

Comments of J.P. Morgan Ventures Energy Corporation

Subject: CAISO Straw Proposal Modeling of Multi-Stage Generating Units

| Submitted by | Company | Date Submitted |
|-----------------------------------|--|----------------|
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Introduction

J.P. Morgan Ventures Energy Corporation (J.P. Morgan) appreciates the opportunity to comment on the CAISO Straw Proposal and the February 25 Stakeholder Conference Call regarding Modeling Multi-Stage Generating Units (MSGU). J.P. Morgan is party to a number of agreements that govern the operation and dispatch of resources that are subject to “Forbidden Region” and other operating constraints. J.P. Morgan therefore strongly supports the CAISO’s efforts to develop and implement a Multi-State Generating Unit Modeling capability in its Market Redesign and Technology Upgrade (MRTU) software. As acknowledged by the Federal Energy Regulatory Commission (FERC) in its January 30, 2009, order on the CAISO’s proposal to defer implementing certain functionality in the MRTU software, J.P. Morgan supports the commitment of the CAISO to implement the MSGU software functionality within six to nine months after MRTU go live.

Notwithstanding J.P. Morgan’s support for this effort, and as discussed further below, J.P. Morgan is concerned that the CAISO’s proposed design may obviate certain of the potential benefits of enhanced modeling for Multi-Stage Generating Units. J.P. Morgan is concerned that design parameters or rules that limit the ability of resource owners to flexibly bid MSGU into the CAISO’s markets may unnecessarily limit the availability of these resources to the CAISO – an outcome that could both reduce the liquidity of the CAISO’s markets and potentially impair reliable operation of the system. If necessary, J.P. Morgan requests that the CAISO consider a design or rule set that would permit more enhanced modeling of *most* MSGU. J.P. Morgan is concerned that absent a more refined or flexible approach to modeling MSGU, the CAISO may be better off staying with the existing, imperfect, approach to managing MSGU resources. While J.P. Morgan is hopeful that some form of enhanced modeling for MSGU can be implemented, J.P. Morgan requests that the CAISO carefully consider these comments and fashion a MSGU modeling proposal that achieves the benefits identified in the CAISO’s Straw Proposal.

Candidate Design Options, Bidding, and Bid Cost Recovery

As stated in its previous comments, J.P. Morgan believes that the CAISO has correctly identified the type of operating constraints that can be potentially modeled in the proposed multi-state generating software. The CAISO straw proposal correctly identifies the difficulties in protecting infeasible operating ranges given the limitations on ramp rates and the suspended “Forbidden Region” functionality and the potential benefit of being able to more accurately model Forbidden Region constraints and multiple highly-varying ramp rates. In addition, J.P. Morgan believes the CAISO has correctly characterized other important operating parameters such as: operating and start-up costs, hold times, varying heat and energy costs, and dual regulating ranges. J.P. Morgan agrees that all of these parameters are ideally modeled in the CAISO’s proposed MSGU software.

Furthermore, and to the extent not generally identified above, J.P. Morgan recommends that the CAISO market functionality be able to recognize and accommodate 1) the advance notice requirements and hold times associated with the need to start second boiler feed pumps; 2) the specific start-up and other unique requirements for operating certain resources (e.g., certain resources may require auxiliary steam from another boiler to start, thus incurring additional demand (fixed) costs that are currently not includable in start-up costs); and 3) the inter-dependency between units (e.g., the need to dispatch an on-line unit to within a specific operating range in order to supply steam to another off-line unit).

J.P. Morgan supports the CAISO proposal to implement a “modified pseudo-plant” approach to modeling multi-stage generating units (Straw Proposal at pp. 4-6). Acknowledging the potential implementation constraints associated with such modeling identified by the CAISO (e.g., the need to lock in a given configuration in real time), J.P. Morgan supports implementing the capability to independently bid various configurations into the CAISO’s markets. In addition, J.P. Morgan supports the ability to submit bids for a particular configuration of a multi-stage generating unit. Specifically, J.P. Morgan supports the ability to submit bids that reflect, as identified by the CAISO: “operating and start-up costs, hold times, nuances in ramping capabilities, varying heat rates and energy costs, and dual regulating ranges.” (Straw Proposal at p.7). Finally, with respect to the applicable Bid Cost Recovery (BCR) provisions, J.P. Morgan supports “a more tailored calculation of BCR.” (Straw Proposal at pp.7-8). J.P. Morgan supports a BCR calculation that “uses output-varying values for costs such as Start-Up and Minimum Load for each of the embedded generators” rather than the costs for the composite unit as a whole.

Proposed Mitigation

On page 6 of the CAISO’s Straw Proposal, the CAISO states as follows:

Market Power Mitigation: We recommend that market Power Mitigation be performed on a configuration-by-configuration basis. Since Market Power Mitigation is performed on all clean bids submitted for use in the IFM, individual configurations’ bids may be flagged for mitigation.

Configurations (or pseudo-plants) that are incremental up in the All Constraints pass of the Mitigation run would have their bid mitigated based on the relevant operating parameters which would be included in the configuration-level information. In addition, if a unit has a configuration committed in the Competitive Constraints run, and another committed in the All Constraints run, both configurations' bids would be flagged for mitigation.

J.P. Morgan requests that the CAISO reconsider the need for mitigation in light of FERC's February 20, 2009, order that addressed, among other matters, mitigation of resources exceptionally dispatched to manage their Forbidden Operating Region constraints. In that order, FERC stated that:

Regarding mitigation related to unit-specific operating characteristics, such as forbidden operating regions, the CAISO has not provided any explanation as to how a resource could possibly determine ahead of time that the CAISO would need to manually hold it above its forbidden operating region for capacity-related reasons. The CAISO has further failed to explain why, in such a situation, it lacks adequate alternatives for procuring the needed additional capacity elsewhere, thereby limiting a particular unit's ability to exercise market power. Consistent with Commission policy to limit mitigation to the market in which a seller has been found to possess market power, we reject the CAISO's proposal to apply broad mitigation to all resources exceptionally dispatched due to specific operating constraints without some showing by the CAISO that these resources can anticipate the need for the Exceptional Dispatch, thereby creating the potential to exercise market power.¹

At minimum, J. P. Morgan requests that the CAISO clarify in the next version of its proposal not only the mechanics (how) of mitigation, but, in light of the FERC order referenced above, also the need for mitigation, distinguishing between the application of mitigation in the Integrated Forward Market, Hour-Ahead Scheduling Process and Real Time Markets.

Specific Questions Posed By The CAISO

1. The proposed design for multi-stage generating unit modeling would enable Participants to bid in the multiple configurations of multi-stage units into the Integrated Forward Market (IFM). At most one configuration can be chosen by the IFM, and that configuration would then be locked for the Real Time Market (RTM). Please elaborate on any issues foreseen with locking the configuration passed to the RTM. (Specific examples or scenarios would be helpful.)

First, J.P. Morgan acknowledges the challenge of solving the RTM given all the various configurations of multi-stage units (Straw Proposal at p. 5). J.P. Morgan is concerned

¹ See *California Independent System Operator Corporation*, 126 FERC ¶ 61,150, at P. 107 (2009); Order On Section 206 Investigation, Technical Conference, Accepting In Part And Rejecting In Part Tariff Provisions, And Implementing Transitional Measures; Docket Nos. ER08-1178-000 and EL08-88-000.

that locking in the configuration accepted in the IFM through the RTM may require the CAISO to continue to rely on its Exceptional Dispatch authority in real time and thus may obviate some of the purported benefits from moving to the MSGU proposal. Specifically, J.P. Morgan is concerned that the CAISO may be unnecessarily limiting the availability of resources with Forbidden Operating Region constraints from more fully participating in the CAISO's RTM. Furthermore, J.P. Morgan is concerned that, based on real time operating conditions (reliability) the CAISO may need to dispatch a resource out of one operating configuration (i.e., that accepted for the resource in the IFM) and into another relying on the CAISO's Exceptional Dispatch authority and related pricing provisions.

J.P. Morgan requests that the CAISO commit to further analysis regarding the need to rely on Exceptional Dispatch and the feasibility of removing the bid limitations at some point in the future. In addition, J.P. Morgan requests that the CAISO assess and explain whether it would be possible to implement a MSGU modeling methodology that appropriately limits the number of allowable configurations per resource, but does not lock in through real-time the configuration accepted in the day-ahead market.

Finally, J.P. Morgan requests clarification that should the CAISO deem it necessary to rely on its Exceptional Dispatch authority, that either 1) the CAISO limit real-time Exceptional Dispatches to the capacity available from the resource based on the resource configuration accepted by the CAISO in the IFM or 2) the CAISO clarify and make explicit that resources exceptionally dispatched from one configuration into another are entitled to recovery of all costs associated with moving the resource from one configuration into another.

2. The issue of Resource Adequacy (RA) Must Offer (MO) requirements was discussed on the Conference Call on February 25, 2009. The ISO is considering including in its proposed design the requirement that multi-stage units subject to RA MO requirements would need to bid into the IFM at least one configuration that would fulfill the unit's full RA MO obligation. If no configuration is chosen by the IFM, the units would need to submit a configuration into the RTM that would fulfill the RA MO obligation.

J.P. Morgan can support a requirement that multi-stage units subject to RA MOO requirements would need to bid into the IFM at least one configuration that would fulfill the unit's full RA MO obligation so long as: 1) the resource is ensured full cost/bid recovery for operating within the applicable configuration; and 2) the CAISO makes explicit that, should the resource be accepted in the IFM using a configuration that does not provide access to its full RA capacity that the resource be deemed to have satisfied its RA Must-Offer Obligation.

3. Reporting outages and de-rates of units into the Scheduling and Logging for the ISO of California (SLIC) software will be somewhat more complex for multi-stage units. Two options include the following:

- Submit outages/de-rates at the unit level, and make any changes necessary to ramp rates within the configuration-level bids.
- Submit outages/de-rates at the configuration level for all configurations impacted by a generating unit, and make any ramp rate changes within the SLIC ticket.

The IFM and RTM bids for configurations affected by the outages/de-rates should reflect the changes in ramp rates and capacity. Please comment on these options and provide your preference, or any additional suggestions.

At present, based on its understanding of the options presented above and its assessment of feasible operating practices, J.P. Morgan supports a proposal wherein resource owners submit outages/de-rates at the unit level, and make any changes necessary to ramp rates within the configuration-level bids. While J.P. Morgan understands that submission of outages/derates at the configuration level may be more consistent with the preferred overarching design discussed above, J.P. Morgan is concerned that an approach that requires SLiC submissions at the configuration level may be unworkable from a real-time operations perspective.

Conclusion

J.P. Morgan appreciates the opportunity to provide these comments on the CAISO's Straw Proposal regarding Modeling of Multi-Stage Generating Units. J.P. Morgan supports the CAISO's proposal to implement the MSGU capability within six to nine months of MRTU go-live. J. P. Morgan requests that the CAISO carefully consider these comments and seek any necessary approvals from the CAISO Governing Board and FERC in a manner that preserves the CAISO's flexibility in implementing a MSGU modeling design that achieves the benefits identified by the CAISO in its Straw Proposal.