CAISO COMPETITIVE PATH ASSESSMENT FOR MRTU
PRELIMINARY RESULTS – RELEASE 2

COMMENTS
OF THE STAFF OF THE
CALIFORNIA PUBLIC UTILITIES COMMISSION

November 5, 2007

CPUC staff appreciate the opportunity to provide comments in response to CAISO’s white paper of September, 2007, Competitive Path Assessment for MRTU, Preliminary Results – Release 2. The CPUC staff will provide additional comments as issues relating to competitive path assessment (CPA) develop further throughout this stakeholder process.

CAISO’s second release of CPA results, as laid out in the September, 2007 white paper, raises a number of questions and concerns for CPUC staff. Accurate CPA is a critical market power mitigation tool and essential to efficiently run wholesale and retail markets under MRTU. Competitive path assessment will determine where CAISO utilizes market power mitigation mechanisms. If paths are deemed competitive when they are in fact uncompetitive, market power will remain unmitigated.¹

CAISO’s Model Relies on Numerous Unexplained Assumptions Such That An Adequate Assessment Is Impossible

Numerous underlying assumptions made in the simulation play critical roles in determining the outcome. In order to account for the specific operating characteristics of generators (minimum down, minimum run, ramp rates, etc.) the model must use assumptions regarding the status of all generators at the initial period, hour ending zero (e.g., when did it last turn off, where is it in its ramping process, etc.). For example, if a plant has a minimum down time of eight hours, but was shut off at hour ending 22 the day before, there must be some assumption made in the model to show how this status is accounted for. These assumptions should be made explicit.

¹ The designation of a path as non-competitive does not mean it will always be mitigated, just that the path may be subject to mitigation.
CPUC staff understand the burden imposed by this level of detail. However, a technical appendix laying out such information would allow stakeholders to make much more informed decisions and more fruitful comments.

Another way to reduce the importance of initial conditions could be to perform a multi-day simulation where possible. This would reduce the impact of initial condition assumptions. For example, if CAISO selected 6/23/2006 for the “high spring” scenario, they could run scenarios for 6/22/2006 through 6/24/06, and then isolate and study the results of 6/23/06. This would reduce the effect that initial or terminal assumptions have on the results. However, CPUC Staff acknowledge that this may involve difficult and burdensome analysis.

The current method may be acceptable, but without additional information it is impossible to assess the impact of the assumptions used to model the representative days.

**The Absence of Ancillary Services Bids Results In An Inaccurate Representation Of The Co-Optimization Problem And Erroneous Conclusions**

It is understood that data do not exist for Ancillary Services (A/S) in California. However, the co-optimization of the Integrated Forward Market relies critically on the relationship between the energy and A/S prices. (See White Paper at p.7.) Therefore, substituting only the opportunity cost of selling A/S inaccurately represents the co-optimization problem, and improper conclusions result. CAISO could consider proxies for A/S from other ISOs or otherwise develop reasonably reliable data that may aid the accuracy of modeling. If the CAISO staff has considered this problem, then the CPUC staff feel that an explanation is needed describing why the methodology used provides a sufficiently accurate framework for determining if a path is competitive.

Additionally, the simplified A/S market model utilized in the simulation which considers only the CAISO-wide system and South of path 26 region, raises similar concerns. (See White Paper at p.12.) Lastly, the combination of spinning and non-spinning reserves into one market (See White Paper at p.13), raises concerns because a unit certified to provide non-spin may not be certified to provide spin. This creates additional modeling distortions, which could impact the validity of the study’s conclusions.

**CPUC Staff Urge Clarification On The Use Of RMRs**

CAISO’s use or integration of generation subject to Reliability Must-Run contracts (RMRs) into the market is unclear. Are RMRs treated in a special manner? It appears to CPUC staff that RMRs are used to determine the number of hours that are mitigated in the previous 12 months, but they are entered into the Integrated Forward Market as competitive units. (See White Paper at pp. 20-21.) CPUC staff seek further clarification of the assumptions used, if any, for RMR units and clarification of how these units are integrated into the model.
Load Curtailment Implies a Pivotal Supplier And Should Be Treated As A Failure Of The Three Pivotal Supplier Test

If insufficient supply results in load curtailment while performing the Three Pivotal Supplier test, then this signals that there is at least one pivotal supplier. Thus, the approach described in *Competitive Path Assessment for MRTU Preliminary Results for Spring and Summer Seasons*, where load curtailment was treated as a failure of the Three Pivotal Supplier test, is the appropriate standard.

CPUC Staff Support CAISO’s Use Of The Three Pivotal Supplier Test

CPUC staff support a conservative approach to CPA. If a path is deemed non-competitive when it is truly competitive, there will be little harm as the generators’ bids should reflect their mitigated bids. However, as noted above, deeming a line competitive when it is not will result in unmitigated market power, which can be very harmful to ratepayers and market efficiencies. Therefore, the burden should be heavy to prove that a path is competitive. For this reason, CPUC staff support the Three Pivotal Supplier test at the outset of the competitive path assessment.

Once sufficient historic data on MRTU market operations become available, the CAISO may want to consider altering the Three Pivotal Provider test to account for the operational characteristics of different generators. For example, the fixed costs of turning a baseload generator on and off may cause the costs of such units to be too great to permit realistic consideration of this option. In such cases, the Three Pivotal Supplier test could be altered such that any generation that lacks operational flexibility would not be removed while performing the test, but would be backed down to the unit’s minimum generating capability.

CPUC Staff Seek Elaboration/Clarification From The CAISO Regarding:

1. The “Rounded Relaxation algorithm.”
2. The meaning of the term “Maximum Mitigation Hours” in tables 9-14.
3. Whether both energy and ancillary services are removed from the simulation in the co-optimization when performing the Three Pivotal Supplier Test.

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2 A path deemed to be non-competitive that is competitive will not harm generators, LSEs, or ratepayers. Generators, the ones directly affected by bid mitigation, have no market power on these mislabeled paths, and will therefore offer their power at prices similar to what they would be mitigated down to. Thus, the price signals that would need to occur for CAISO to mitigate bids will not occur. Lastly, the level of protection provided to LSEs and ratepayers by calling a competitive line non-competitive cannot inflict harm on market participants. Since mitigated bids and competitive bids should lead to similar outcomes, LSEs and ratepayers would see the same price signals, and would therefore be indifferent between the two price signals.
**Conclusion**

CPUC staff support CAISO’s efforts on CPA and generally support the use of the Three Pivotal Supplier Test. The final CAISO methodology, however, must achieve the goal of accurately identifying competitive paths so that California ratepayers and other market participants are not subject to market power manipulation and abuses.

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