

## Comments Concerning Market Monitoring and Enforcement

In preparation for the FERC technical conference on 1/23/01 please find Southern California Edison's comments related to market monitoring and enforcement.

### **Background**

Southern California Edison (SCE) believes that Californian markets are dysfunctional, and that California faces supply/demand balance prospects that will likely perpetuate this dysfunction for the next several years. As a result, sales of electricity should be returned to cost-based rates. In this case, monitoring should consist largely of ensuring that suppliers are not paid more than approved rates. Cost-based rates should include term contracts as well as spot market sales. The monitoring function must guard against daisy chaining of power contracts by marketers to justify final prices based on what was paid by the intermediary. Rather, contract costs should be measured against the actual cost of production.

In the event that the cost-based rates are not implemented, SCE offers the following monitoring and enforcement suggestions. Note that these standards are not sufficient to ensure rates are just and reasonable. Other fundamental changes to market rules must be implemented and proven successful before presuming markets will produce just and reasonable rates. These suggestions for monitoring are premised on the market design as it existed in California in January, 2001.

#### **1) Who should monitor the markets?**

Monitoring should *not* be done by an agency that is either a) tasked with ensuring reliability or b) primarily concerned with its own continuation in the market. Monitoring under these conditions creates an inherent conflict of interest making effective monitoring and enforcement unlikely. Grid operators that require the cooperation/compliance of a generator may be reluctant to penalize or reprimand a generator. Operators of an exchange wishing to maintain influential participants similarly have a conflict in punishing participants that have violated exchange rules.

In part, the FERC authorized independent monitoring agencies for both the ISO, the Market Surveillance Committee (MSC), and the California Power Exchange, the Market Monitoring Committee (MMC), based on stakeholder concerns over this conflict. While FERC recognized the need for independent monitoring, FERC has not recognized the need for these monitoring agencies to have enforcement capability or that institutions such as the ISO and PX must be subordinate to such agencies. FERC also failed to implement suggestions from the existing independent committees. To effectuate change and prevent market abuses, any monitoring agency must receive more support from FERC.

To remove this conflict, **monitoring should be performed and enforced by an entity independent from the ISO** (and the California Power Exchange). Rather than

the part-time organizations of the MSC and MMC, new independent monitoring and enforcement agencies must have a full time staff dedicated to monitoring and enforcement. Such duties will require constant interaction with the ISO and PX on a real-time basis and will require not only immediate access to all market related information, but will also require the cooperation of the ISO and PX to perform its duties. As a result, the ISO and PX should have staff capable of interfacing with and supporting the requests of the independent enforcement agency.

**2) When should behavior be monitored and enforced?**

Market behavior should be monitored and enforced primarily ex-ante. That is, bids that have the potential of distorting market results should be excluded prior to running the markets. Damage to the market can be minimized if the markets are not initially distorted.

In addition, items such as scheduled maintenance, outage declarations and de-ratings must be monitored. The enforcement agency must have authority to penalize parties for intentionally providing false or misleading information related to unit status. Governor Davis recently proposed CPUC inspectors to monitor the causes of plant outages. The independent monitoring agency should coordinate with these CPUC inspectors.

However, the independent enforcement agency must also have the ability to look at results ex-post and determine if market manipulation has occurred. Such an ex-post review may be necessary to establish patterns of systematic abuses that have, on an individual basis, avoided detection prior to running the market.

**3) What authority should the monitors have?**

To reduce market abuses, the independent monitoring and enforcement agency must have the authority to monitor and investigate all operational and bid data, to monitor the amount of MWs controlled by parties through bilateral contracts, the authority to mitigate potential abuses prior to running markets, the authority to penalize parties that have abused the market, and the authority to change market rules and, when appropriate, authority to rerun markets or recalculate prices.

Currently, market monitors have scant authority to do anything but observe abuses and suggest remedies. This is wholly insufficient to deter, prevent or mitigate abuses. The future monitoring and enforcement agency must have the ability to mitigate bids before markets are run. Such mitigation should allow the exclusion of bids from the market, the adjustment of bids to some predetermined level, and the ability to submit bids when participants have inappropriately withheld bids from the market.

If a party has been found guilty of an abuse, penalties should be applied. Such penalties should not only retract any profits derived from the abuse, but should be sufficiently large to deter future abuses. Where possible, penalties should capture the impact to the market at large, not just direct costs associated with the abuse. For example, an abuser sells 100 MWs at an increased price of \$5/MWh. As a result, 3,000MW of load is forced to pay a price inflated by \$5/MWh. The abusing party should be penalized the cost to the market,  $\$5 \times 3000\text{MW} = \$15,000$ , not just the individual benefit derived from the abuse,  $\$5 \times 100\text{MW} = \$500$ .

Finally, the enforcement agency should have the authority to quickly change market rules on an emergency basis to prevent abuses. FERC would then review such actions and make a final determination as to appropriateness. In addition, the monitoring agency should have the authority to implement specific market rules/trading restrictions on individual parties found guilty of market abuses.

#### **4) What markets should be monitored?**

Monitoring agencies should be concerned with the delivered cost of wholesale electricity. Thus all factors that measurably impact the wholesale cost of electricity should be monitored. Factors include the cost at which electricity is sold to the wholesale market, the cost transportation for electricity (i.e. transmission pricing), the costs of variable inputs for marginal generation (in California this is typically burner-tip gas prices), and other variable costs (such as emission credits).

#### **5) What monitoring and enforcement is necessary in electricity and electricity transportation?**

In general, the reasonableness all bids for electricity should be measured against the actual cost of production. This necessarily requires that *all* bids from both originating sources (i.e. generators) and third parties (i.e. power marketers) must be associated with the physical resource that produces the electricity. Fuel limited resources such as hydro and emission limited peakers, as well as units claiming significant cost that cannot be readily verified (such as emissions) should be identified and behavior appropriately monitored and enforced. One possible treatment would be to disallow such units from setting market clearing prices.

Bids determined as abusive will either be mitigated or excluded from the market.

The following should be monitored:

- i) Unit bid prices relative to estimated variable cost of production. Actual variable costs, as opposed to opportunity cost or fixed cost recovery should be considered. Bids in excess of a threshold above estimated actual costs should be mitigated or rejected.
- ii) Significant variations in bid prices from a single unit. For example, consider a single 100 MW unit bidding into the real-time market. If the unit bids its first 50 MW at a price of \$50/MWh, then bids its next 40 MWs at

\$60/MWh, and its final 10MWs at \$750/MWh, such a bid should be identified as an attempt to manipulate market prices and should be mitigated.

- iii) Temporal changes in bids from the same unit without corresponding temporal changes in production input costs. For example, if a unit typically bids \$50/MWh but whenever a certain transmission line is derated the unit changes its bid to \$100/MWh, this should be identified as a potential market abuse.
- iv) Absence of bids or a reduction in the total MWs bid from a unit when market prices allow for profitable production.
- v) Variations in the bid price for electricity in sequential markets. For example, California runs sequential auctions for day-ahead energy, transmission congestion relief, and real-time energy. If, for example, a unit is willing to sell day-ahead energy for \$50/MWh, but then requires \$200/MWh for energy to relieve congestion or \$500/MWh to sell real-time energy, this should be identified as a potential market abuse.
- vi) On a unit basis, quantity of electricity that is scheduled as an export out of California and then sold back to California in a later sequential market. This could indicate “MW laundering” in which power is effectively withheld from the market via a fictitious schedule. The counterparty to such schedules should also be identified.
- vii) Ownership of Firm Transmission Rights on a path by path basis.
- viii) Systematic temporal changes in schedules. For example if party systematically submits day-ahead schedules and then withdraws these schedules hour-ahead, this should be investigated as a potential manipulation of energy and/or congestion markets. In addition, schedules that are submitted but are never delivered should also be monitored.
- ix) Total power controlled by a party through bilateral agreements. The control could be for title to electricity or other control such as scheduling, dispatch or bidding.

## 6) What monitoring is necessary in gas and gas transportation?

During most periods of the year, California receives marginal electricity from gas fired generation. Thus, changes in the delivered price of gas have a significant impact on the cost of production and the market price paid by California for electricity. In 2000, California watched as gas prices increase from less than \$3/MMbtu to a high of over \$50/Mmbtu, and costs for electricity increased by hundreds of millions of dollars. The importance of monitoring and mitigating abuses in the gas market cannot be overemphasized.

The following should be monitored:

- i) Ownership of gas transportation
- ii) Prices at the source of production, price of gas delivered to California (the implied price of transportation)
- iii) Ownership of gas storage
- iv) Participant specific use of gas storage

## 7) What monitoring and enforcement is necessary for ancillary services?

Bids determined as abusive should either be mitigated or excluded from the market. The following should be monitored:

- i) Amount of ancillary services controlled by each party within each zone
- ii) Bidding patterns and prices on a unit basis
- iii) For Spinning Reserve - comparison of capacity bid price with cost of production and market energy price. Capacity bids significantly in excess between the cost of production and the price for energy should be examined. Conversely, when the price of Spinning Capacity exceeds the profit a unit would earn by selling electricity, an absence of bids (or high bids) from such a unit should be investigated.

## 8) What monitoring is necessary in other input and quasi-input costs?

The monitoring agency may have difficulty quantifying certain production costs. Units that have such costs require special treatment. For example, during the summer of 2000, NOx emission credits in the South Coast Air district reportedly reached levels of over \$50/lb. Peaking units can produce as much as 5 – 6 pounds of NOx per MWh generated, and thus some argued that production costs for these units exceeded \$300/MWh for emissions alone. However, the emission market is illiquid and relatively non-transparent and the program itself has complex rules including an annual emission credit allocation at no added cost to the generator and provisions for borrowing credits against future allocations. The South Coast Air Quality District further obfuscated the price (both actual and expected) of emissions in a December 2000 abatement order with a California generation owner. Under the order, rather than going to the market and paying \$50/lb for NOx credits, the generator must install emission controls, pay a penalty for emission credits equivalent to about \$8/lb of NOx, and can borrowing against future allocations to prevent future violations. In short, no definitive method for translating the cost of South Coast NOx emissions into a cost of production exists.

In instances where input prices cannot be accurately assessed, special monitoring rules must be developed. One possible rule would be to prohibit these units from setting the market clearing price (but units could still be have the opportunity to receive the market clearing price).

The following should be monitored on a participant and unit level:

- i) Allocation of NOx and other emission credits
- ii) Monthly consumption of emission credits
- iii) All purchases and sales of credits, and the price of such transactions
- iv) Other unit specific restrictions related to emissions
- v) Other difficult to quantify costs that have a significant impact on a units production cost or availability