

A Commentary on Electricity Price Caps in California

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On July 11, 2002 the FERC overturned a sharply lower price cap issued earlier in the week by the CAISO, which used a complex formula linked to peak prices during power shortages to cut its price cap by nearly 40 percent on July 9 to \$57.14 per MWh, and then on July 10 to \$55.26 per MWh. These low caps made it difficult to get power to where it was most needed. It was also hard to justify running older, less efficient plants at these prices.

The FERC returned the region-wide cap on Western power prices to its previous level of \$91.87 per MWh, which will remain in place until September 30. The agency said it overturned the state agency's lower cap because the caps "could cause severe supply disruptions...We act now because we cannot expose customers in California and other Western states to the *risks of a low price cap.*" (emphasis added)

State officials welcomed the move, realizing that these higher price caps will allow less efficient plants to come on line at least during critical periods. Despite an increased effort of bringing new generation capacity on line, about half of California's power generating fleet is at least 30 years old. In addition, the state suffers from transmission bottlenecks. Because of the "continued problem of lack of infrastructure in California we felt we needed to take this action sooner rather than later," said Commissioner Brownell.

The inadequacy of the generation and transmission infrastructure is a serious problem in California. In a competitive market, prices are expected to be signals to suppliers for building new generation capacity, to system operators for transmission system expansion, and to consumers for conservation. The FERC appears to understand the importance of price signals by recognizing the *risks of a low price cap*, but this is only partially helpful. Because, the agency still distorts the price signals by continuing to set price caps, and the usual challenges of price caps persist: what is a low price cap? How do we know that the new price cap is not too low? Or, perhaps, it is too high! And, although there is deadline for the caps, the history indicates that extension of "temporary" regulation is quite common.

While we were asking these questions, as it was trying to help us make our point, FERC comes up with a new price cap of \$250 per MWh starting this fall. Apparently, FERC believes that previous price caps were *too low*. Although the goal was still the same, i.e., to ensure adequate supplies, state officials were not as welcoming this time. Apparently, California officials believe the new price cap is *too high*.

Regulators in almost all regulated industries have been notorious for missing the price target. In fact, isn't this inability to get the price "right" and the associated market inefficiency one of the main reasons for restructuring of airlines, railroads, trucking, telecommunications, oil and gas, and now the electric power industries? To paraphrase FERC Commissioner Massey, the regulators have to be ahead of market players not only to monitor market behavior but also to ensure market efficiency. This is a mighty challenge! Why make this challenge even bigger by going back to micromanagement of prices?

The difficulty of these regulatory tasks and the inefficiency of the results have been learned by experience in the oil and gas industry when the price controls of the 1970s failed. The subsequent restructuring of the industry led to fairly well functioning markets for oil, products and natural gas. Today, many associate price volatility in the electric power industry with higher prices. But the statistical evidence from the oil and gas sector indicates the opposite: although prices have become more volatile after restructuring, the long-term average prices declined despite OPEC and "exhaustibility" of these resources.

Yet, price caps remain quite popular in the electric power sector mostly because electricity is perceived differently (as a "right," or a "public service") and price spikes (i.e., volatility) are unacceptable after so many years of stable prices. Electricity is a "political commodity" on its way to, perhaps one day, becoming a "market commodity." Consumers are happy (and hence the politicians) with the stability brought about by the price caps but, the resulting regulatory uncertainty interferes with the timing of new infrastructure. What will the regulators do next? When will they change the price cap again? What will be the level of the price cap? All of these questions require answers that are crucial for ensuring the commercial viability of a new power plant.

Admittedly, electricity is a little different from oil and gas. First, it cannot be stored in commercial levels. Second, there are no liquid long-term, national futures markets (although companies have made good use of OTC markets, developing customized products). Nevertheless, the statistical evidence from relatively mature competitive electricity markets such as PJM and UK indicate that prices, though more volatile than oil and gas prices, also revert to the mean, albeit more slowly. Moreover, the volatility has provided valuable information for the calculation of the option value of peaking plants, which are the difference between a healthy reserve margin and shortages.

There seems to be two crucial observations from other restructured markets, including those for other energy commodities, which require constant repetition.

1- Volatility is not the same as market manipulation. Market manipulation happens and when it happens, it can definitely lead to higher prices as well as higher volatility. In that case, the regulators should be as vigilant as they can in order to punish the perpetrators. However, they also need to ensure that the market rules are written clearly and applied fairly to create an open, fair and competitive market. But, not all volatility is evidence of market manipulation. In essence, volatility is a summary of the fluctuations in prices reflecting the fluctuations in demand-supply balance. As such, it is an invaluable signal to market participants and most efficient way of re-establishing market equilibrium.

2- Price stability is not the same as market efficiency. History teaches us that price caps almost always fail. The regulators are either too late or too quick. The cap is either too high or too low. The result is inefficiency. Despite the sales job done by politicians everywhere to represent the single most important reason for restructuring as lower prices, it should never be forgotten that the primary goal of restructuring is to increase efficiency and to shift risk from public to private domain where it can be dispersed across numerous actors in various market positions. Increased efficiency will most likely, but not necessarily, lower prices; but, more importantly, implies optimal allocation of the society's scarce resources and hence provides overall savings in the form of lower opportunity costs. Energy and in particular electricity is a key input to economic activity. Lower costs to commercial and industrial customers are much more important for the society than lower prices to residential users as lower production costs will not only be reflected in lower prices of other goods and services but also increase the competitiveness of the industry globally. The failure to think past the first level of prices and to see all these multiplier effects distorts policymaking and hurts the society in the long-run.

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