

**February 28, 2012**

**To:** California Independent System Operator (via e-mail to [CostAllocation@caiso.com](mailto:CostAllocation@caiso.com))  
**From:** First Solar  
**Re:** Comments on CAISO Cost Allocation Guiding Principles Straw Proposal

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First Solar appreciates the opportunity to provide these comments on the CAISO's Cost Allocation Guiding Principles Straw Proposal ("Straw Proposal"), and Stakeholder Teleconference, held February 21<sup>st</sup>. First Solar generally supports the guiding principles set forth in the Straw Proposal, and the CAISO's desire to fairly allocate costs. We take this opportunity to offer comment on the implementation of those principles.

As an overarching comment, First Solar notes that these cost allocation principles have potentially far reaching impacts. The Straw Proposal indicates that the principles will be considered for application to products beyond the flexi-ramp product in a later proceeding. In addition, we note that the California Public Utilities Commission (CPUC) has several important proceedings open, namely the Long-Term Procurement Plan (R.10-05-006), Resource Adequacy (R.11-10-023) and Renewable Portfolio Standard (R.11-05-005) dockets, wherein the issues relating to cost causation, integration, and cost allocation are being considered. Thus, we recommend that the CAISO allocate to load for the Flexi Ramp product initially, as was proposed in the most recent Flexi Ramp proposal. In the later proceeding, wherein the CAISO intends to apply the Straw Proposal to a broader range of products, we recommend that the CAISO consider the implementation of cost allocation principles holistically, in close collaboration with stakeholders, including the CPUC.

Specific comments on several of the guiding principles, in the Straw Proposal, follow:

***Causation***

*Costs will be charged to resources and/or market participants that benefit from and/or drive the costs. It is a fundamental tenant of just and reasonable energy markets that costs are allocated in this manner...*

**Comment:** First Solar notes that cost causation is a complex topic with varying impacts that does warrant more time for consideration. First Solar agrees with this principle, in general, and offers comments here for how causation should be defined, especially with respect to variable energy resources.

First Solar notes that the Straw Proposal does not explicitly state that costs should be allocated to generators or load, but leaves the question open. It was our understanding that, under the most recent Flexi Ramp product proposal, costs were meant to be allocated to load and not to individual generators. First Solar agrees with a primarily load-based allocation of costs, for several reasons. First, causation is extremely difficult to prove on a generator-by-generator basis. Second, it is the procurement activities of LSEs on behalf of ratepayers that ultimately drive both costs, as well as products that bidders offer. Third, variable renewable energy resources currently have limited ability to respond to price signals, particularly absent other changes in the market design.

***Comparable Treatment***

*Similarly situated resources and/or market participants should receive similar allocation of costs. This principle is similar to "Causation" above, but is intended to emphasize non-discrimination as well as avoiding special treatment of different types of technologies and/or market participants. Once causation is identified for a particular cost, all similarly situated resources and/or market participants fitting the causation criteria should be allocated the costs. This principle is important in encouraging development of new technologies as well as ensuring fair treatment of existing ones.*

**Comment:** First Solar agrees with this principle, in general, in that it focuses on equitable treatment. However, in keeping with comments on other principles, First Solar recommends that the CAISO primarily allocate costs on behalf of load, and treat all load fairly with respect to cost allocation. Doing so achieves the goal of "...avoiding special treatment of different types of technologies..." by considering the aggregate performance of each LSE's portfolio rather than each single generator.

Comparable treatment would include looking at the market design and deciding not only how to allocate costs within the market structure, but also whether the market structure should be adjusted. The unintended consequence of not doing so would be preferential treatment to the incumbents for whom the market was designed.

**Policy Alignment**

*The cost allocation design supports the economically efficient achievement of state and federal policy goals. Economic efficiency is achieved through the design and allocation of costs in the ISO market, incorporating costs/benefits in the bilateral capacity market, and providing additional cost transparency in the ISO market for other policy decisions.*

*An implementation question in allocating costs in accordance with policy alignment is the mechanism for allocating costs according to causation. For example, is alignment with achieving some policy goals more optimally achieved by allocating costs to load-serving entities that bilaterally procure resources that drive certain costs? In other cases, it may better align with policy goals, as well with other of these principles, to allocate costs directly to the resources that drive the costs.*

**Comment:** First Solar agrees that policy alignment is a valid and important goal of this policy initiative to the extent that policy alignment does not conflict with other fundamental principles (e.g. causation). To the implementation question within this principle – “(I)s alignment with achieving some policy goals more optimally achieved by allocating costs to load-serving entities that bilaterally procure resources that drive certain costs?” – we respond, in general, “yes”. The specific policy goals that warrant consideration are all existing and future laws and regulations to support deployment of variable renewable energy resources and reduce emissions from the electricity grid – including, but not limited to, the Renewable Portfolio Standard, Global Warming Solutions Act of 2006 (aka. AB 32), and the loading order.

The LSEs are making the decisions around resource allocation and through PPAs, define the bounds within which the resource operates its plant. The same LSE makes decisions around additional investments or capabilities that the resource could provide. Thus, the best way to drive the right resource mix to both meet policy goals, as well as system goals, is to have the LSE manage the whole integrated picture.

**Incentivize Behavior**

*Providing appropriate incentives is key to an economically efficient market. Profit maximization by market participants that are allocated the costs should lead to lower costs incurred by the ISO market over a reasonable timeframe. The market design and cost allocation should also recognize when other market mechanisms incentivize the same behavior (for example, exposure to real-time prices for deviations from day-ahead schedules provides an incentive to reduce deviations); and,*

**Manageable**

*Market participants should have the ability to manage exposure to the allocation. The market design should seek to minimize variability and complexity of the allocation and maximize the transparency of cost drivers. This principle is important for ensuring that cost allocations have the desired effect. Allocating unmanageable costs does not provide market participants with the opportunity to minimize the cost drivers the cost allocation is intended to incent.*

**Comment:** Solar photovoltaic energy output is dependent upon and reflects the solar insolation it receives. While First Solar understands this principle, the result when applied to VERs means that the ability of these resources to manage these costs is limited, given current market design. While First Solar appreciates the rationale behind this principle, the result when applied to variable energy resources that do not currently have the ability to cost-effectively store energy, means that penalties are applied or allocated when there is not an ability to change the underlying variability of the solar resource. If the behavior to be incented is LSE portfolio selection, then the charges should be allocated to the LSEs. If the behavior to be incented is accurate forecasting, then sub-hourly intervals would be needed for forecasting intervals. This is another reason why costs should be allocated to LSEs as Market Participants on a portfolio basis and not to individual generators.

In addition, as FERC identified in its Notice of Proposed Rulemaking (NOPR) on Integration of Variable Resources, allocation for certain costs to VERs is inappropriate if the tools or structure to manage those costs such as intra-hour scheduling, are not provided. First Solar, thus, recommends that the CAISO consider changes in the CAISO markets and practices that may be needed to provide VER generators the tools to develop products, such as improved scheduling, to enable better integration of renewable energy into the grid.

***Synchronized***

*The cost drivers of the allocation should align as closely as possible to the selected billing determinant. For example, if a procurement target is set based upon expected outcomes, the actual outcome in a single settlement interval may not be indicative of the cost driver. The procurement requirement was not set and the cost was not incurred because of the actual outcome, but because of the expected outcomes.*

**Comment:** No comment at this time.

***Rational***

*Implementation costs/complexity should not exceed the benefits that are intended to be achieved by allocating costs (e.g. it would be economically inefficient to mail a check/bill that is less than the cost of postage). Other market design changes must be identified and considered that can also achieve the desired outcomes. For example, allocation based upon deviations should consider the scheduling and metering granularity of different types of resources: import, export, load, internal generation. They are very different for these various resources and the implementation challenges should be considered in allocating costs. As with any market design component, the practicality of the proposed approach is an important consideration.*

**Comment:** First Solar agrees with the CAISO that the implementation challenges, and impacts, associated with allocating costs to certain types of resources should be considered in allocating costs.

**Conclusion**

First Solar recommends, in summary, the following:

- 1) CAISO adhere to the most recent cost allocation proposal for the Flexi Ramp product initially;
- 2) CAISO, within its later proceeding to consider application of these cost allocation principles to other products, carefully consider their implementation, in close collaboration with stakeholders, including the CPUC; and,
- 3) CAISO consider, in collaboration with stakeholders, developing market design elements that would enable better integration of VERs into the grid.