

Comments of J.P. Morgan Ventures Energy Corporation

Subject: Multi-Stage Generating Unit Modeling

Submitted by	Company	Date Submitted
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J.P. Morgan Ventures Energy Corporation (J.P. Morgan) appreciates the opportunity to comment on the CAISO Issue Paper on Multi-Stage Generating Unit Modeling and the November 14 Stakeholder Conference Call regarding Multi-Stage Generating Unit Modeling. 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. J.P. Morgan supports the commitment of the CAISO resources necessary to support implementation of such software functionality within six to nine months after MRTU go live.

Please submit your comments to the following questions for each topic in the spaces indicated.

1. Please describe the operational issues that you believe modeling of multi-stage units can alleviate.

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 issue paper 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 market 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); 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).

2. If you participate in other ISO/RTO markets where multi-stage units are modeled, please provide any insights you have gained from that experience.

J.P. Morgan has no comment on this issue.

3. What issues do you anticipate arising due to modeling of multi-stage units? Please provide detail and/or examples.

See answer to (1) above. J.P. Morgan agrees with the CAISO that an important issue for discussion and resolution is the treatment of start-up and minimum load costs, recognizing that these costs can vary by number of starts and unit configuration.

4. Which of the two models – pseudo-plant or pseudo-unit – discussed in the conference call would you prefer to see implemented and why?

J.P. Morgan prefers Option 2 because of the perceived greater flexibility it provides.