

**Comments of Powerex Corp. on
EIM Year 1 Enhancements Phase 2
Issue Paper & Straw Proposal**

Submitted by	Company	Date Submitted
Mike Benn 604.891.6074	Powerex Corp.	July 22, 2015

Powerex appreciates the opportunity to comment on CAISO’s June 30, 2015 “Issue Paper & Straw Proposal” regarding the Energy Imbalance Market (“EIM”) Year 1 Enhancements Phase 2. The Issue Paper seeks stakeholder input on multiple aspects of the EIM market design, including the allocation of costs and benefits associated with the transmission facilities of EIM Entities. Powerex’s comments are focused on the following three topics: (1) reconsideration of transmission rates that apply to EIM Transfers (Section 3); (2) allocation of congestion rents associated with EIM Transfers (Section 5); and (3) use of third-party transmission facilities for EIM Transfers (Section 8.1).

Transmission Rate Options for EIM Transfers

It is essential that a transmission rate design balance the objective of equitably recovering fixed asset costs with the objective of promoting efficiency. The equity objective requires that the significant investments made in transmission facilities be recovered from those that benefit from their use in accordance with cost-causation principles. Such costs may be allocated to any of the entities involved in the delivery of power flowing over the grid, including loads, generators, or intermediaries (e.g., marketers). In contrast, the efficiency objective requires that the costs of these facilities be allocated to customers in a manner that does not deter otherwise efficient transactions. For instance, applying fixed transmission charges in an incremental manner, particularly to highly price-sensitive decisions (e.g., delivery of power from generation that can be dispatched down) may deter efficient deliveries.

The current EIM design reflects a decision to elevate the pursuit of efficiency over the equitable allocation of the fixed costs of facilities used to effectuate EIM Transfers. Rather than attempting to strike a balance between these objectives, the initial design of the EIM can be viewed as exclusively prioritizing the avoidance of “hurdle rates” that might reduce efficient transactions in the EIM by exempting an entire class of transactions from transmission charges. In effect, the current design ignores equitable considerations based on the belief that requiring EIM Transfers to bear a fair share of the embedded costs of the transmission grid would impede the efficiency of, and reduce the benefits of, the EIM.

This same assumption is embedded in the CAISO's Issue Paper. The Issue Paper sets forth four alternative transmission rate frameworks to be applied in the EIM (including the current design of free "reciprocal" transmission between EIM Entities), with each of the options striking a different balance between pursuing short-term efficiency and ensuring that costs are allocated equitably. For instance, under Alternative 1, CAISO would maintain the current free "reciprocal" transmission rates, while Alternatives 2-4 would apply transmission charges to all transactions, including those in the EIM, using different mechanisms. Inherent in CAISO's evaluation of these options is the assumption that imposing *any* cost responsibility on EIM use of the transmission grid will reduce short-term efficient dispatch.

But this is not necessarily the case. While increasing charges directly with dispatch quantity may be viewed as imposing a hurdle rate, transmission rates can be designed in a manner that avoids this issue. For instance, under the OATT framework, the majority of transmission service is reserved and paid for under monthly, annual, or multi-year reservations; in these circumstances, the transmission costs (exclusive of losses) are sunk with respect to the amount of energy that is delivered in any given hour, and hence do not present a hurdle rate or create "friction" that deters economic transactions. In practice, the assessment of transmission charges only constitutes a material hurdle rate if: (1) transmission charges increase with energy deliveries (*i.e.*, the charges are not "sunk"); (2) the charges are applied to highly elastic activity (*i.e.*, to transactions that can be avoided if they become uneconomic); and (3) the transmission charge applied is sufficiently high to render an otherwise economic transaction uneconomic.

Powerex believes that it is possible to design a transmission charge that would ensure that EIM Transfers not only make an equitable contribution to the fixed costs of the transmission system, but also avoid the creation of incremental hurdle rates that reduce the economically efficient use of transmission. In other words, unlike the current transmission reciprocity framework and the alternatives set forth in the Issue Paper, Powerex believes there is an approach that would achieve **both** the equity objective and the efficiency objective. Specifically, Powerex recommends that CAISO add an "Alternative 5" to the transmission rate designs considered in this stakeholder process, under which costs would be allocated in the following manner:

- For each operating hour, CAISO would calculate the net amount of EIM Transfers at each EIM Internal Intertie;
- To the extent the net EIM Transfer at an intertie represents an export from the CAISO BAA, CAISO would multiply the net EIM Transfer by the CAISO Wheeling Access Charge;
- To the extent the net EIM Transfer represents an export from an EIM Entity BAA operating under an OATT framework, CAISO would multiply the net EIM Transfer by the applicable transmission provider's hourly non-firm rate; and
- The totals calculated above would be charged as uplift to the EIM Entity Scheduling Coordinators (or CAISO) in proportion to their share of net purchases in the EIM. Under the OATT amendments filed by PacifiCorp and by NV Energy for recovery of other EIM-related uplift charges, this would be sub-allocated based on measured demand (*i.e.*,

load and exports) in their BAA. Similarly if the CAISO is a net importer, its share of these costs would be sub-allocated based on CAISO measured demand.

This proposal has several beneficial features. First, the cost responsibility allocated to EIM Transfers out of the CAISO would be the same as would apply to any other export out of the CAISO BAA.¹ This addresses concerns about undue discrimination, and also ensures that all users of the transmission grid bear an equitable share of its costs. Second, the cost responsibility for these exports would be allocated to the parties that benefit from these transfers: the loads in the BAA(s) being served by the EIM Transfers. Third, since it is load, and not generators, that would bear cost responsibility, the charges would not affect generator bidding behavior, economic dispatch efficiency, or LMP prices in the EIM. Fourth, this framework could be readily implemented by all EIM Entities, applying their OATT-based transmission charges to EIM Transfers out of their BAAs, with those costs allocated as uplift to EIM Entity BAAs that are net importers in a given hour.

It is undeniable that an export out of one BAA benefits customers located in other BAAs. Under the current EIM rules, however, the importing BAAs enjoy the use of the exporting BAA's transmission system for free. It is also undeniable that these rules force the exporting BAA's transmission customers to subsidize the use of their grid for EIM export transactions that may not offer them any direct benefit whatsoever. When EIM Transfers are exports from CAISO to NV Energy, for instance, it will be CAISO's loads that pay for the use of the CAISO grid for transfers that benefit only NV Energy's customers. Similarly, when EIM Transfers are exports from NV Energy to CAISO, it will be NV Energy's transmission customers that pay for the use of the NV Energy transmission system for transfers that benefit only CAISO's customers.²

To date, CAISO has not disputed that the EIM rules fail to recover transmission costs from the entities that benefit from EIM Transfers. Instead, it has offered two rationalizations against adopting a more equitable framework. First, it has argued that the waiver of transmission charges in the EIM is "reciprocal," meaning that EIM Entities will not just forego receiving transmission revenue when they are an exporter in the EIM, but will also benefit from not having to pay transmission charges when they are an importer in the EIM. The actual experience of the EIM to date shows that EIM Transfers have not been random imbalance energy flows—which arguably could be characterized as providing "reciprocal" benefits—but have instead been overwhelmingly and systematically in the direction of imports into the CAISO BAA. The

¹ It is not necessary, for purposes of CAISO's transmission charges, to apply any cost to EIM Transfers that are imports into the CAISO BAA. Imports into a BAA displace internal generation, and do not increase the overall use of the transmission facilities, whereas exports from a BAA represent additional generation being dispatched, over and above the amount used to serve load in the BAA.

² These same concerns do not arise under PacifiCorp's existing donation arrangement, as the transmission reservations used for EIM Transfers have already been paid for by PacifiCorp's merchant and donated for EIM use. However, to the extent transfers with PacifiCorp adopts NV Energy's "ATC methodology," these same concerns would apply.

original, pre-implementation argument of “reciprocal” benefits can no longer be used to justify exempting systematic transfers from paying an equitable share of transmission costs, consistent with cost-causation principles.

Second, CAISO has argued that applying transmission charges to EIM Transfers would undermine the short-term efficiency of EIM dispatch by introducing incremental hurdle rates that prevent otherwise economic transactions between EIM Entity BAAs. But as explained above, not all transmission cost mechanisms create incremental hurdle rates. Concerns about efficiency impacts can and should be addressed through careful rate design; they are not a justification for waiving transmission charges altogether.

Powerex is well aware that transmission rate design is a careful balance between multiple objectives. Opinions will differ regarding whether it is preferable to pursue one objective at the expense of the other. However, there should be broad support for identifying and developing transmission rate designs that simultaneously achieve both the equity and efficiency objectives to the greatest extent possible. Powerex believes that its proposed “Alternative 5” can simultaneously advance both objectives, and deserves careful consideration in this stakeholder process.

EIM Transfer Limit Congestion Allocation

Section 5 of the Issue Paper discusses the allocation of congestion rents for EIM Transfers between EIM Entity BAAs. The Issue Paper appropriately recognizes the general concept that congestion rents should be allocated to the entities that fund constrained transmission facilities. This is a long-standing principle under both the OATT and the LMP-based frameworks. Under LMP, congestion rents are explicitly collected by the market operator based on the difference in prices charged to loads and the prices paid to generators. These rents are then distributed to the entities that are responsible for funding the revenue requirement of the transmission assets; in the case of CAISO, these rents are allocated on the basis of measured demand.³ Under the OATT framework, the value of scarce transmission service is allocated through rights to physically schedule energy deliveries over the scarce paths. The owner of these rights is intended to have the ability to move energy from lower-value market locations to higher-value locations, and collect the difference. In order to obtain these valuable rights, transmission customers compete on the basis of service duration, often committing to pay the embedded cost of the associated transmission facilities for multiple years or even decades. Under either framework, the value of limited congestion is not assigned to loads, generators, intermediaries, or any other entity by virtue of their customer class; rather, it is assigned to ***the entities that fund the revenue requirement*** of the scarce—and hence valuable—transmission facilities.

³ In CAISO, like in many other LMP-based markets, Congestion Revenue Rights (“CRR”) provide a means to monetize or hedge the expected stream of congestion rents. CRRs do not change the fundamental alignment between the responsibility for funding the grid and the receipt of congestion revenues, whether based on CRR auction proceeds or based on the spot market congestion rents.

This alignment supports both cost-causation principles (where the benefits of an activity accrue to those who fund the costs) and provides the incentives necessary to fund future investments.

The Issue Paper addresses the special circumstances presented by transfers between two BAAs. As a general matter, the allocation of congestion rents begins with the determination of the specific constraint(s) limiting the transfer. The limiting factor may be entirely within the exporting BAA, entirely within the importing BAA, or on the coordinated intertie between the two BAAs, in which case the constraint is not evidently “in” one BAA or the other. In addition, as the Issue Paper recognizes, EIM Transfers may be limited either by the scheduling limit of the intertie, by the EIM Transfer limit, or both.

The Issue Paper proposes to allocate congestion rents depending upon whether it is the EIM Transfer limit or the intertie scheduling limit that is the binding constraint. In the case of interfaces between two EIM BAAs in which the EIM Transfer limit and the intertie scheduling limit are the same, CAISO proposes a 50/50 split, representing an equitable allocation of the economic value of the scarce transmission capability between the two BAAs. Under alternative intertie configurations, the scheduling limit and EIM Transfer limit may differ, and the Issue Paper proposes to allocate the congestion rents depending on which of the two limits is binding.

These proposals and the associated discussion contained in the Issue Paper are important first steps to expanding CAISO’s recognition that not all congestion rents collected under its LMP framework should be allocated exclusively to CAISO’s customers. As CAISO is aware, Powerex has long expressed concern that CAISO’s market includes specific rules that effectively bypass the OATT framework for allocating scarce transmission on external systems and collect the value of that limited transmission as congestion rents on CAISO’s system. This has resulted in a disproportionately high share of congestion on transmission between CAISO and the Pacific Northwest being collected and allocated by CAISO’s rules, rather than being allocated to the customers that fund the constrained facilities limiting imports into the CAISO BAA. Powerex is encouraged by CAISO’s decision to move away from such an approach in the Issue Paper and welcomes having an open discussion of the principles that should govern both the collection and the distribution of congestion rents, including cost causation and the need to incentivize future investment.

Powerex notes, however, that the nature of the EIM raises an additional complication that is not addressed or recognized in the Issue Paper. Specifically, how should congestion rents that are allocated to an EIM Entity Scheduling Coordinator be distributed? The answer to this question is vital to determining whether or not congestion rents in the EIM will actually flow to the entities that fund the constrained facilities.

Under PacifiCorp’s current OATT, all EIM congestion rents are sub-allocated as uplift among all PacifiCorp measured demand. Under the Issue Paper’s proposal, if EIM Transfers from PacifiCorp to CAISO are limited by the EIM Transfer limit (and not by the COI scheduling limit), 100% of those rents will be allocated to PacifiCorp as the EIM Entity Scheduling Coordinator, and sub-allocated by PacifiCorp to all of its customers on the basis of measured demand. There is a patent disconnect between the cause of the constraint—which is based on the

volume of firm transmission rights donated for EIM use by PacifiCorp Energy (the merchant division of PacifiCorp that has paid for these rights)—and the recipients of the value of that transmission. Under this approach, there would be no financial incentive whatsoever for PacifiCorp Energy to increase the amount of firm rights it makes available for EIM use because the benefits of doing so are not returned to PacifiCorp Energy. Similarly, there is no financial incentive for any other eligible entity to participate in the Interchange Rights Holder mechanism. Thus, even if the EIM represents the highest-value use of scarce transmission in a particular hour, the current allocation of congestion rents will prevent the efficient amount of transmission from being made available for EIM use.⁴

In order to provide efficient incentives to make transmission available for EIM use, the CAISO should work with EIM Entities to ensure that congestion rents from EIM Transfers are allocated to the entities that have funded the associated transmission facilities. While implementation of such mechanisms may require changes to each EIM Entity's OATT, and not just to the CAISO Tariff, this is a critical issue and one of importance to the efficiency and functioning of the EIM as a whole.⁵ Accordingly, Powerex requests that CAISO more fully articulate the underlying principles governing its proposed allocation of congestion rents on EIM Transfers, as well as provide feedback on Powerex's comments on this topic.

In addition, Powerex asks CAISO to address and clarify the following statements in the Issue Paper:

- The Issue Paper proposes that, on internal interties where the EIM Transfer limit is less than the intertie scheduling limit, the congestion rent will be allocated “to the EIM entity tagging the EIM transfer.”⁶ It is unclear what e-Tag authorship has to do with identifying the appropriate entity to receive the economic value of the limited EIM Transfer capacity.
- Similarly, if the intertie scheduling limit is less than the EIM Transfer limit, 100% of congestion rents will be allocated “to the EIM BAA managing the intertie scheduling point.”⁷ Again, the entity managing the scheduling point is not necessarily the entity funding the cost of the scarce and limited transmission facilities.

⁴ Where the EIM Transfer limit is based on ATC, and the ATC represents transmission capacity that was never sold to transmission customers in the first place, a sub-allocation to Network transmission customers would ensure the benefits are distributed to the customers that ultimately pay for the transmission network. As a practical matter, however, such a sub-allocation may not be materially different than the current sub-allocation on the basis of measured demand.

⁵ Moreover, in other contexts CAISO has required EIM Entities to implement specific provisions within their OATT. For example, Section 29.26(b) of the CAISO Tariff limits the manner in which EIM Entities may charge for transmission service on their own non-CAISO transmission systems.

⁶ Issue Paper at 12.

⁷ *Id.*

Use of Third-Party Transmission for EIM Transfers

Section 8.1 of the Issue Paper provides a limited discussion regarding EIM Transfers that do not flow across transmission facilities owned by EIM Entities, but rather over the transmission systems of third parties. This circumstance does not exist today (*i.e.*, EIM Transfers occur only over direct interconnections between EIM BAAs), but the Issue Paper speculates that “the EIM transfer limit approach could be expanded” to third-party transmission owners.⁸ The Issue Paper goes on to contemplate that the appropriate compensation for such transmission service to third-party providers would be “at an agreed to rate, such as the non-firm transmission rate.”⁹

Powerex believes that this section of the Issue Paper—which by its own title is concerned only with compensation—is exceedingly premature. There has been no discussion to date regarding whether *any* third party transmission providers would ever allow a portion of their transmission system to be effectively handed over to CAISO to determine who does or does not flow on those facilities, or to collect and distribute congestion rents on those third-party facilities. The notion of a CAISO-controlled virtual network over other transmission providers’ systems raises numerous legal questions, including whether doing so is permissible under the third-party provider’s tariff and governing statutes. CAISO appears to simply assume that third-party providers would be willing to permit their systems to be used in this manner or, alternatively, that firm rights-holders already have the legal right to use their capacity reservations in this manner. None of these issues has been raised even in cursory fashion, let alone being subject to robust stakeholder input and regional discussion.

Contrary to what the Issue Paper suggests, use of third-party transmission systems to support EIM Transfers is not a matter of simply negotiating appropriate compensation. Rather, it raises a host of complex technical, policy, and legal issues that would need to be resolved first. For that reason, if CAISO believes that use of third-party transmission capacity is either necessary or valuable to the operation of its EIM, it should initiate an outreach process including regional dialogue with other transmission providers and their customers to explore whether there is any support for developing such an arrangement, and to receive guidance regarding the possible frameworks that might be acceptable.

⁸ *Id.* at 19.

⁹ *Id.*