd Revised Straw Proposal states that the EIM Entity Scheduling Coordinators for EIM Entities with inadequate or excessive energy supply shall make the appropriate modifications to the base schedules from *non-participating resources* no later than 40 minutes prior to the operating hour. However, PacifiCorp understands that appropriate modifications to base schedules will be made for *all* resources, not just non-participating resources. In fact, normally modifications to base schedules needed for balancing will be made by participating resources. PacifiCorp requests that the final draft proposal be modified to clearly indicate this point.

Section 3.3.8. Intertie Schedules with Other Balancing Authorities

In the 3rd Revised Straw Proposal, the ISO states “The EIM will not support dynamic transfers with external BAAs unless there are pre-existing dynamic schedules or pre-existing pseudo-ties registered as EIM Participating Resources.” PacifiCorp does not agree that only pre-existing dynamic schedules or pre-existing pseudo-ties registered as EIM Participating Resources should be supported by the EIM. The EIM should allow for and include the addition of new dynamic transfers, if they are added consistent with the policies, procedures, or business practices of the EIM Entity. PacifiCorp requests that the final draft proposal be modified to clarify this issue.

Section 3.3.11. Variable Energy Resource Production Forecast

The ISO should clarify what it means by “poor forecast accuracy” in relation to a decertification of variable energy resource forecaster.

Section 3.7.8. Neutrality and Uplift

The third paragraph in section 3.7.8.1.1 which describes how the proportional transfer method is calculated seems to be missing unaccounted for energy (“UFE”) in the denominator. The spreadsheet example provided did include UFE in the denominator. Moreover, the words “interface change” should be changed to “interchange” in several places.

Section 3.7.8.4. Flexible Ramping Constraint

This section states:

As discussed in Section 3.4.3, the Market Operator will enforce a flexible ramping constraint requirement for the ISO BAA and each EIM Entity BAA. The costs of resolving the flexible ramping constraint for each BAA will be calculated for each BAA separately based upon the individual BAA requirement. A BAA is only responsible for its associated flexible ramping requirement and not the other BAA requirement even if flexible ramping capability is procured in one BAA to meet another BAA's requirements.

The 3rd Revised Straw Proposal does not appear to indicate how the localized flexible ramping constraint (FRC) costs would be computed. PacifiCorp recommends clarification regarding how the localized FRC costs would be calculated per BAA. Additionally, given that the method for compensating FRC resources will differ between the ISO and other EIM Entities, the ISO should assure that resources providing flexible ramping capacity into the ISO's BAA will be compensated commensurately with internal resources providing the same service.

Section 3.8. Transmission Service

As noted in prior comments, PacifiCorp supports the ISO's proposal not to impose an incremental transmission access charge for EIM transmission usage in the first year of the EIM. PacifiCorp agrees that further consideration of transmission service can be informed by actual EIM operational experience and as additional balancing authorities consider participation. PacifiCorp proposes that for initial EIM implementation it should be a transmission customer who would be voluntarily offering its transmission rights for EIM dispatch between EIM Entities and between an EIM Entity and the ISO. This would not constitute "as available" transmission, but rather would be a quantity of firm transmission rights, voluntarily offered by a transmission customer for EIM dispatch, for a specified time interval. Under the ISO's Alternative 1, the ISO and the EIM Entity would be relying on their existing transmission rates to collect their transmission revenue requirements.

As such, the ISO's description of Alternative 1 on page 85 of the 3rd Revised Straw Proposal should be modified slightly as follows:

Replace the concept of: "No-cost transmission use is available through EIM, being dispatched on an as-available basis, with existing transmission rates (which have been set without an EIM existing) continuing in place."

With: EIM transmission will be utilized between EIM Entities and between EIM Entities and the ISO using firm transmission rights offered by transmission customers for EIM dispatch with no incremental charge, because the firm transmission rights have been purchased under existing transmission rates (which have been set without an EIM existing).

The title of Alternative 1: “No-Charge, As-Available Transmission” also should be modified to “Transmission Customer Supplied Transmission” because the current title no longer accurately reflects the state of the ISO’s proposal on transmission. PacifiCorp proposes that the ISO modify the language in Alternative 1 to more closely align with the concept described above which recognizes that firm transmission rights, purchased by a transmission customer, could be voluntarily offered for a specified time interval for EIM dispatch.

With respect to intra-BAA transmission usage, each EIM Entity should establish the requirements for transmission usage within its BAA. The concept of reciprocity would apply as between EIM Entities and between EIM Entities and the ISO and should be designed to reflect non-discriminatory treatment of similarly situated participants. Language should be included under Alternative 1 that allows the EIM Entity to design rules to allow transmission customers to make their transmission available for EIM dispatch even if they are separate companies from the EIM Entity. Moreover, the EIM Entity also should have the ability to establish requirements for making transmission available for EIM usage within its BAA. PacifiCorp agrees that the principle of reciprocity among the ISO and EIM Entities is important and may be achieved through a number of approaches. PacifiCorp looks forward to working with the ISO to develop a more specific proposal with respect to reciprocity requirements and use of transmission for EIM dispatch.

In addition, PacifiCorp suggests the following language changes to section 3.8. Proposed changes are underlined: “If an EIM Participating Resource wishes to bid into EIM beyond its existing transmission rights ~~contracts~~, the transmission service provider may determine whether or not it would be responsible for non-firm transmission service charges, unreserved use ~~excess usage~~ charges, or other charges...

Alternative 2 in the ISO’s 3rd Revised Straw Proposal also should reflect the same concept that would allow the EIM Entity to design rules to allow transmission customers to make their transmission available for EIM dispatch even if they are separate companies from the EIM Entity.

PacifiCorp supports the ISO’s proposal to move forward with Alternative 1 with the suggested changes identified as part of the final draft proposal. These concepts should also be reflected in Section 1 on Transmission Service in the ISO’s 3rd Revised Straw Proposal.

IV. CONCLUSION

As stated previously, PacifiCorp appreciates the ongoing efforts of the ISO management and staff to develop the EIM in a timely manner and in accordance with the principles in the Implementation Agreement. PacifiCorp’s comments are intended to: (1) focus on critical issues related to the market design; (2) identify areas where PacifiCorp needs additional explanation or data to understand the ISO’s proposal; and (3) provide specific proposed changes to improve the draft final proposal. As noted in the introduction, PacifiCorp’s primary concern during this phase

of the stakeholder process is to develop an implementation plan that will allow for and ultimately ensure a smooth transition to a functional EIM. It is important to note that this process will continue to evolve into testing and market simulation stages, where design elements may be further refined. PacifiCorp will continue to be an active participant in the EIM stakeholder process and undertake the necessary activities to be able to support startup of the EIM on October 1, 2014.