# CALIFORNIA'S ENERGY CRISIS: IMPLICATIONS FOR PUBLIC FINANCE AND TAXATION

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MUCH OF THE DISCUSSION SURROUNDING THE electricity crisis in California has focused on the flawed mechanics of the deregulation experiment and the underlying supply and demand imbalances that drove the crisis. Clearly, these are important issues that are being addressed in a variety of forums. The failed deregulation episode, however, has had broader ramifications that touch on public finance, in particular, the critical role that stable institutional frameworks and regulatory schemes play in a well-functioning market system. Less attention has been focused on these aspects of the crisis and their longer term consequences. In the first part of this paper, we examine the energy crisis through an institutional lens, highlighting the role that the key decisions to defer price increases at the retail level had on creating an intermediation crisis, transforming the institutional framework that supported the energy market, and creating a long-term burden for the California economy. In the second part of the paper, we review the consequences of the energy crisis for the property taxation system in the state.

## INSTITUTIONAL TRANSFORMATION

From June 2000 to June 2001, the California energy market was under siege. Key policy decisions that were made, in very difficult circumstances, by Governor Gray Davis and the California Public Utilities Commission (PUC) led to a remarkable institutional transformation, with the bankruptcy of one major utility and the insolvency of another, and the establishment of a major state presence in the market for electricity.

The tale begins in September 1996, when Governor Pete Wilson signed the bill that launched California's deregulation experiment. At the time, primary concerns in California and across the country were the effect that anticipated price *decreases* would have on marginal or unprofitable plants and the resulting impacts on shareholders and stakeholders. Much of the debate focused on the treatment of "stranded costs": prior, legitimate investments, including binding power contracts, that would lose value if price competition lowered electricity rates substantially. To ease the consequences of stranded costs, the legislation included a competitive transition charge. It was anticipated that retail rates, which were frozen, would exceed wholesale power rates substantially, thus enabling the utilities to recover their stranded costs. The major utilities also were required to divest themselves of their power plants–other than nuclear and hydroelectric–and proceeds from these sales also could be used to recover stranded costs.

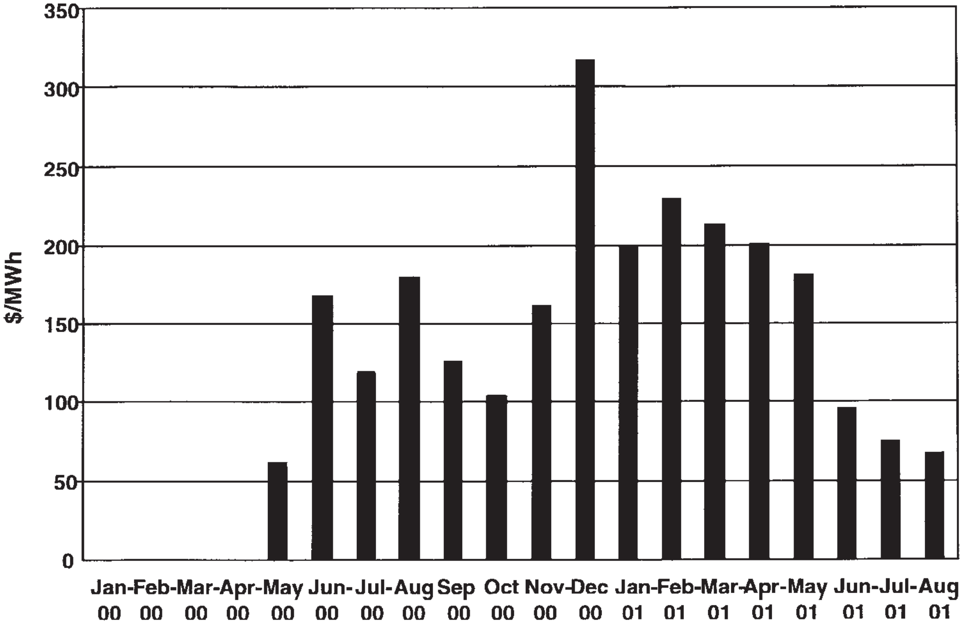
Perhaps the first early warning signs that wholesale prices might rise in the near term was that the sale prices for the divested power plants sharply exceeded their book value, rendering moot the question of stranded costs (Sexton and Sheffrin, 2000). According to the California Energy Commission, the sales of plants totaled $3.8 billion, which exceeded their aggregate book value by a multiple of 1.75.[1]

### The San Diego Story

As a consequence of these sales and transition payments, San Diego Gas and Electric (SDG&E) was able to accrue sufficient funds to eliminate its stranded costs and was free to end the freeze on retail rates in 1999. In that summer, there were temporary price increases in the face of wholesale rate increases, but these soon abated. In the spring of 2000, however, wholesale prices started to climb sharply. Figure 1 provides monthly data for the average costs of electricity for California, indicating the sharp change in the economic environment. Customers of SDG&E experienced price increases while the customers of the other major investor-owned utilities were sheltered because of the retail price freeze. Pacific Gas and Electric (PG&E) and Southern California Edison (SCE) began to incur expenses for power that exceeded the rates they could charge consumers.

The San Diego situation attracted the most attention because retail customers were facing large rate increases. After prolonged negotiations and

*Figure 1:* **Average Monthly Cost of Electricity in Source: California**




many false starts, PUC in September 2000 imposed a three-year rate cap for customers of SDG&E. In retrospect, the decision to re-impose retail rate caps in San Diego was a crucial development. This set the tone for future responses: price increases and the direct pain for consumers were to be deferred. As a result, there were no direct price incentives for ratepayers to curtail consumption. Moreover, with soaring wholesale rates and frozen retail rates, the utilities were losing money at a rapid rate.

### The Crisis Builds

Two key factors contributed to the decision to defer rate increases. First, there was political expediency on the part of Governor Davis and his appointees on the Public Utilities Commission. Second, there was some hope for a deus ex machina solution from Washington and the Federal Energy Regulatory Commission (FERC). Reports from the Market Surveillance Committee and the Department of Market Analysis of the California Independent System Operator clearly indicated that the wholesale market was dysfunctional and that power generators were exercising excessive market power. From May to November 2000, estimates of monopoly rents for large in-state suppliers and importers exceeded $5 billion (A. Sheffrin, 2001). Raising retail rates in this environment seemed unjust, so it was natural to appeal to FERC. This strategy ignored the underlying gap between retail and wholesale prices.

In the fall, the utilities called for rate increases to close this gap and stop the hemorrhaging. No actions were taken. The utilities also wanted to enter into long-term contracts and bypass the California Power Exchange, the one-day-ahead market in which they were required to purchase power. The utilities were given permission to enter into long-term contracts, but PUC wished to retain the authority to review them. The uncertainty created by delayed review effectively curtailed the use of long-term contracts. Thus, through the fall, the utilities continued to purchase power in the spot markets, at a price far above what they received from ratepayers.

As the debts of PG&E and SCE began to accrue, power suppliers began to become concerned about payment. The situation reached a crisis in December 2000 when, with the potential insolvency of the major utilities in California, several suppliers began to refuse to sell to PG&E and SCE, even though power was available, albeit at high prices. Overall, the major utilities had accumulated debts of approximately $13 billion from their required power purchases.

The state had reached a full-fledged financial intermediation crisis, transformed from a tale of demand and supply to one in which the creditworthiness of purchasers was the driving factor. With the California ISO unable to purchase power, the California Department of Water Resources (DWR) stepped in on behalf of the utilities in December and early January. This department historically had some limited involvement in power purchases, as it was a power generator and often bought and sold electricity. The funds used to buy power were from a state account funded by water users, not general tax funds. DWR, however, did expect to be reimbursed for these purchases. The governor's office claimed it was not aware of these actions when they occurred.[2]

### The State Response

By January 2001, Governor Davis recognized the full-fledged financial intermediation crisis. The DWR was authorized to make purchases on behalf of the utilities, and the governor proposed the first of numerous initiatives to restore the creditworthiness of the major utilities. Among other ideas, he suggested that the state purchase the transmission lines from the utilities at prices above market in order to infuse cash into the utilities. Later proposals involved the utilities issuing debt secured by rates charged to electricity purchasers. While there was general agreement that restoring the utilities' financial health and letting them return as direct power purchasers would be preferable to having the state be the ultimate purchaser, there were important obstacles in the way of an agreement. Consumer groups and members of the legislature were extremely concerned about a "bailout" of the utilities. Later investigations revealed that PG&E and SCE, taken together, had transferred approximately $9 billion to their parent companies since the start of deregulation. They raised the legitimate question of why funds should flow up to the parent corporations in good times, yet the operating companies would not receive reverse flows in bad times.

The discussions and negotiations about restoring the financial health of the utilities continued throughout the spring and summer. PG&E declared bankruptcy on April 6, citing a variety of factors, including over $9 billion in unrecovered utility purchases. Prospects for some arrangement for SCE seemed to be more favorable, and the governor vigorously championed SCE's cause, but the legislature adjourned in September 2001 without voting on a bill. Eventually, PUC and SCE reached an agreement by which Edison would regain its footing by using its cash reserve, suspending dividends for a minimum of two years, drawing on cash from the excess of the rates approved by PUC over its current costs, and by working out mutually acceptable agreements with generators for the $1 billion owed to them.

DWR began its major purchases in the wholesale electricity market, on behalf of the utilities, in January. Rates had not been increased, however, and the state began to accumulate substantial debts. PUC did not decide to raise rates until March 26, 2001, and it took until mid-May to work out the full details. The average rate increase was 3 cents per kilowatt hour. The rate increases were weighted heavily toward larger users. For customers whose usage exceeded more than 130 percent of baseline, the average increase on purchases exceeding that level was approximately 50 percent.[3] New rates did not show up on bills for several months after the March decision (although ratepayers were liable for them) and, as a consequence, the effects on consumption were delayed.

As DWR stepped into a new role, questions of governance and oversight became prominent. As the department was new to the marketplace, it was not as sophisticated as some of the other participants, and questions have been raised about the efficiency of its purchases. DWR also insisted on secrecy and sharply limited information about purchases. Later, it turned out that a number of participants had conflicts of interest, which would have been detected if the agency had been operating under normal procedures.

These governance issues have had major consequences. DWR had been purchasing power at prices higher than retail and incurring debt at a rapid rate on the accounts of the state. The state treasurer had formulated a plan for a bond issue of $12.5 billion in the fall of 2001 to repay the state treasury over $6 billion from the general fund and to pay for future power purchases. This plan required that the utilities and ratepayers accept as a fait accompli the prices paid for DWR power. With DWR's competence and ethics under question, it was natural that consumer groups, along with the utilities, would be wary of the blank check given to the department This proposal also put PUC in an awkward position, at odds with its customary watch-guard authority. The questions raised about the governance implicit in the DWR pass-through delayed the bond offering and have created uncertainty about the mechanism by which the state treasury will ultimately be reimbursed for the power purchases. In early October 2001, PUC rejected the plan put forward by the state and created further uncertainty. The bond issue has been postponed to 2002.

In the press release announcing its bankruptcy, PG&E contended that allowing them and the other utilities to raise retail rates in early October 2000 and to engage in long-term contracts would have kept the utilities solvent and kept the state from incurring large liabilities from purchased power. Whether price increases at that time would have solved the problem fully is not clear because FERC allowed the dysfunctional wholesale market to operate without much oversight until late in spring 2001, at which time it enacted a market-based price cap system. Nonetheless, it is quite likely that the intermediation crisis, which imposed substantial additional costs on California consumers and businesses, could have been avoided. The fear of a political backlash led the governor and PUC to follow a myopic strategy that led to the failure of intermediary structures and the use of an inefficient and inexperienced state apparatus to handle power purchases. There is serious concern that the contracts entered into by DWR will be substantially above market rates for 8-10 years, adding to the burden for businesses and consumers. Indeed, DWR was forced to sell some of its purchased power at a loss of $46 million in July 2001, and, depending on future market trends, these losses could be quite substantial.[4]

In addition, the uncertainty associated with the distribution of the burden for the power charges and the uncertain future of the market create an additional important cost for business. As an example, in fall 2001, PUC debated how to allocate the costs of DWR's purchased power among the customers of the utilities. DWR proposed allocating the costs at the same charge per kilowatt on the theory that they were purchasing power for a single market. PUC, however, decided to use a different methodology, based on the cost of delivering electricity to specific markets, which would have disadvantaged customers of PG&E. After much discussion, PUC voted in September 2001 to suspend the right of businesses and other electric customers to buy electricity from their own power provider and bypass the local utility. The uncertainty associated with these potential shifts in burdens and market structures creates an unfavorable environment and raises the costs of normal transactions.

An analogy to the Great Depression is appropriate. As Ben Bernanke's (1983) research has indicated, the prolonged effects of the Great Depression were in large part due to the bank failures, which destroyed the relational capital between borrowers and lenders and effectively raised the price of credit. The insolvency and bankruptcy of the major utilities, a direct result of policies designed to minimize short-term price fluctuations, will impose similar long-term costs on the California economy, beyond the costs that would have occurred through exposure to market prices.

The turmoil in the energy market also has consequences for taxation. The downturn in the national and California economies has led to a pessimistic budget forecast for fiscal year 2002-2003. The postponement of the $12.5 billion bond issue further clouds the picture. The energy crisis also created uncertainties in other arenas of taxation in California.

## THE CONSEQUENCES FOR PROPERTY TAXATION

When PG&E, the largest property taxpayer in the state, filed for bankruptcy on April 6, 2001, it put not only its own future but also, it was feared, that of many California local governments in the hands of the U.S. bankruptcy court. Four days after the Chapter 11 filing, PG&E paid only half (for April 6 through June 30) of the $79 million in property taxes it owed to 49 counties throughout northern and central California because bankruptcy rules do not allow companies to make payments on debts incurred before their bankruptcy filing. Still due was payment for January 1 through April 5. On May 16, however, the bankruptcy court ordered PG&E to pay its property tax debt, so counties ultimately received the taxes owed on April 10 plus associated late penalty charges.

A more significant and long-term consequence of California's energy crisis on local governments and the property tax has to do with the manner in which power generating facilities are assessed and the allocation of resulting revenues. Article XIII, Section 19 of the California Constitution defines which properties are to be assessed annually by the Valuation Division of the State Board of Equalization: (1) pipelines, flumes, canals, ditches, and aqueducts lying within two or more counties and

(2) property, except franchises, owned or used by regulated railway, telegraph, or telephone companies, car companies operating on railways in the state, and companies transmitting or selling gas or electricity.

### Assessing Generating Facilities

Currently, electric generating facilities not owned by public utilities are assessed locally and the revenues are distributed to the jurisdictions in which the property is located, but this was not the situation prior to the restructuring of the electric utility industry (AB 1890, Stats. 1996, Ch. 854). Recent efforts on the part of the state legislature and the State Board of Equalization to return all power plants to state assessment appear to have succeeded and will have a significant impact on local government revenues.

Prior to 1998, State Board of Equalization assessed all electric utility property using a unitary method. Deregulation required electric utilities to divest themselves of generating facilities. As these power plants were no longer owned by regulated public utilities, the question arose as to who should assess these independently owned, unregulated generating facilities. Although property tax revenues are unlikely to be immediately affected in either case, state versus local assessment can affect future property tax revenues and the allocation of those revenues to the various local governments within the state.

The assessment of property at the county level is made pursuant to Proposition 13, which establishes the assessed value of real property at its fair market value at the time of acquisition (base-year value) and allows subsequent adjustments for inflation (limited to 2 percent annually), new construction, and change in ownership. In contrast, state assessment is based on a determination of the fair market value of the property annually. Property operating as a unit is considered the "appraisal unit" and is assessed and taxed as a unit.

Local and state assessed values should be the same at the time of acquisition because they should reflect fair market value. As time passes, local and state assessed values of the same property will likely diverge, particularly if the market value of the property increases faster than 2 percent per year. County assessments, in this case, will be below state market value estimates.

The second crucial difference between state and local assessment arises because of differences in the way property tax revenues are allocated. State-assessed unitary values are allocated by the board to a countywide pool in each county where assessed property is located. These revenues are allocated by statutory formula to *all* local taxing agencies within the county.[5] Revenues from county assessed property, on the other hand, are distributed to only those local jurisdictions in which the particular property is situated.

In 1999, after considerable debate, the board adopted Property Tax Rule 905, which limits its assessment jurisdiction to facilities owned by public utilities. Under this regulation, the 22 electrical generating facilities purchased from public utilities in the late 1990s are locally assessed, as are newly constructed plants owned by non-public utility companies.[6]

The failure of California's deregulated power market has resulted in significant increases in power prices and profits for generators. Since these facilities are afforded the protections of Proposition 13 in that their assessed value can increase by only 2 percent per year, it has been argued that they are being under-assessed in today's market.

On June 20, 2001, the State Board of Equalization (BOE) unanimously approved a motion directing staff to draft an amendment to Rule 905, which would bring all generating facilities that produce more than 50 megawatts of power (an estimated 41 facilities) back under state assessment jurisdiction. Opposition to such a move has come primarily from local governments concerned that state assessment would disrupt their tax revenue stream by redirecting revenue away from cities and other agencies with power plants within their borders. Local governments not only prefer the certainty and predictability of revenue from the local assessment of power plants but also need the incentive it provides for hosting such facilities.

Proponents of state assessment include several environmental and consumer groups who argue that local assessment of power plants at Proposition 13 acquisition values provides a tax break to older, more polluting plants at the expense of new, cleaner plants that are assessed at market value as they come on line. The California Tax Reform Association, which also favors state assessment, has estimated, based on current electricity prices and costs of production, that power plants are drastically under-assessed and that local governments are losing tens of millions of dollars in property tax revenue.[7]

In October 2001, the board voted to return independently owned power plants to state assessment beginning January 1, 2003. The delayed effective date is intended to allow the legislature ample time to change the allocation rule that applies to property tax revenues from state-assessed power generating facilities in order to prevent the potential revenue losses to cities that host such facilities.

Proposed legislation (AB81, Migden)[8] would alleviate the concerns of local governments by preserving the allocation of resulting property tax revenues on a situs basis as if the property were still locally assessed. Therefore, even though electric generating facilities would be state assessed annually at market value, the resulting property tax revenue would be allocated to the city, county, school district, and special districts in which they are located rather than distributed on a proportional basis to all jurisdictions in the county.

## CONCLUSION

While declining prices and consumption have defused some of the day-to-day urgency of the California energy crisis, many issues have yet to be resolved before the state can put this episode behind it. In many respects, the power market has settled down considerably since last spring. Prices are down, blackouts are no longer a threat, and PG&E paid the property taxes it owed local governments. Although declining prices and demand have eliminated the fear of blackouts, they have raised the cost to California businesses and consumers of the long-term contracts that were signed earlier this year. The state is obligated, under these contracts, to purchase more power than is currently needed and must try to resell the excess. The decline in electricity prices has led to losses as the state has been forced to resell power at prices significantly lower than what it paid. There have even been times the state has had to pay a utility to take the excess power. Discussions are under way to renegotiate the long-term contracts under more favorable terms, creating additional uncertainty in the markets.

In the area of public finance, important questions remain regarding appropriate institutional frameworks and who will bear the cost of the state intervention. For example, what role should the state play in California's electricity market; specifically, what should be the role of the newly created state power authority? Moreover, the Board of Equalization or the legislature needs to assign responsibility for assessment of power generators once and for all, and not raise the question every time market conditions fluctuate. Finally, it must be decided who is to bear the costs of prior and future state power purchases. A decision is pending on the bond offering that is intended to reimburse the state treasury for the DWR power purchases. The governor, Public Utilities Commission, and the Board of Equalization must address these issues in order to eliminate lingering uncertainty in the public and private sectors.

## Notes

1 California Energy Commission, http://www energy.gov/electricity/divestiture.html.
2 *Los Angeles Times*, January 13, 2001.
3 California Public Utility Commission, News Release, May 15, 2001.
4 Sudden Power Glut Puts State in Costly Bind, *Los Angeles Times*, August 11, 2001.
5 See Sexton and Sheffrin (2000) for a discussion and example of this allocation formula.
6 Sexton and Sheffrin (2000) present an analysis of the debate and controversy surrounding Rule 905, as well as estimates of the impact on local governments of the resulting reallocation of property tax revenues.
7 From discussion at June 20, 2001 BOE meeting as reported in *State Tax Notes*, June 25, 2001, p. 2168.
8 Although AB 81 was passed by the state Senate on June 7, 2001, it has been held under submission by the Assembly Appropriations Committee.

## References

Bernanke, Ben. Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression. *American Economic Review* (June 1983): 257-76.

Sheffrin, Anjali. Empirical Evidence of Strategic Bidding in California ISO Real Time Market. March 21, 2001. www/caiso.com/marketanalysis/index.html.

Sexton, Terri A., and Steven M. Sheffrin. Electric Utility Deregulation and the Property Tax in California and Other Western States. In Philip Burling, ed. *Impacts of Electric Utility Deregulation on Property Taxation*. Cambridge, Massachusetts, Lincoln Institute of Land Policy, 2000.