



September 29, 2016

Submitted to the CAISO at InitiativeComments@CAISO.com by Rachel Gold (Policy Director) and Susan Schneider (Consultant)

RE: Comments of the Large-scale Solar Association on draft 2017 Stakeholder Initiatives Catalog

The Large-scale Solar Association (LSA) hereby submits these comments on the CAISO’s September 15, 2016 document, “2017 Stakeholder Initiatives Catalog” (Catalog). LSA’s comments question the characterization of one existing initiative and recommend two new initiatives – on submission of economic bids and generator interconnection process enhancements.

Characterization of current initiative

The Catalog includes the Generator Interconnection Driven Network Upgrade Cost Recovery initiative (Section 5.2). Section 5 contains “...stakeholder initiatives that are currently underway and will not be presented to the ISO Board for approval by December 2016.”

However, the CAISO’s latest proposal in that initiative indicates that the CAISO intends to bring this matter to the Board at the December 14-15, 2016 meeting. (LSA’s comments in that initiative have supported the CAISO’s proposal to move expeditiously, to avoid delays in concluding Generator Interconnection Agreements (GIAs) with Valley Electric Association (VEA), the Participating Transmission Owner (PTO) that seems to be impacted most imminently.) Thus, this issue properly belongs in Section 4, with other issues that “...may still be currently underway, but will be approved by the ISO Board of Governors by December 2016.”

Recommended new initiatives

LSA understands that the CAISO has considerable demands on its resources, and that it will be able to undertake only a small number of new initiatives in 2017. Thus, LSA has limited its recommended new initiatives to the two efforts in the table below that would significantly improve operation of CAISO markets and development of new resources. Both are explained further in the sections following.

<i>INITIATIVE TITLE</i>	<i>DESCRIPTION</i>
Economic Bidding Initiative	Methods and implementation criteria/timelines for measures to increase economic bids (and reduce self-schedules) in CAISO markets
Interconnection Process Enhancements (IPE) 2017	Selected improvements to CAISO interconnection-related procedures, based on experience under the GIDAP

* *Generator Interconnection and Deliverability Allocation Process.*

Economic Bidding improvement initiative

For the last several years, CAISO studies identified the need to increase the level of economic bids to promote renewables integration. The CAISO's 2009 Annual Report on Market Issues and Performance cited a finding from an earlier study that "self-scheduling is a significant barrier to efficient renewable integration."

Similarly, the ISO Study of Operational Requirements and Market Impacts at 20% RPS (September 2010) stated that "self-scheduling is a significant barrier to operational flexibility and must be addressed to successfully integrate 20% renewable energy."

The CAISO's 2014 Annual Report on Market Issues and Performance, stated: "Energy from new solar resources is expected to continue at a high rate in the next few years" to meet the state's renewable portfolio standards. "This will increase the need for flexible and fast-ramping capacity that can be dispatched by the ISO to integrate increased amounts of variable energy efficiently and reliably."

The CAISO has implemented several reforms intended to increase the supply of economic bids, to better resolve any over-supply situations using CAISO market mechanisms. Some improvements have been made, most notably: (1) lowering the bid-price floor from -\$30 to -\$150/MWh; (2) revising the Participating Intermittent Resources Program (PIRP) to allow wind/solar participants to submit economic bids; (3) implementing the Flexible Resource Adequacy (FlexRA) program, with a must-offer obligation for FlexRA resources to submit economic bids, and the Flexible Ramping Product to help monetize that capability in CAISO markets.

However, the CAISO has indicated that it will need additional flexibility in the future. As the CAISO's Draft Final Proposal Addendum in the Self-Schedules Bid Cost Recovery Allocation and Bid Floor initiative states (at p.6):

Furthermore, as the supply fleet evolves towards a 50 percent RPS, there will be increased instances of over-supply conditions. A deeper pool of economic bids will enable the market to more efficiently manage over-supply conditions...

Despite this stated need, the CAISO has had limited success in a number of recent efforts to promote economic bids, so while there have been some improvements, only a fraction of the resources the CAISO believes could be offering economic bids and providing additional flexibility are doing so. These efforts have included the following:

- **Import and Export Liquidity in 15-Minute Market**, an October 2015 workshop about increasing economic bids from import and export transactions into and out of the CAISO in the Fifteen Minute Market (FMM). The workshop focused on reasons why so many import and export transactions are submitted as inflexible self-schedules and "block" schedules – specifically, to:
 - Understand 15-minute import & export availability on interties
 - Identify incentives/disincentives for FMM economic bidding from imports and exports
 - Distinguish reasons that economic bids are not submitted from reasons economic bids are submitted but don't clear

The CAISO, Western Power Trading Forum and Bonneville Power Administration gave presentations at the meeting, and many problems and potential solutions were discussed. Stakeholders offered additional suggestions in written comments after the workshop.

Suggestions included various ways to reduce costs or uncertainties preventing some entities from participating in the FMM, and cooperative efforts to encourage other BAAs to implement 15-minute scheduling. Some stakeholders raised concerns about some of these measures in written comments.

The CAISO stated in the workshop that it would decide (based on this feedback) whether to initiate a stakeholder process to consider FMM intertie bidding/scheduling design changes. However, the CAISO has not responded to stakeholder suggestions or concerns, or conducted any public follow-up announcement or action on these issues.

LSA notes that recent “SB350” and other studies include scenarios with exports from the CAISO (and expanded ISO) BAAs to other BAA areas of up to 6 - 8,000 MW – meaning that the current typical CAISO import position would have to be reversed, and then up to 8,000 MW of exports would have to be accommodated. Assuming that a large portion of these net exports would consist of variable renewable generation, these export levels may not be achievable, even with the Energy Imbalance Market (EIM), if the CAISO cannot remove impediments to achieving increased flexibility from existing intertie transactions.

- **Self-Schedules Bid Cost Recovery Allocation and Bid Floor initiative:** This initiative, nearing completion, is addressing the economic bid minimum price (energy bid floor) and Integrated Forward Market (IFM) Bid-Cost Recovery (BCR) cost allocation – into a single stakeholder process, with the CAISO proposals summarized below.

TOPIC	CURRENT MARKET RULE	DRAFT FINAL PROPOSAL
Energy Bid Floor	Bid floor = -\$150/MWh	Lower bid floor to -\$300/MWh
IFM BCR Cost Allocation	<u>BCR allocation based on:</u> (Cleared IFM Demand) – (Self-Scheduled Generation & Imports) +/- (Inter-SC Trades of IFM Load Obligation)	<u>BCR allocation based on:</u> (Cleared IFM Demand) +/- (Inter-SC Trades of IFM Load Obligation) <i>(delete subtractor for self-schedules)</i>

The Draft Final Proposal Addendum issued last week in this initiative proceeds with the BCR proposal (with a limited exception), but reverses the bid-floor proposal even though it retains all the arguments supporting the change. The CAISO has said it reversed its position, in part, due to concerns expressed by other stakeholders, including the following:

- **Possible market power for decremental energy bids**, though the CAISO: (1) said it has detected some market-power exercise with the current bid floor but has not (to LSA’s knowledge) addressed these concerns; (2) has effective market-power mitigation for incremental energy bids that presumably could be extended to decremental bids; and (3) does not seem to have investigated how ISOs with lower bid-floor limits address those issues.
- **Relevant metrics to measure the degree and extent of self-schedule cuts**, since the CAISO and its Department of Market Monitoring (DMM) seem to disagree on such metrics;
- **The increase in economic bids that might be elicited by bid-price floor changes**, e.g., the amount of resources with opportunity costs between \$150 and \$300/MWh, and below \$300/MWh (LSA and other stakeholders have provided information on the former), and other changes (e.g., contractual or operational changes, or technological developments) that might be facilitated at various price-limit levels.

If the above concerns prevent the CAISO from lowering the bid-price floor in the current stakeholder process, LSA strongly recommends that the CAISO not drop this issue. Instead the CAISO should undertake a full and consolidated initiative to chart a reasonable course of action to identify, select, develop, and deploy needed reforms (including the bid-price floor reduction). This initiative would consider the following:

- (1) **Problems that are impeding market efficiency** (including economic-bid submission) and are expected to do so in the future, as renewables penetration increases;
- (2) **Potential solutions to those problems**, including the steps needed to develop and implement those solutions and, for each, either: (1) an implementation schedule; or (2) market indicators or metrics that would trigger their implementation.

As part of this initiative, LSA recommends that the CAISO systematically identify and address stakeholder concerns such as those expressed in the two stakeholder processes noted above.

Interconnection Process Enhancements (IPE) 2017

The CAISO has not held a comprehensive Interconnection Process Enhancement (IPE) examination since GIDAP implementation several years ago. (The CAISO did conduct a more limited initiative addressing mostly administrative changes in the “IPE 2015” effort last year.)

LSA has compiled two lists of issues that should be addressed in this initiative – one with complex issues and one with topics that would be simpler to address.

MORE COMPLEX IPE ISSUES

<i>SUBJECT</i>	<i>DEFINITION</i>
GIDAP “parking” rules	Review & consider adjustments to better align rules with utility procurement processes, e.g., allowing projects to park longer (see First Solar comments for one possible approach)
Transmission upgrade status	Require annual PTO updates to generators with projects in the queue of: (1) expected completion date of NUs needed for In-Service Date or requested RA deliverability; and (2) “operational deliverability assessment” Phase II Study tables.
Generator Interconnection Agreements – Appendix Format	Standard template & change process for GIA Appendices, e.g., include payment timing/amount forecasts & 3 rd -posting timing
Behind-the-Meter (BTM) storage issues	
NQC impact	Allow NQC to increase up to level studied
Metering	Allow combined metering with different technologies, w/CAISO development of “pro rata” forecast based on installed capacity
PTO construction timing	
Interconnection Financial Security (IFS) release	IFS (e.g., under Second Posting provisions) for PPA loss due to PTO construction delays beyond Phase II Study or GIA estimates, even if the third posting has been made
COD/milestone timing	Automatic extensions when caused by: (1) time estimates in Interconnection Studies that make limitations impossible to meet; and/or (2) construction delays beyond Phase II Study or GIA estimates
Shared Stand-Alone Network Upgrades (SANUs)	Allow/clarify that generation projects can share SANUs, and the treatment of their financial-security postings (e.g., postings should total only SANU cost and, if a project withdraws, its security should benefit of remaining projects)
Reassessment cost cap	More fairly adjust the cost cap where the percentage allocation to a participant is very small (e.g., less than 5%) and the upgrade cost is high (e.g., over \$20M).
Affected System options	Include potential CAISO-system mitigation to Affected System impacts in interconnection studies, e.g., as Option B-type upgrades

SIMPLER IPE ISSUES

<i>SUBJECT</i>	<i>DEFINITION</i>
Shared transformer clarifications	Clarification of requirements to share transformer between project phases
Downsize before Ph. I Study	Clarify that downsizing of the IR capacity is allowed as part of the post-Scoping Meeting information submission
LCR qualification	Include in Interconnection Studies information on whether a project would qualify as a Local Capacity Resource (LCR) for RA purposes based on the criteria applicable at the time, i.e., whether the project site is located in an identified Local Capacity Area (LCA)
Security impacts of withdrawal – phased third IFS postings	Formalize clarifications on release of second-posting amounts if a project withdraws from the queue after some third-posting installments have been made but others have not
Process clarification	Clarify/formalize invoicing/notice and posting process (e.g., meaning of “on or before” posting deadline)