

## PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



June 15, 2007

To: California Independent System Operator

**Re: CPUC Staff Comments on the CAISO's Conceptual Design Proposal for Scarcity Pricing**

The CPUC staff appreciate the opportunity to provide comments in response to CAISO's May 31, 2007 *Issues for Scarcity Pricing (SP) Conceptual Design in the MRTU Markets* (Issue Paper). CPUC staff understand that under MRTU Release 1, the CAISO submitted to Federal Energy Regulatory Commission (FERC) a proposal of a limited scarcity pricing that will raise bids to the bid cap in the absence of sufficient energy bids.<sup>1</sup> In its September 21, 2006 *Order Conditionally Accepting The CAISO's Electric Tariff Filing To Reflect Market Redesign And Technology Upgrade*<sup>2</sup> (MRTU), FERC directed the CAISO to implement a more comprehensive reserve shortage scarcity pricing mechanism to be implemented within 12 months of the startup of MRTU's Release 1. Later, in its April 2007 MRTU Order,<sup>3</sup> FERC directed the CAISO to further incorporate SP for both energy and reserves shortages and to develop administratively determined graduated prices applicable to different reserve shortage levels. The following CPUC comments are based on the Issue Paper and discussions held during the June 6, 2007 CAISO Market Surveillance Committee (MSC) meeting.

The CPUC staff understand that CAISO's Conceptual Design proposal is at a very early stage, so the details of CAISO proposal are not fleshed out. At the MSC meeting CAISO staff suggested that the SP proposal is at its kick-off stage. Given the lack of details of CAISO proposal, CPUC reserves the right to make more substantial comments in future SP stakeholder process.

**Any CAISO Proposal Must Include Just And Reasonable Compensation (Reserve Demand Values) To Ensure A Realistic Scarcity Pricing Market Design.**

Scarcity Pricing is perceived by some to be an important market feature because it is intended to allow existing high cost suppliers to be available for system needs and creates incentives for new investment. A *broad form* of SP is triggered in some ISO/RTOs whenever operating reserves level drop below a threshold, and the price for additional reserves rises automatically to the offer cap (i.e. existing price cap and/or the highest LMP that can be higher than the price cap). Similarly, CPUC staff acknowledge that under active demand response programs, scarcity pricing can alter the balance of supply and demand in real time.

If the CAISO is proposing a *broad form* of SP, then the CAISO should avoid providing exorbitant revenue streams to suppliers through scarcity pricing. For example, suppliers that

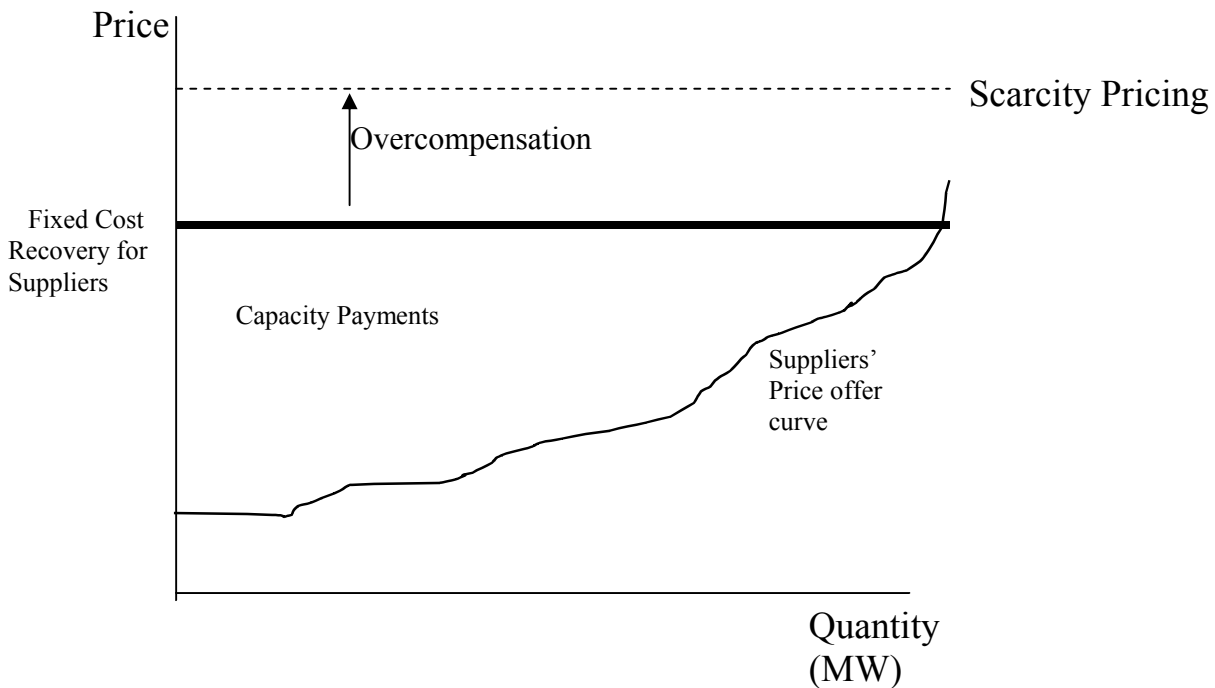
<sup>1</sup> SP will be triggered only in the absence of contingency events.

<sup>2</sup> California Independent System Operator Corporation, 116 FERC ¶ 61, 274 (2006) at p. 452.

<sup>3</sup> California Independent System Operator Corporation, 119 FERC ¶ 61,706.

are compensated through revenue payments via an administratively determined process intended to provide recovery of fixed costs, may not necessarily warrant additional full compensation through SP if such SP is also intended to compensate generators for their fixed costs. The potential for overcompensation through scarcity pricing can be illustrated via the following simple graph.

**Figure 1: SP Compensation is well above Suppliers' Full Cost Recovery**



As shown in the above graph, it is clear that if scarcity prices (denoted by the dotted horizontal line) is not well designed this system could compensate suppliers much more than the remuneration required to induce new generation (represented by the bold horizontal line). CPUC staff cautions that CAISO should design SP in such a way that considers suppliers' total revenue streams.

**The CPUC Is Currently Considering Whether Resource Adequacy Resources Should Be Required to Offer Ancillary Services in the Day Ahead Market.<sup>4</sup>**

FERC's September 21, 2006 Order directed the CAISO to implement SP at the Day Ahead and Real Time markets. Introducing SP in both Day Ahead and Real Time markets will expose California ratepayers to additional risks than if SP was only introduced in the Real Time market. The ISO-New England and Pennsylvania, New Jersey, and Maryland markets only have SP in their Real-Time markets.<sup>5</sup> CPUC staff support consideration of the CAISO proposal that utility contracted Resource Adequacy (RA) resources shall be required to offer Ancillary Services in the Day Ahead Market to the extent the resource is capable of offering such services. Such a must offer requirement on RA resources may significantly reduce the

<sup>4</sup> Assigned Commissioner's Ruling And Scoping Memo For Phase 2, filed on December 22, 2006 in Rulemaking 05-12-013.

<sup>5</sup> California ISO Issue Paper on Reserve Shortage Pricing Design, May 31, 2007: Appendix A, page 11.

frequency and/or duration of SP triggering events in the Day Ahead market, which may also prevent supplier market power in the Day Ahead market.

### **CAISO Must Use Caution To Designate Reserve Shortage Regions.**

While CPUC acknowledges that locational reserve requirements are important because system-wide reserves may not provide sufficient incentives to procure reserves for all transmission constrained prone areas, CPUC staff believe that the CAISO must use caution in designating local areas for SP purposes. Under shortage conditions, the Reserve Market Clearing Prices (RMCP) calculation will be based on a sum of the shortage shadow prices given the regional binding constraints. Additionally, CAISO's March 9, 2007 Local Capacity Requirements studies for 2008 based on North American Electric Reliability Corporation Performance Standard Category C<sup>6</sup> showed that for 2008, significant reserves shortages are expected in many local areas.<sup>7</sup> CAISO must designate regions in a way that does not create perpetual scarcity prices for certain suppliers of reserves since such design may create perverse incentives to create artificial scarcity conditions.

### **MSC Member Dr. Frank Wolak's Discussion Is More Suitable For Energy-Only Markets Than For California's Current And Planned Market Structure.**

MSC member Dr. Frank Wolak presented a discussion regarding the theory underlying SP. Dr. Wolak discussed examples of how scarcity pricing works in the sale of airline and sporting event tickets. CPUC staff believe that Dr. Wolak's proposal is more suitable in an energy-only market. In an energy-only market, when generation is in short supply it is important to allow spot prices to rise to a level that reflects scarcity, which will over time induce investment in new generation. The California market, however, has been moving into an energy plus capacity pricing system for several years, and CPUC staff do not anticipate any change in this course.

### **Conclusion**

CPUC staff support CAISO's current efforts to develop a SP conceptual design that will contribute towards generators' revenue adequacy and incent investment in resources where needed. The final CAISO proposal should balance between such interests and protecting California ratepayers from market failure. CPUC staff look forward to further discussions in this process.

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<sup>6</sup> Category C: The NERC standards require system operators to "look forward" to make sure that they safely prepare for the "next" N-1 following the loss of the "first" N-1. This is referred to as N-1-1. CAISO 2008 Local Capacity Technical Analysis: Report and Study Results, March 9, 2007.

<sup>7</sup> *Id.* Page 2, Local Capacity Needs