October 20, 2016

Chair Richard Maullin
Governor Ashutosh Bhagwat
Governor Angelina Galiteva
Governor Mark Ferron
Governor David Olsen

RE: Bid-Price Floor

Dear Chair Maullin and Governors Bhagwat, Galiteva, Ferron, and Olsen:

I am writing on behalf of the Large-scale Solar Association (LSA) about the CAISO market bid-price floor specifically, and the issue of economic bids in general. LSA strongly recommends the CAISO Board direct Management to take the following actions:

- **Move to implement a bid-price floor reduction to $-300 per MWh now**, in the CAISO's Self-Schedules Bid Cost Recovery Allocation and Bid Floor initiative (Initiative), in order to incent additional economic bids; and

- **Direct Management to conduct a stakeholder process next year to examine further incentives for, and removal of obstacles to, submission of economic bids.** This effort should be included in the 2017 Stakeholder Initiatives Catalog roadmap, and it should include a plan to eventually lower the floor price to $-1,000/MWh to match the $1,000/MWh bid cap, as well as other reforms to improve market ability to manage renewables integration and other issues.

LSA's recommendations are based on reasons outlined below.

Lowering the economic bid-price floor now

CAISO studies since at least 2009 have identified the need for additional economic bids, to manage over-supply situations and integrate renewable resources using CAISO market mechanisms. That need continues, despite reforms since then to increase the supply of economic bids. Most recently, CAISO's Draft Final Proposal Addendum in the Initiative states (at p.6):

> …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 efficiency [sic] manage over-supply conditions…

The MSC's October 19th memorandum, Briefing on MSC activities from August 16 to October 8, 2016 (MSC Memo) agreed, stating:

> Encouraging market participants who presently self-schedule to submit explicit offers would result in more rational curtailment of imports and generation than present ISO procedures for choosing among self-schedules to curtail… There will be a growing need for more incentives for flexibility from those who can provide it…

The CAISO undertook the Initiative earlier this year to help address that continuing need, by considering two market-rule changes intended to promote economic bids. The CAISO stated in the Initiative discussions that "only a fraction of the resources" that could be offering economic bids and providing additional flexibility are doing so.

One of the proposed changes in the Initiative would lower the economic bid floor from the current $-150/MWh to $-300. A lower bid floor would promote economic bids by increasing the risks of submitting self-schedules (essentially price-taker bids). As the MSC Memo states:

> …In general, members of the MSC believe that a lower bid floor may need to be instituted in the near future to incent downward flexibility… Members of the MSC believe that reducing the bid floor should promote more flexible bidding. Self-scheduling would become more costly and risky, increasing the attractiveness of flexible bidding.

More specifically, a lower bid-price floor would, among other things:

- **Reduce incentives for Day Ahead demand over-scheduling.** As stated in the CAISO's May 5th document, <u>Stepped Constraint Parameters – Issue Paper</u>, an asymmetrical price cap and floor incents such practices, and a lower floor will help bridge some of that gap.
- **Allow resources with greater opportunity costs to express them through their bid prices.** Opportunity costs can exceed both $150 <u>and</u> $300/MWh, due to Time-of-Day (TOD) multipliers and other factors; this information can easily be verified from standard, public pro forma contract information.
- **Incent more flexible contract terms, and more use of such existing terms.** Most renewable-resource Power Purchase Agreements (PPAs) allow for economic-bid submission, but as noted above, it seems that much or most of that flexibility is not being used. Where PPAs or other arrangements don't explicitly provide for economic bidding (e.g., some import/export contracts), the MSC Memo says lowering the bid-price floor "…could in the longer run encourage market participants to revise contracts that presently have provisions that discourage the submission of price-based offers."
- **Facilitate integration-resource development and other market solutions through accurate price signals**, including: (1) new technologies like energy storage; and (2) conventional-resource investments to increase operational flexibility.

Despite these strong reasons for a lower bid-price floor, Management decided not to proceed with the Initiative, and that is why there is no agenda item before you this month with that proposal. Management's rationale for reversing its position is based, in part, on concerns expressed by other stakeholders, including potential market-power issues, disputes over the current extent of self-schedule cuts already taking place due to insufficient economic bids, and lack of flexibility of some resources.

However, there was no apparent attempt by Management to either determine whether the benefits from lowering the bid-price floor would outweigh these concerns or to actually address those concerns. LSA believes that the positive benefits would outweigh any negative consequences and, in the absence of concrete evidence to the contrary, the Board should direct Management to proceed with lowering the bid-price floor to $-300/MWh.

Promotion of economic bids more generally

There are other instances where Management decided to drop reform proposals that could have further incented economic bids and resource flexibility, instead of addressing stakeholder concerns and moving forward.

One such situation was with an earlier proposal to lower the bid floor to the current $-150/MWh. Management had proposed a $-300 floor price at that time but, due to the same concerns stated by stakeholders in the Initiative, decided to go with the $-150 price without addressing those concerns.

While this was an improvement over the $-30/MWh price in effect at the time, these concerns prevented what could have been a move to a $-1,000/MWh price floor at that time – much more consistent with the floor prices of other ISOs and the CAISO's own $1,000 bid cap. As the MSC Memo states:

> However, the ISO has decided to defer a decision to decrease the bid floor further to below -$150/MWh. This is at least in part due to general concerns raised by stakeholders and the Department of Market Monitoring about the impact from the exercise of downward market power being increased by a lower bid floor.
>
> We raised related concerns in a previous MSC opinion,[3] in which we pointed out the possible need for safeguards in cases where changes in transmission limits or modeling differences between the day-ahead and real-time markets bestow local market power upon a small set of generators who could be required to be dispatched below their day-ahead market schedule in real time to eliminate transmission overloads.
>
> Unfortunately, in the five years since that opinion, no analyses have been made public of the frequency or severity of such potential problems in the ISO market, so we are not in a position to assess whether the potential for the exercise of such downward market power is a significant risk nor able to assess the importance of developing changes to the mitigation design that would be needed to address these issues with either the current bid floor or a lower bid floor.

If the CAISO simply drops its bid-floor proposal in the Initiative and then seeks to revive it at some later date (as Management has said it may do), these same stakeholder concerns will be put forward a third time, and hence the CAISO will just have to start over, again.

Similarly, the CAISO held an October 2015 workshop, Import and Export Liquidity in 15-Minute Market, about increasing economic bids for import and export transactions in the CAISO's 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.

The Western Power Trading Forum and Bonneville Power Administration gave presentations, and problems and potential solutions were discussed. Stakeholders offered additional suggestions, as well as concerns, in written comments.

However, since the workshop and comment submittals, the CAISO has neither addressed the concerns nor conducted any public follow-up announcement or action on these issues. It appears that the CAISO has simply dropped that effort as well.

Recent "SB 350" and other studies include scenarios with exports to other BAAs of up to 8,000 MW – i.e., the current typical CAISO net import position would be reversed, and up to 8,000 MW of additional exports would be accommodated. These export levels may not be achievable if the CAISO does not remove existing impediments and market inefficiencies.

Regardless of whether the CAISO decides to lower the bid-price floor to $-300/MWh at this time, it is important for the CAISO's long-term market efficiency to address stakeholder concerns about lower price floors than that, and to move forward with additional actions to promote additional economic bids more generally.

LSA has submitted a recommendation for the draft 2017 Stakeholder Initiatives Catalog that the CAISO undertake a full and consolidated initiative to chart a reasonable course of action to identify, select, develop, and deploy needed reforms to promote market flexibility and economic bids (including a further bid-price floor reduction, potentially to match the $1,000/MWh price cap). This proposed initiative would consider the following:

(1) **Identifying problems that are impeding market flexibility** (including economic-bid submission) and/or may do so in the future, as renewables penetration increases; and

(2) **Developing a plan to resolve those problems**, including the steps needed to develop and implement those solutions and, for each solution, either: (1) an implementation schedule; or (2) market indicators or metrics that would trigger their implementation.

Development of this plan will give stakeholders advance notice of potential future market-rule changes and allow more orderly transitions to those new rules in the future.

Conclusion

For the reasons described above, LSA strongly recommends that the Board direct Management to both lower the bid-price floor to $-300/MWh in the initiative and include LSA's recommended new economic-bidding initiative in the final 2017 Stakeholder Initiatives Catalog "roadmap."

Sincerely,

Shannon Eddy

Shannon Eddy
Executive Director