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What Happened in California, or Why Arkansas is not California

The on-going electricity crisis in California is causing economic pain, not only in California but in several western states. Two days of rolling blackouts in northern California in January 2001 highlighted the serious shortage of power in the west. Alerts have been called almost daily this year by the California independent transmission system operator (Cal ISO) of power shortages, with public pleas for conservation. The three major investor-owned utilities—Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas and Electric (SDGE)—are suffering a financial meltdown and are in default to their creditors. Their debt caused by a faulty restructuring plan is estimated at over $12 billion. Additional generation capacity will take at least two years to build, but the financial burden will last many more years.

California electricity markets have failed due to—

1. *Unanticipated growth in demand for electricity*
2. *Unanticipated reductions in supply of generation*
3. *Structural defects in the deregulation plan*
4. *Environmental regulations and siting difficulties affecting new generation facilities*
5. *Faulty regulation and political miscalculation*
6. *The possible exercise of market power by wholesale generators*

California's problems with the electricity markets are being exacerbated by the recent rise in oil and natural gas prices. Further, while the US relies on market forces to bring the prices of oil and gas back to reasonable levels, California seems intent on prolonging the time to rationalize its electricity markets to perhaps 10 years or more.

Unanticipated growth in demand

The market fundamentals were pressing for electricity price increases even before retail electricity prices were capped. In the early 1990s, the California economy was growing slowly and the supply of generation in the west was almost 20% in excess of demand. By the time California began its electric industry restructuring in 1996, the economy was booming. Growth rates were also high in the states surrounding California. As a result, by 1999 the demand was consuming all of the available supply.

Unanticipated reduction in supply

No new large power plants have been built in California in 10 years. The availability of imported electricity, typically about 20% of the California supply, has been going down due to growth, particularly in Arizona, Nevada and Washington.

The amount of water available for the giant hydro projects in the Pacific Northwest of the Bonneville Power Authority, long a supplier to California markets, has been exhausted as rainfalls have been below average and power production has been high. The snowpack is only 60% of normal this year, meaning this summer will have lower than normal supplies of hydro generation as well.

What new power projects have been built in recent years in the western region have all been gas fired. The price of natural gas quadrupled from 1998 to 2000, from about $2 per million Btu (MMBtu, or about 1000 cubic feet) to about $8/MMBtu, but in California, which has developed some pipeline capacity shortages, the price peaked at $60/MMBtu in December 2000. While such price spikes are short-lived, the average price of gas in California remains above the already high national average, now in the

$5/MMBtu to $6/MMBtu range. Since over one-half of the generation in California is gas fired, the costs of generation have risen considerably.

The 2000 MW of interruptible industrial load available to California utilities has already been used up. Interruptible contracts are basically agreements by customers to buy power at reduced rates in exchange for the utility's ability to cut their supply during power shortages. The contracts have limits on the total number of hours per year a customer can be interrupted. Those limits have already been reached. Typically, most interruptions are called for during the summer. They will not be available this summer.

The investment climate for power producers is chaotic in California. Profits have been high for the purchasers of the divested utility power plants, which should stimulate investment. However, with the continually changing wholesale price caps and the siting hurdles in California, investors prefer projects in more stable political environments.

Structural defects

Probably the greatest structural defect built into the California plan is the requirement placed on utilities to purchase all of their energy needs from the daily spot market, the California Power Exchange (Cal PX). As a stranded cost mitigation measure, utilities were required to voluntarily divest 25% of their fossil-fuel generating assets. The utilities finally divested all of their fossil-fuel assets. The divested units were required to sell into the Cal PX, which runs daily bids to establish tomorrow's hourly market price. The utilities were required to purchase their electricity supplies from the Cal PX.

Competitive energy service providers (ESPs), however, found it especially difficult to do business in California. One, it is very hard to build new generating plant in California, meaning the competitors are also at the mercy of the Cal PX for supply. Two, the stranded cost charges are variable—high when the Cal PX price is low, and low when the PX price is high—making it almost impossible for the ESP to tell the customer what his price will be. And three, the rates that utilities could offer were capped at unreasonably low levels. As a result of these and other factors, competitors never entered the retail markets in any meaningful way.

The second major structural defect in the California plan are the capped retail rates. The cap remains in effect until the stranded costs are paid off. SDGE fully paid its obligations early, while PG&E and SCE were scheduled to finish payments in 2002. San Diego was subsequently savaged by the confluence of events leading to the rise in Cal PX prices and re-capped its rates soon thereafter. Now, the three utilities have run up $12 billion in debt buying high priced energy off of the Cal PX while selling it at capped prices. Their bond ratings have gone to junk level and they are defaulting on payments. The response of the state has been to enter the electricity markets and begin purchasing $10 billion worth of power directly under long-term contracts, for up to 10 years.

Environmental and siting hurdles

The stringent air quality requirements, in Southern California particularly, have reduced the supply of electricity. Many power plants have restricted hours of operation in order to stay under emissions limits. Allowances for NO_x and SO_x emissions are generally more expensive in Southern California, raising the costs of what generation is allowed. The difficulty of acquiring permits to build a power plant in California slows the supply response to the shortage and increases the cost of those installations.

The not-in-my-backyard sentiment is particularly strong in California. The lead times to gain local building permits frustrate power developers. Calpine, an independent power producer, has been trying for over a year to gain a permit to build a 600 MW natural gas fired cogeneration plant in San Jose, California. The City Council voted "no" last November because of opposition of Cisco Systems, the city's largest employer. Cisco felt the plant would be unsightly next to its campus. California has recently developed alternative permitting through the state Energy Commission in an attempt to alleviate this problem.

Faulty regulation and political miscalculation

Faulty regulation and political miscalculation established the defective structure of the California system. Regulators wanted publicly visible pricing at the Cal PX so utilities could not establish secret, sweetheart deals for themselves. Regulators also feared utilities would enter into long-term contracts at above market prices, which could result in additional stranded costs for the default provider. So, all utilities had to buy from the Cal PX. Since the utilities still owned the nuclear units and the hydro units, that left customers exposed to the spot market for about 60% of their supply. Other power markets—in Australia, in Britain, in the PJM (Pennsylvania-New Jersey-Maryland area Regional Transmission Organization) and in New England—operate with 10% to 20% of the supply exposed to spot market prices. Californians were 3 to 6 times more vulnerable to the price volatility of spot markets than they should have been.

The first political miscalculation was not anticipating this crisis. It first reared its head in July in San Diego. By December, when the shortages spread to the rest of the state, still no response had been formulated. The second miscalculation has been the plan to deal with the crisis. By not immediately increasing retail rates, by imposing long-term price caps, and by making the very same long-term buying decisions that were denied the utilities, the state is inserting itself into the utility business even further. As a result of the urge to protect ratepayers, California is harming taxpayers, creditors, and the western power markets in general. Now, the talk is of the state buying the transmission grid from the utilities. The proposal is to buy the $3 billion book value transmission grid for a market value estimated at up to $9 billion, so that the utilities may relieve themselves of some of their debt burden. The balance is to be amortized over 10 years, keeping electricity prices above market for at least that long.

The fallout will deepen as business considers relocating. Nevada already reports company after company is knocking at their door, asking about moving from California. Further, the increasing costs of doing business in California will eventually spread throughout not only the US economy, but also especially to Mexico and the Pacific Rim countries.

Utilities in Oregon, Washington, Idaho and Utah have already asked for, and received, significant rate increases to reflect the increased wholesale costs for power. Those states understand that customers respond to higher prices by reducing demand. California has belatedly instituted a small, temporary rate increase. If additional rate increases are not granted, apparently the bill will be paid for by taxpayers.

The Federal Energy Regulatory Commission (FERC) has moved to correct some of the problems in the California electricity markets. A price cap on wholesale power was put in place on a temporary basis. FERC also lifted the state requirement that utilities buy through the Cal PX, and terminated the Cal PX rate schedule effective April 30, 2001. The Cal PX will be dismantled.

Market power

The Market Surveillance Committee of the California Independent System Operator (ISO) concluded in a September 2000 report that market power was exercised in the summer of 2000, with energy costs at 182% of their calculated benchmark price. FERC reported in November 2000 that the California market is seriously flawed and that rates have been unjust and unreasonable. FERC concluded that, while they could not determine which individual sellers, if any, were exercising market power, the market structure and rules provide the opportunity for sellers to exercise market power when supplies are tight.

Arkansas is different

Arkansas shares few of the 5 identified faults of the California markets. One, we have no power exchange. While some form of exchange will most likely develop, the private sector will provide for those services. The Commission will have no rules mandating sales into or purchases from the PX.

Second, our transition period price freeze is short term and our default standard service will be responsive to market prices. Our market structure will have a high percentage of stable, long term bilateral contracts rather than spot market supplies. This tends to stabilize prices, causing movements both up and down to be slower than in the short-term markets.

We are not immune from the problems of faulty regulation and political miscalculation, but clearly the problems we will face are not even close to what happened in California.

Rather than walk blindly into a constricted supply and demand situation, we know that load growth in Arkansas has been around 2% per year. Supply, while stagnant from the late 1980s to the late 1990s, has already increased and will increase significantly in the future. Arkansas will have an abundance of supply rather than a shortage.

Our environmental permitting and siting hurdles are far easier to address than in California. This is evidenced by the already impressive number of new generation plant announcements.

Dealing with the exercise of market power is a problem we share with California, or any other state that moves to competitive generation markets. Our statutory authority to deal with market power is broad and contemplates the ability of the Commission to act before, during and after the transition to retail open access.

California has provided many lessons on how not to move to competitive retail electric markets. Just as there are advantages to not going first, there are advantages to not going last. Other states are providing lessons of what works, and are finding real benefits to competitive markets. As we learn from the experience of other states, Arkansas can move ahead confidently, knowing that the California mistakes will not recur here.