

Stakeholder Comments

**Reactive Power Requirements and Financial Compensation
Straw Proposal Stakeholder Meeting, August 20, 2015**

Submitted by	Company	Date Submitted
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SDG&E appreciates the opportunity to comment on the Reactive Power Requirements and Financial Compensation straw proposal dated August 13th and stakeholder meeting held August 20, 2015. With one exception, SDG&E supports the CAISO’s reactive power requirements proposal and urges its implementation as soon as practicable.¹ SDG&E takes exception to the CAISO’s proposal to compensate new resources that “have...made a showing that contractual agreements specifically lack any compensation for their fixed costs associated with reactive power equipment.”

- I. CAISO has not demonstrated the need for making substantive changes to its existing reactive power compensation mechanisms

SDG&E believes the CAISO has not demonstrated that the cost for implementing a new compensation process for reactive power is needed or will benefit ratepayers. The CAISO’s proposed compensation process is administratively cumbersome and creates the potential for adding costs to ratepayers without offsetting ratepayer benefits.

The existing compensation mechanisms rely on:

- (i) bilateral contracting between Load Serving Entities (LSEs) and generators: generators can negotiate separate payment provisions for reactive power capability or reflect such costs in a single \$/kW capacity price,

¹ The CAISO proposes to impose reactive power requirements on asynchronous generators entering the generator interconnection queue in cluster 9 and subsequent clusters. The CAISO has not, however, determined how it will treat yet-to-be built generators entering earlier interconnection queues. SDG&E believes that the need for grid reliability argues in favor of applying the requirements more, rather than less, broadly. One approach could be to apply the new requirement to all asynchronous generators in earlier interconnection queues that, as of the date FERC approves the tariff language necessary to implement the new requirements (i) have yet to begin construction, and (ii) cannot provide evidence of an executed purchase power contract.

- (ii) centralized energy market participation: generators can reflect reactive power capability and provision costs in their offered \$/MWh energy prices,
- (iii) compensation for opportunity costs when generators are required by the CAISO to absorb/produce reactive power outside of a minimum required power factor range, and
- (iv) specialized contracts between the CAISO and select generators where there are specific reactive power needs not otherwise being met through existing market mechanisms.

Unless and until the CAISO can demonstrate that the costs of setting up and administering centralized clearing markets for reactive power—for both capability and provision—are offset by efficiency gains, existing compensation mechanisms should continue to be used.² At present, SDG&E believes the fairest and least-costly means of obtaining adequate reactive power capability is to implement the CAISO's proposal to require all new resources-- synchronous and asynchronous-- to produce or absorb reactive power within minimum prescribed power factor ranges.

- II. CAISO should establish clear reactive power requirements and an effective date for the implementation of its revised reactive power policy. Financial compensation will fundamentally follow.

Like the CAISO, SDG&E believes the current synchronous generator requirement -- the capability to supply reactive power within a 0.95 leading and 0.90 lagging power factor range -- should apply on an equivalent basis to all new asynchronous generators connecting to the CAISO system after a certain time (to be determined). This is a simple approach which provides certainty to developers of new generation and does not impose new burdens on existing asynchronous generators that were built under a different set of rules. Developers of new asynchronous generation will know they must choose inverters with the capability to produce or absorb reactive power within a minimum prescribed range. With this certainty, they can reflect the associated costs in their negotiations with LSEs.

- III. CAISO's proposal to permit generators to demonstrate that their costs for the capability of providing reactive power have not been fully recovered is administratively inefficient and could result in higher costs.

² To maximize efficiency, such centralized markets would need to be designed to co-optimize the provision of real and reactive power since there can be economic tradeoffs between these two sources of power. Market power mitigation measures would also be needed because reactive power requirements are highly localized.

Some generator representatives claim that the costs of providing reactive power capability are not being fully recovered through existing mechanisms. In apparent agreement, the CAISO “proposes to provide capability payments to only new resources that have made a demonstration that their fixed costs for reactive capability equipment are not currently covered under their contracts.” The CAISO’s proposal is problematic in several respects. First, it does not make business sense that a generator would enter into a contract, and participate in markets, where the revenues are not sufficient to earn a minimum acceptable return on the investment needed to build the real and reactive power capability.

Second, requiring the CAISO to review asserted demonstrations of inadequate fixed cost recovery under contracts is cumbersome and wrought with issues. Inevitably, the CAISO must interpret what fixed costs are, and are not, covered in a contract between two parties. Even if contract terms purport to specifically exclude compensation for the fixed costs associated with reactive power equipment, there is no practical way to know whether the agreed-on price for real power internalizes some or all of the reactive power capability costs or whether there are other non-price terms and conditions that provide compensatory benefits to the generator. SDG&E believes it would be a mistake to place the CAISO in the role of interpreting bilateral contracts.

Furthermore, while the generator has the right under the CAISO proposal to attempt to demonstrate that the fixed costs for reactive capability equipment are not covered by contract, it is unclear what rights the counter-party or other stakeholders (who may end bearing increased costs) would have if they disagreed with the generator’s demonstration. Fairness suggests that all parties with an interest in the outcome of the attempted demonstration (which could even include regulatory authorities) should have the opportunity to weigh-in. SDG&E believes the CAISO has under-estimated the complexity of its proposal.

It should be noted, the CAISO’s annual Transmission Planning Process (TPP) is setup to handle specific reactive power needs that could arise even with implementation of the CAISO’s proposal that all new asynchronous generators produce or absorb reactive power within a specified range. For example, the loss of SONGS created a reactive power need that remaining generators were unable to address. A Reliability Must Run (RMR) contract with the owner of the Huntington Beach generating station (which converted retired generators into synchronous condensers) and other transmission upgrades (e.g., Static Var Compensators, capacitors) were able to address the reactive power shortfall within a very compressed timeframe.