



To: Market Simulation Group

Date: May 25, 2012

The Market Simulation Group (MSG) of the University of California Energy Institute, working with the California Air Resources Board, has requested input from stakeholders to inform an assessment of design features of the California's cap-and-trade market for greenhouse gas (GHG) emissions. The analysis of MSG is based on an emission allowance market simulation model, examining the potential for market power and other strategic behavior in the GHG emissions market.

San Diego Gas & Electric and Southern California Gas' comments are directed toward aspects of the ARB cap-and-trade design elements that can be tested in such a simulation model, trying to identify factors that can potentially detract from the efficient and competitive operation of the GHG emission market. So, concerns about market monitoring of secondary or derivatives markets are not addressed since ARB has not indicated the role of the market monitor in those markets and they are probably not addressed in the market simulation model.

(1) Aspects of the Market Design that Could Detract from Market Efficiency

Thin markets. ARB is allocating allowances to a number of parties and Quebec may be doing the same, but only a portion of those allocated allowances are consigned for auction. On the demand side, non-compliance entities that want to trade in the market will be acquiring allowances to sell later (or for environmental groups just to hold). The holding limits established allow non-compliance entities, with a zero compliance obligation, to hold as many allowances as a compliance entity with a large annual compliance obligation.

The concerns on the demand side are whether the markets are thin enough to allow non-compliance entities to drive the price up artificially through hoarding. These could be financial traders trying to create a price squeeze at the end of a compliance period, or clean tech entities trying to drive up the short-term GHG price to influence perceived cost effectiveness to obtain long-term contracts for their technologies.

On the supply of allowances, for regulatory reasons or tax reasons, entities receiving allocated allowances at or near the full obligation may choose not to sell their allowances even if not needed for current compliance, preferring to bank them for future compliance. Because there is no borrowing, this asymmetry makes the market even thinner. Price spikes in the SO₂ market were exacerbated by reluctance of electric utilities to sell in the market. Requiring consignment of a small portion (5-10%) of those allocated allowances for entities receiving near 100 percent of compliance obligation may benefit market efficiency. The lack of timely adoption of offset protocols by ARB will also place a limitation on supply that may create an artificially thin supply.

Thin markets are also a greater concern as financial products develop. Market participants could take large financial positions, and then attempt to manipulate the physical market to benefit their financial position. An example would be for an entity to purchase financial swaps that settle against the auction clearing price, such that if the auction price is high the trades would be more profitable. Then the same entity may attempt to bid in the auction in a manner to cause the prices to settle at a high level.

All of the concerns are magnified if the price containment reserve is depleted.

Unnecessary Uncertainty and Interaction with Electricity Market. In the Energy Crisis, there was quite a bit of interaction between the NOx RECLAIM market and the electricity market and debate on which market was driving the price in the other market. With a great deal of lack of clarity on the resource shuffling provisions and sales of power into California electricity markets at points outside California, there is uncertainty created by the cap-and-trade regulation that could reduce the efficiency of the operation of both the electricity and the ARB cap-and-trade markets.

(2) Incentives to not Comply Completely with the Market Rules

Explicit or Implicit Collusion. The obvious and most damaging factor to an efficient market would be collusive bidding by entities or implicitly sharing/coordinating/signaling of bidding strategies in the auctions. A second type of collusion would be a bid by non-compliance entities to evade the holding limit rules by collusively acting together to control a significant block of allowances.

False Reporting. Entities could choose to inflate/deflate the price of bilateral transactions when reporting to ARB in the transfer process or create round-trip sales at artificially high or low prices that could affect market if reported by ARB directly or in some aggregated index.

Delay in Release of Auction Results. With 7 days between the auction and the results of the auction, the efficiency of the secondary market would be impacted if information was leaked to some parties as to the auction clearing price prior to all other market participants. Such a lengthy period before releasing auction results creates a significant incentive to obtain the information early.

Electricity Imports. Another concern, but that may not impact the market simulation, are the issues surrounding importers of electricity into California. One issue is the potential for electricity sales without purchasing required allowances. There is a question as to whether ARB can adequately monitor sellers not located in California selling into California's electricity market. The second issue is where the market rules are unclear, such as with resource shuffling, where it is ambiguous which transactions are allowed and which are not. It is difficult to comply with market rules that are subject to interpretation and litigation.

(3) Effectiveness of Mechanisms and Process for Monitoring Market Performance and Compliance with the Market Rules.

Since we have seen nothing from the firm retained to be the cap-and-trade market monitor on this issue, we have no comment on the mechanisms and process for monitoring market performance and compliance with market rules.

Submitted by David T. Barker
on behalf of San Diego Gas and Electric Company and Southern California Gas Company