

SOME REFLECTIONS

The story of the California electricity and financial crisis is far from finished. At the time of this writing, Pacific Gas & Electric is still struggling to develop a plan to emerge from bankruptcy that is acceptable to both the judge and its creditors. Southern California Edison is regaining financial health but still faces obstacles. Various state agencies are attempting to renegotiate the long-term contracts and/or to challenge the contracts in court or through the FERC. The CPUC and the DWR are discussing options for issuing long-term revenue bonds. Wholesale price mitigation measures established by the FERC are scheduled to expire in September. Litigations spawned by the crisis are working their way through the courts. The fall of Enron has brought into question the viability of some electricity contracts. In addition, Enron's fall has led commentators to blame that corporation for its roles in electricity market restructuring and the crisis. The FERC recently initiated a fact-finding investigation into whether Enron or any entity manipulated electricity or natural gas prices (or "otherwise exercised undue influence over wholesale prices") during the crisis. The CAISO is developing proposals for correcting flaws in California electricity markets. The FERC continues to promote and support regional transmission organizations. Other regions, including the Northeast, are successfully operating restructured electricity systems. Texas is moving forward with its deregulation. The House Energy and

Commerce subcommittee is working on legislation to promote deregulation. Researchers are striving for deeper understanding of western electricity markets, further sorting out the underpinning of the crisis and working to design better electricity market structures.

Even though the story is far from final, it may be valuable at this point to reflect on lessons that emerge from the sad history, even though any lessons will be, by necessity, somewhat subjective.

Unfortunately, one message repeatedly communicated is that the California experience proves that electricity deregulation has been a failure in California, and by extension, is likely to be a failure elsewhere. For example, Governor Davis stated, "But we must face reality: California's deregulation scheme is a colossal and dangerous failure. It has not lowered consumer prices; it has not increased supply. In fact, it has resulted in skyrocketing prices, price-gouging and an unreliable supply of electricity. In short, an energy nightmare."¹ Governor Davis has even used the California experience in Mexico to condemn any move toward privatization of the Mexican electricity system. Governor Davis during early December 2001, speaking in Mexico, urged Mexican authorities to keep complete governmental ownership and control of the electricity system: "Don't hand over your electricity infrastructure to private interests, unless you have 15 percent more energy than you need. In private meetings, [Mexican] President [Vicente] Fox and I agreed on this."²

Yet a fair assessment of the California experience cannot reach such an anti-private sector conclusion, nor can it lead to a negative conclusion about the viability of electricity system deregulation.

First, as has been well documented by researchers such as William Hogan³ and by Robert Crow,⁴ electricity system restructuring, including deregulation, has been very successful in other nations and in other regions of the United States. Successful deregulation has been proven possible, even though California's particular system is flawed and has been managed terribly.

¹January 8, 2001, State of the State Address.

²Quote from UPI wire: <http://www.upi.com/view.cfm?StoryID=14122001-070000-9884r>. Story by Ian Campbell, UPI Economics Correspondent.

³For example, William W. Hogan, "Electricity Market Restructuring: Reforms of Reforms" (Harvard University: May 25, 2001).

⁴Robert Thomas Crow, "Not Invented Here: What California Can Learn from Elsewhere about Restructuring Electricity Supply" (Stanford Institute for Economic Policy Research Working Paper, December 2001). Available at <http://siepr.stanford.edu/papers/pdf/01-10.html>.

In California, deregulation has set the stage for widespread wholesale market competition and adequate electricity-generation capacity. California's restructuring has resulted in a dramatic increase in the number of new electricity-generating plants proposed, approved, and under construction. Deregulation is having the desired impacts on wholesale electricity supply.

The contention still seems to be that deregulation caused the electricity crisis. However, a fair examination of the western electricity crisis shows this contention to be invalid. The crisis stemmed primarily from two factors. For over a decade, population growth and economic growth in the western states steadily increased electricity consumption, but very little new electricity-generating capacity was added. As a result, by the year 2000, western electricity markets had become very tight even under normal conditions. But 2000 and early 2001 were not characterized by normal conditions. Exceptionally low rainfall in the Pacific Northwest and Northern California led to sharp temporary reductions in hydroelectric generation that triggered the electricity crisis. California deregulation played only a minor role, if any at all, in creating the crisis.

The financial crisis, on the other hand, was the direct result of California regulatory actions. It was not the result of *deregulation*, but rather of overly stringent *regulation*. Even though all municipal utilities and investor-owned utilities throughout the entire West faced the electricity crisis, investor-owned utilities located in California were the only ones that experienced the financial crisis.

Two regulatory rules forced California investor-owned utilities into a financial crisis. First, these utilities had been precluded from using long-term electricity purchase contracts to protect themselves financially from wholesale market price spikes. This lack of protection was in stark contrast to practices of other utilities: investor-owned utilities in the other western states and municipal utilities throughout the West, including California. The regulatory-imposed absence of financial protection set the stage for the financial crisis.

Second, once electricity prices on wholesale spot markets skyrocketed, the California governor and the CPUC refused to allow the retail price increases needed to keep the investor-owned utilities financially viable. The legislature even reestablished retail price control for San Diego Gas and Electric. The regulations

forced the investor-owned utilities to purchase electricity at very high wholesale prices and to sell the same electricity at retail prices controlled to be far below purchase costs. These utilities were required to sell as much electricity as their customers wanted to buy, even though utilities were losing money on all their sales. The CPUC never allowed any increases in retail electricity prices until after the largest two utilities had been drained of all financial assets and of all borrowing capacity and were on the verge of bankruptcy. Only then did the Commission approve any retail price increases. However, the initial increase was far too small to balance sales price and purchase costs. Thus retail price regulation, not deregulation, was fundamental to creating the financial crisis for the utilities.

Once these utilities had become so credit unworthy that generators and marketers were no longer willing to or required to sell them electricity, the State stepped in to buy electricity on their behalf. The State itself began buying electricity at high wholesale spot prices and selling it at the low regulated retail prices. Buying high and selling low was just as costly to the State as it was to the investor-owned utilities. During the winter and spring of 2001, this program completely drained the State Treasury of its projected \$8 billion surplus. This ill-conceived scheme was not the result of deregulation, but was the deliberate choice of the State of California. In short, the financial crisis was *not* the product of deregulation, but rather was the product of overly aggressive and inappropriate regulation.

The California experience should make it clear, once again, that actions that economically isolate the supply side of markets from the demand side create major problems. In California, retail price control was the primary regulatory mechanism that isolated the demand side from the supply side of the electricity markets. Such price controls typically reduce system responsiveness and eliminate incentives for consumers to adjust to changing economic conditions. The lesson had been brought home forcefully to the United States during earlier energy crises, including 1973–74 and 1980–81 when gasoline price controls and governmentally imposed oil allocation controls led to hours-long gasoline lines. Yet California political leaders, ignoring lessons of the past, maintained rigid retail electricity price controls until the bitter end.

Maintenance of retail price controls thus discouraged energy demand reductions—energy conservation—by consumers. However,

energy conservation was California's best hope for forcing wholesale prices to decrease. Thus, California's decision to keep retail prices at artificially low levels allowed wholesale prices to remain at painfully high levels. Consumers did save money in the short run through lower rates, but will pay all of the high wholesale costs through long-term increases in the retail rates. Therefore, public officials, by isolating consumers from wholesale market conditions, have brought long-term harm to California consumers of electricity as well as to California taxpayers.

The California experience also brought into sharp focus the importance of managing the risks associated with implementation of any policies, especially those that radically change the system. California electricity restructuring was just such a policy. It radically changed regulation, altering an electricity system that itself has never been free of economic risk. The history of the electricity system should have made it clear that one cannot confidently predict changes that significantly influence generation costs. Cost of fuels change, as has occurred for natural gas, oil, and coal. Public acceptability of generating technologies can vary over time. Hydroelectric generation depends entirely on rainfall, the amount of which can vary sharply from year to year. Prediction of electricity demand growth is at best an imperfect art, and understanding circumstances in which market power might be exercised—in fact, even determining whether market power is being exercised—is fraught with error. Risks exist and they must be managed.

Given the significant economic risks, the regulatory system should distribute those risks appropriately. However, the restructuring left investor-owned utilities bearing a disproportionate share of the risk. Subsequent regulatory implementation made matters worse. Thus, with reductions in available hydropower, the financial consequences of soaring wholesale spot market prices were borne disproportionately by the California investor-owned utilities.

It is impossible to expect that policy choices will eliminate system-wide risks. Risks will always remain. Nevertheless, one can expect that good policy choices and regulatory implementation will fairly distribute those risks and that the regulatory system will not disproportionately concentrate risks on a limited number of companies, particularly if those companies are incapable of bearing the entire risk. Unfortunately, that was not the case in California.

The California experience highlights something that is well known to everyone who has managed, participated in, or observed

large-scale changes in complicated organizations or economic structures. Any major restructuring of such important systems will continue to require modifications well after the initial changes have been implemented. System operation requires monitoring and may require wise and strong leadership to identify and implement changes that are needed after unintended adverse consequences of the system change become apparent.

California's electricity system includes both complicated organizations and complex economic structures. The restructuring was fundamental and sweeping. No one was able to predict with complete certainty how all the changes would work. Thus, it was important that the State carefully monitored important features of the system operation.

No one should have been surprised to find important unintended adverse consequences of the electricity system restructuring. No one should have been surprised to find system flaws that required changes. And no one should have been surprised to hear that the Chief Executive of the State needed to provide the leadership to assure that the appropriate changes were implemented.

In California, the governor is the Chief Executive Officer of the State and thus had the leadership responsibility to assure that flaws in the changed electricity regulation system were identified and corrected early enough to avoid a crisis. At least, the governor could have corrected flaws enough to avoid the most damaging consequences of the crisis. The California experience shows the real lasting harm that can befall when the governor fails to take the appropriate role.

The California experience also highlights the dangers of failing to differentiate between short-run issues and long-run issues. California, like all of the western states, faced a short-term electricity crisis. Although during the crisis it was impossible to predict its exact duration, available information about new generation capacity under construction made it clear that the supply shortage, at the root of the crisis, would be of relatively short duration. During the crisis, it was also possible to foresee that any problems of market rules would become far less important once the anticipated new generating capacity was on-line. Thus, the short-term nature of the electricity crisis was predictable even during the crisis.

It was also predictable that the financial crisis, if allowed to proceed, could have long-term ramifications and that long-term contracts for electricity purchases at prices far exceeding the

expected electricity prices would have long-term adverse financial ramifications. Thus, there were foreseeable long-term problems.

It is commonplace to note the need for careful differentiation between short-term problems and long-term problems. Careful differentiation between short term and long term helps ensure that new long-term problems are not created as “solutions” to short-term problems. Unfortunately, the California State Government did not seem to so differentiate. Thus, the State negotiated long-term contracts ostensibly aimed at the short-term crisis; these contracts quickly became long-term problems. The failure to implement rational short-term solutions, such as temporary retail price increases, implied that the State missed those solutions that could act quickly over a short time period, allowing the short-term challenge to become a crisis and leading directly to the long-term financial problems. Although reasonable people can disagree about the appropriate policy measures, appropriate matching of the time scale of the solutions to the time scale of the problems would have been far superior to those actions taken in California.

As a final reflection, it is important to recognize that California has had severe economic and policy problems in the past and will have problems in the future. But California has a robust economy, boasts a diverse and vibrant population, provides technological leadership for the world, and remains a wellspring of new ideas. California will survive the problems, both the short- and long-term problems, associated with the electricity and financial crises. And in decades to come, perhaps the lessons learned from this crisis will help California to avoid similar mismanagement.