TESTIMONY

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Power prices in California are too high because the power market has a real shortage caused by serious structural flaws in the market design and in its implementation. When the state set up its partially deregulated market through its 1996 deregulation legislation, California did not follow the example of other power markets that use rules to create a market for capacity. In addition, California's complex siting and permitting processes have created formidable barriers to the development of the new generating capacity that the state so badly needs. Quite simply, California ran out of capacity because it did not set up a market to pay for it or a process to enable it. A third flaw in California's market design was the use of price caps in its retail power rates. As scarcity drove up wholesale power prices in 2000, the majority of customers in California continued to consume power at retail price levels frozen below 1996 levels. The retail price caps distorted the market by increasing demand and driving price spikes higher. Yet, utilities remained obligated to provide all the power people wanted at capped prices. As a result, price caps had the unintended consequence of driving Pacific Gas and Electric, California's largest utility with $22 billion dollars of assets, from an "A" credit rating to bankruptcy court in less than four months.*

Price caps—although well intentioned—usually distort the market and create unintended consequences. We have already seen this in California, and the history of broadly applied wage and price controls or targeted controls on energy prices like natural gas in the 1970s is also a record of distortions and unintended consequences. Price controls always create unintended consequences and shift activity into unproductive directions. We can be sure that price caps on power in

California today will do one thing: prolong California's agony. They will not add one watt of generating capacity.

Price caps may sound simple in theory. In fact, they are anything but simple. The bureaucracy to administer them always becomes many more times complicated than originally expected. Controls will create confusion. There will be immense arguments over how to set them and over how they are implemented and enforced–and by whom. What they will certainly and absolutely do is discourage new investment. As it is, investment is already being driven away by the fevered political rhetoric, the variegated threats, the prospect of state takeover, the chaotic policies the state has already applied, and the amazing but evident willingness of the state to enforce policies that drove its largest utility into bankruptcy–and are turning the state's surplus into a huge deficit. This is not a state that is creating an environment favorable to new investment or, more fundamentally, serving its citizens. Price controls–and the rancor and confusion that will accompany them–will make a bad situation much worse.

Many people want price caps because they believe that power suppliers are withholding capacity to drive up prices in California. If this were true, then price caps would limit their gains. Further, this argument goes, if we could just get them to knock it off, then this artificial shortage would end and power prices would drop back down to reasonable levels. Why do so many people want to believe in market power? Putting the blame on suppliers diverts blame from the basic design flaws and weaknesses in the California power market—and the failure to address those flaws and weaknesses. Of course, as long as we continue to disagree on the cause of the problem, a consensus on the solution will remain elusive. Even worse, if we misdiagnose this problem as one of market power, then we will pursue solutions that at best do not fix the problem and at worst, have the potential to further distort the market and create new problems.

An examination of the California power market does not support the market power hypothesis. Power generators have market power if they can act to set prices. The California power exchange began operation in 1998. In anticipation of the new competitive power market in the West, CERA developed a computer model to analyze the interactions of supply and demand in determining wholesale prices. When we simulate

the western power market in 1998 and 1999 and compare the results with the actual market-clearing prices, the evidence is quite compelling. During this period the California power market was in a demand and supply balance, and we observe that wholesale power prices cleared at the level of short-run operating costs—fuel, environmental costs, and other operat ing and maintenance costs. Over this time frame, the California energy market was doing just what it ought to do: efficiently determining the utilization of power plants to meet demand at each hour with price signals reflecting the operating costs of rival producers.

We must confront the fact that the industry structure that delivered a competitive outcome in 1998 and 1999 did not change in 2000. What did change was the demand and supply balance. All the heated political accusations do not change that blunt fact. Since no significant new power generating capacity entered the California power market in the past several years, a shortage occurred in 2000 because demand growth finally outstripped supply.

California instituted its partial and contradictory deregulation—and I emphasize partial and contradictory deregulation—in the middle 1990s, when the state was coming out of an economic downturn and had considerable surplus capacity. In retrospect, it is clear that an underlying assumption was that the surplus would persist and that the future would take care of itself. That was okay until the state started to grow again. Between 1996 and 2000, the state's economy grew by 29 percent. Electric power demand grew by 24 percent. Yet, over a ten year period, no new power generating capacity was added in the state. This is a simple recipe for a shortage—and that is the plight that California finds itself in today. We estimate that the state, with normal weather conditions, has about 10 percent less generating capacity than it needs to meet peak demand periods this summer.

Any market that has a severe shortage of a product that consumers value highly and for which they have few substitutes will end up with many buyers bidding up scarce supply. In other words, a "shortage premium" will arise. It is this bidding up process by the buyers that creates the shortage premium. If we have a wet hydro year in 2002, the shortage will temporarily disappear. Under such conditions, we fully expect the market structure to deliver prices reflecting

short-run costs without a shortage premium. On the other hand, if suppliers do have market power, then the incentive to exercise control over prices is even greater under such conditions than it is today and prices will remain high. Time will tell—the past already provides clear evidence that this is a shortage premium and we expect the future will too.

We must recognize that when supply and demand were in balance the competitive energy market in California produced prices with a level and volatility that was half of what was necessary to support new power plant investment. During 1998 and 1999 the annual wholesale price of power was between $14 and $30 per megawatt-hour. The evidence is clear—the energy market alone in California did not provide a timely price signal for new investment. As a result, the shortage was both predictable and preventable. As early as April 1997 we wrote in our analysis of California's new market: "There is no reliable mechanism [in California] to pay for the fixed and operating costs of new generating facilities, since the means for doing so (e.g., long-term contracts, high ancillary services payments) are unlikely to be widely available for several years given the rate freeze and above-noted trend toward low PX prices. That is likely to lead to extended periods of low prices followed by periods of very high prices, as supply shortages and surpluses develop. Price volatility will not be conducive to a smooth transition to competition."*Other markets that had capacity markets along with energy markets—like Texas and New England—were able to attract more than enough new power plant investment in just a few years to avoid similar shortages. One of the sad features of the current debate is the failure to examine how better-conceived deregulation policies are working in other states.

Price caps will not add capacity or reduce demand. Price caps provide a limited tool to deal with power prices that are too high. First, only half of the power produced in the western power market is subject to the Federal Energy Regulatory Commission jurisdiction. FERC price caps will create incentives to run controlled power through uncontrolled sellers to end-run the patchwork coverage. Second, time and again we have seen price caps set in such a way as to withdraw supply. Current proxy price caps are set based on operating costs using an average fuel price estimate. As a result, when generators face a higher-than-average fuel price, they have the perverse incentive not to operate. This point is often overlooked. But it

is very dangerous to overlook it at a time when California is confronted by the prospect of blackouts. This indicates the type of distortion to expect from price caps.

We must face the facts that California competes with other power systems around the world to attract power plant investment and that price caps discourage investment. Remember: the power business is one of the most capital-intensive businesses in the US economy. California remains a highly flawed power market in which the only way to recover costs above short-run operating costs is through a periodic shortage premium. By adding price caps to the current flawed California market design, investors will see no way to recover the full costs of a power investment through the market. California cannot afford to continue to bring forth power development by guaranteeing payment through long-term power purchase contracts from the Department of Water Resources. The state's record in long-term power contracting is abysmal. Recall that half the stranded costs in California that drove the state to deregulate were due to long term power contracts the state mandated under the Public Utility Regulatory Policy Act.

California still has not fixed its market to create a positive investment climate for power development. To assist California, the FERC should insist on a minimum set of structural elements in its wholesale power market design. It will be a mistake to make price caps the centerpiece of a federal response to the California power shortage. They would make a bad situation worse, and they do nothing to fix the flaws that so desperately cry out for solution.

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