Lights Out!

by Fred Smith

Environmentalist fantasizing and government regulations caused California's power failure.

California has an energy problem. Electricity rates skyrocketed in San Diego where prices were free to fluctuate; and brownout/blackout risks are mounting in much of the state served by Southern California Edison and Pacific Gas & Electric, where consumer rates are capped by government regulation. As we speak, California's utilities are paying more to purchase electricity than they are allowed to sell it for. They are unable to pay their bills and are facing bankruptcy.

Media and political commentators are blaming all of this on the market. California was working well, so we are told, but then free-market advocates pushed through a bill to deregulate the California system and screwed up everything. Gov. Davis is blaming everyone but himself and proposing tighter price controls and even a state takeover of the industry.

Lincoln once asked a friend: "If we call a dog's tail a leg; then how many legs does a dog have?" "Five," his friend answered. "No, still only four," Lincoln responded. "Calling a tail a leg doesn't make it one!" And so it is with the California "deregulation" story. California engaged in a game of regulatory shuffleboard, introducing new flexibilities and then checking them with new regulatory rigidities, but leaving the system as unresponsive as before. The flaws of the old system — which was widely perceived as helping out the utility management and its special-interest friends (the environmental-activist community in particular) — were not really addressed. When the smoke cleared, it was again the utilities and the greenies who came out on top. As Herbert Stein used to say, "When a thing can't go on forever, it will stop." That's what happened in California.

What's going on? And what, if anything, can be done about it? As we shall see, the California problem is the result of a long tradition of political control of electricity. Politics allowed the utilities to misinvest in capacity — first too much and then too little — and made it possible for environmental activists in the state to mandate a series of anti-energy-use policies. The costs of the latter were paid for via cross-subsidies from other ratepayers. Neither of these situations could last long — both would have soon disappeared had the industry been deregulated.

But, of course, not much was really deregulated in California. Instead, the traditional regulatory structure — government-granted regional monopolies to firms, whose rates and terms of service are then regulated — was shuffled around. Some of the steps taken might have been useful; others were unnecessary; still others ensured the current disaster. First, the state viewed power generation as a competitive sector and thus deregulated it. The hope was that stand-alone firms would be more efficient and cost less to consumers. The existing utilities were required to sell off their generating capacity.[1] The new, independent, power providers would then be able to sell their power to whomever they wanted at whatever price they felt it warranted. The utilities would henceforth be involved only in distribution and retailing.

Free-market proposals for the distribution system were ignored, although the law did develop a timeline for allowing all consumers — commercial, industrial, and residential — the right to select their own supplier of electricity under whatever terms they found mutually advantageous. The grid would become a "common carrier," required to transmit the power generated by any firm to anyone — at a "fair" rate (how this was to be determined was never made clear).[2] The term for this was "retail wheeling," akin to the competition situation in telecommunications. No one gave much thought to why anyone would find it worthwhile to maintain,

expand, and upgrade the distribution grid.

But these problems were small in comparison to the two major changes in the deregulation plan: first, an authorized transmission charge accompanied by an electricity price cap; and, second, the blocking of long-term purchase contracts. Pacific Gas & Electric and Southern California Edison had major debt on their balance sheets. Under regulation, these debts were "safe" because the firms were allowed to set rates adequate to ensure "reasonable" capital cost recovery.

But once the cost of electricity was deregulated, with the prices charged to consumers capped, the utilities faced huge losses, even bankruptcy. In a free market, of course, bankruptcy plays an important role. Bankruptcy allows the revaluation of capital — an investment might have been prudently made, but circumstances can change, making the initial investment no longer viable.

We would simply conserve ourselves into energy adequacy, and we would do so while lowering electricity rates!

For example, suppose an oil boom creates huge demand for temporary housing in central Colorado. An entrepreneur responds by building a large motel. To make a profit, he must have 60% occupancy at a rate of $70 per night. Demand from energy workers is so good that the motel is able to charge $80 per night and still get 70% occupancy. It is a profitable venture. But after a few months, the price of oil declines and it is no longer profitable to develop oil wells in the area. With the oil workers gone, the motel's occupancy rate falls to 20%, despite its cutting the room rate to $50. The owner of the motel is now operating at a loss. Things don't get better, and eventually his debts exceed the value of the motel. A creditor sues and the motel cannot pay. The sheriff conducts a bankruptcy sale. The highest bid is only 20% of the cost of the motel. The new owner, thanks to his lower capital outlay, can operate the motel profitably with a 50% occupancy and a $35 room rate. The lower room rate attracts enough bargain-minded travelers that the motel can be operated profitably.

This happens frequently: under bankruptcy, the original shareholders take the bullet, new shareholders acquire the assets at the adjusted price, and the game continues. No workers are shot; no assets are burned to the ground.

But bankruptcy in the regulated "safe" utility sector is politically undesirable — all shares in these firms seem to be held by widows and orphans — so the state decided to protect the firms. In the case of California utilities, the protection mechanism was to levy a transmission charge on everyone using the power grid; raising money the firms could use to pay their debts and protect their shareholders. Not a free-market concept, but one that seemed necessary to move ahead.

Unfortunately, this revenue-transfer scheme prompted the state to demand a *quid pro quo* from the utilities. The state would allow utilities to charge a recovery fee, but if they did so, they must in return accept a price cap on the rates they charged their customers. One might have expected the utilities to have balked at this — to have insisted on a cost-plus rate adjustment factor or something — but at the time, everyone was convinced that deregulation would lower costs and thus lead to lower prices. But forecasting is not an exact science, and no one seemed worried that costs might increase. That optimism in part stemmed from the fact that the state then enjoyed a slight capacity surplus — more supply than demand — and the utilities believed that energy growth was a thing of the past. America was now in an energy stable mode. Indeed, with the Kyoto Treaty under consideration, with electric cars on the horizon, and with low-energy e-commerce soon to replace the old industries we might soon be mothballing plants. No one had to worry about supply — demand would only be going down.

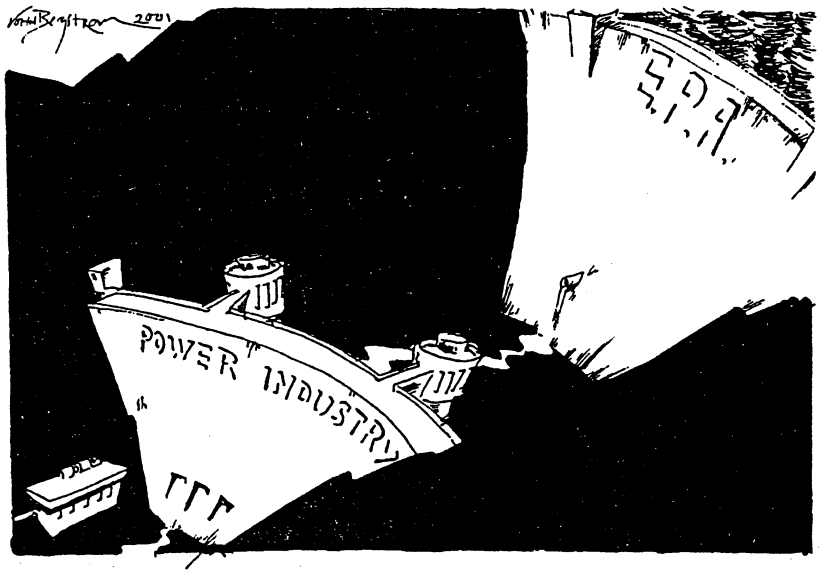
Prior to deregulation, generation and distribution were integrated into the same company. California split the two functions among independent companies. Generation capacity and distribution grids are both expensive, long-lived capital investments. Normally, a firm would seek risk-sharing arrangements, whereby generators and distributors would sign long-term contracts at agreed-upon rates, probably to vary with generation costs. Generators would know that they could sell some portion of their output at an established price; distributors would know their purchase prices in advance.

But, again, the fear of markets, and concern that such arrangements might permit the firms to reunite, led to a rule against contracts. In California, market prices would be spot prices — the creative instrumentality of futures markets, which create major incentives for projections and for longer-term price stabilization instrumentalities, would not be involved.

These rigidities, which appeared to leave the utilities with more security, reflected the widespread demand-side beliefs of the time. California, more than almost any other state, promoted Demand Side Management. DSM, as it was known, argued that, of course, markets had failed, as there were a vast array of cost-effective energy-conservation measures that many businesses and almost all consumers failed to realize. Our lights were the wrong kind and too bright, our homes weren't adequately insulated, our cars were too big, our water pipes and electric wires were too small. Everywhere, the environmentalists contended, there was energy waste that could cheaply be eliminated. To address these market failures, the greens pressured the utilities to create a wide array of incentives to "encourage" consumers to "save" energy. A homeowner would be encouraged to install insulation or energy-efficient light bulbs and would receive an incentive payment to do so. The costs of these incentive programs would then be included in the rates charged to those users who elected not to join the conservation effort. One of the impacts of these laws was that electricity rates in California were much higher than in adjoining states (in the mid-1990s, Californians paid about 50% more for electricity than those in neighboring states). Moreover, evaluations of DSM programs gave little encouragement to the environmentalists' arguments; people wouldn't support them voluntarily. But in the California regulatory shuffleboard, with rates capped and capital costs guaranteed, the utilities would be able to continue their flirtation with the

greenies — or so it was believed.

California had other problems. It had moved aggressively away from coal and nuclear power, and even from oil. Natural gas was the fuel of choice for power generation in California. But natural gas is not an easily transported fuel — it can't be trucked (or, rather, not readily) like home-heating oil or propane; pipelines are needed. But the same anti-development logic buttressed by demand-side thinking blocked pipelines (and high-power electric transmission lines) also. Californians fought against developing the oil field off the Santa Barbara coast and stopped exploration activities elsewhere. California's energy policy — like that of the United States — was strictly demand-side; we would simply conserve ourselves into energy adequacy, and we would do so while lowering electricity rates!



The roots of the California electricity crisis lie deep in American history. American energy policy has long been political — one of the major "successes" of the progressives was the series of hydro-dams throughout the West. Taxpayer-supported electricity projects would light up the West; taxpayer-supported water projects would make the desert bloom. The initial "promotional progressive" era created real assets that produced real results. Aluminum plants and other industrial facilities expanded throughout the West. So did agriculture, as lands throughout the East and South reverted to wildlife habitat.

But, of course, such policies inevitably encourage wasteful resource practices that are difficult to correct. Consequences of this policy have emerged in the California crisis, as aluminum plants in the Northwest and fertilizer plants in the Midwest have found it more profitable to close down and sell their electricity or natural gas on the market.

But the promotional progressive era policies have shifted in recent years to those of a precautionary progressive era. We no longer seek expanded supply, but, rather, more prudent use of what we have. Conservation is our preferred source of energy. California, in particular, accepted the view that Amory Lovins and a host of other Malthusian energy gurus promote. According to this theory, building new power plants (and by extension, almost anything else) is foolish. The greatest source of energy is conservation — negawatts (the energy freed by increasing the efficiency of our society) would suffice for the modest energy needs of a post-materialistic society. Change a few light bulbs, add a little more insulation, buy an electric car — save money and energy at the same time! Electricity capacity has grown slowly, largely through plant upgrades (no major new plants came on line in the last decade), while demand increased steadily.

The result was inevitable: at current prices, there is more demand for electricity than can be supplied. In a free economy, prices are free to fluctuate; and when demand outstrips supply, the price rises, which provides buyers with an incentive to conserve and producers with an incentive to increase production.

But politics and the regulatory state make it difficult for supply and demand to equilibrate, and a vast array of regulatory impediments makes it very difficult to create new capacity quickly. California seeks federal help, but there's no massive amount of power in the West to alleviate this situation. And people in neighboring states are not happy about the prospect of being penalized for California's stupidities. And, thanks again to regulatory roadblocks, there is not enough transmission capacity to resolve this problem by wheeling power in from the Midwest or East. Moreover, alternative fuels — and here we mean natural gas, oil, and propane, not wood or solar — are also in short supply. (Coal is plentiful, but thanks to environmental activists, there is not a single coal-powered electricity plant in California.)

The result is the situation we have today. California's utilities teeter on the edge of bankruptcy, while California's governor is asking neighboring states to provide electricity at bargain rates and the federal government to bail out the utilities. ❑

Notes

1 Because of environmental reasons — largely the liability associated with nuclear plants and the conservation requirements associated with hydro-dams — the utilities retained that type of power source. Most of the facilities sold were gas-fired generators.

2 Free-marketers have developed some reasonable ideas about how networks emerging from such monopoly franchise situations might be privatized and deregulated; however, these ideas have never received much attention. Government control prevented competitive delivery systems, although, of course, there are some alternatives — natural gas or oil heating for electricity; self-generation; purchase from adjacent grids or private firms in the region. The general approach might be to allow prices to change slowly — a gradually expanding "zone of reasonableness" around established rates, while encouraging consumers and providers to invest in new linkages, line-sharing contractual arrangements, and decentralized power generation. Moving from a political to a private market will always involve messy transition problems of this sort — and messiness is not something that politicians wish to face.