

IN THE DARK CALIFORNIA CONSUMERS HAVEN'T SEEN BENEFITS OF DEREGULATING THE ELECTRICAL INDUSTRY YET -- WHAT WENT WRONG?

Published: Sunday, August 27, 2000 Edition: Morning Final Section: Perspective Page: 1C Memo: Severin Borenstein is director of the University of California Energy Institute and the E.T. Grether professor of business administration and public policy at UC-Berkeley's Haas School of Business. He is a member of the Board of Governors of the California Power Exchange, a non-profit corporation that operates the wholesale electricity marketplace. James Bushnell is director of research at the UCEI and a member of the California Power Exchange Market Monitoring

Illustration: Drawing, Map

Source: BY SEVERIN BORENSTEIN AND JAMES BUSHNELL
ROLLING BLACKOUTS in San Francisco. Skyrocketing electrical prices in San Diego. Three years after the state restructured the electricity industry in an attempt to aid consumers, many consumers are feeling anything but better off. How, they ask, could this attempt at greater reliance on market forces have gone so wrong?

There is no easy answer, but looking back at the history of regulation, the effects it had on the state's electrical industry, and the basics of the state's restructuring plan help to explain why the plan has not benefited consumers -- at least not yet.

In most parts of the U.S. economy, if you run a company you can charge whatever price you wish. This generally works well for consumers, not because sellers are always benevolent and will offer a fair price, but because competition among producers disciplines a seller who tries to raise prices excessively. This system can encourage producers to minimize their production costs and develop new production processes and products.

Through most of the 20th century, however, the federal, state and local governments heavily regulated -- or even owned -- producers in a number of industries. In some cases, such as electricity, cable television and telephones, policy-makers argued that the cost advantages of a large firm -- known as economies of scale -- meant that competition wouldn't be viable. In many cases, the regulation was also an attempt to assure a supply of goods "too important to be left to the market" or an attempt to protect small firms.

Over the last 25 years, as faith in government regulation has declined and belief in the efficiency of markets has grown, market forces have been unleashed in many previously regulated industries: natural gas production, stock brokerage, cable television, long-distance phone service and agriculture. In most cases, the benefits to consumers from deregulation have clearly outweighed the costs of giving producers free rein.

In the electricity industry, the jury is still out. The most visible test case is California, one of the first states to restructure the industry.

Historically, electricity in the United States has been supplied by regulated firms or local government organizations that each do everything from generating the power to delivering it to your house and billing you for it. This structure was motivated by the view that an individual firm could produce and deliver power at lower cost than could a number of competing companies, so competition would be inefficient or not sustainable.

Unleashing market forces Plan strove to avoid mistakes of past Most analysts agree that argument still holds true for the "wires" side of the business -- duplicate wires running down your block wouldn't be very efficient -- but generation of the power that goes into those wires now occurs at hundreds of different facilities. Electricity deregulation, or "restructuring" as it is more often and more accurately called, has attempted to unleash the forces of competition in at least the power-generation sector.

Why did the state approve such restructuring? The price of electricity was high compared with that of other states, in large part because of mistakes by utility companies and their regulators. Those errors included building power plants and signing power purchase contracts that didn't always make financial sense.

One of the chief benefits expected to result from competition was greater prudence in constructing power plants. Under regulation, in return for a limit on their prices and profits, firms had been virtually assured that the costs of a new plant were covered by consumers -- whether or not that plant turned out to be needed or cost-efficient. Under the restructuring plan, if a power plant couldn't make money in the wholesale electricity market, the owners, not consumers, would have to eat the losses.

The regulation years had plenty of horror stories. Consumers ended up paying for white elephants, such as Pacific Gas & Electric's Diablo Canyon nuclear power plant near San Luis Obispo, among the most expensive plants ever built in this country. Many California utilities, often under pressure from regulators, had also signed long-term contracts with small generation owners at prices that turned out to be astronomical compared with the cost of actually producing power.

Unfortunately, even with restructuring, someone still had to pay for these mistakes. Since prices after restructuring were forecast to be much too low to cover these costs, the utilities negotiated a deal under which these "stranded investments" would be paid by consumers: Retail rates were frozen during a transition period at a level that was forecast to be above the utilities' costs of buying and delivering power, and the difference was to be applied toward covering the stranded investments.

The transition period began in 1998 and will end in 2001, or earlier if a utility recoups its stranded investment sooner. Since 1998, the state's three big utilities have recovered much of the stranded investments by selling their plants to other companies, often at prices well above those that were forecast when restructuring was planned. Once a utility recovers its stranded investment, the rates are unfrozen. Consumers are then, theoretically, supposed to see their rates drop.

As is now well-known, San Diego Gas & Electric completed its transition period last year and, this summer, its consumers are getting a glimpse of retail prices after restructuring.

It has been pretty scary. Last month San Diego consumers saw their price of electricity jump to about double their pre-restructuring prices.

What caused the surging prices? Fast growth in demand, due to the booming California economy, combined with a dearth of new supply. The lack of new supply resulted, in part, from restructuring: Potential suppliers, uncertain about how restructuring would work, added very little new capacity in the 1990s.

It's striking how quickly perceptions of restructuring have reversed. Expensive generation facilities that a couple years ago were considered "stranded" by deregulation now have become dear resources that are earning high returns in a time of tight supply.

The frozen retail rates were, not long ago, so derided as a consumer rip-off that an unsuccessful 1998 ballot initiative attempted to lower them before the end of the rate freeze. Now, PG&E and Southern California Edison customers fret about the price hikes and volatility that could result when they follow customers of SDG&E out of the rate freeze.

The biggest swing in perception has, of course, been about the impact of restructuring on prices; customers had believed that it would lower their bills.

In 1997, rates in California were as much as twice as high as those in neighboring states because of the investment choices that regulators and utilities had made over the previous two decades. Some Californians misperceived restructuring as a promise that our rates would immediately approach those of our neighbors'.

The reality was that we had spent too much money building what were, in hindsight, the wrong kinds of power plants and signing expensive long-term power purchase contracts. By 1997 it was far too late to reduce the costs of these mistakes, and there wasn't much other fat to cut.

What restructuring realistically could do is create an environment in which the investment mistakes of the past are not repeated in the future -- or if they were repeated, the costs would fall on investors, not consumers.

While deregulation and the profit motive can provide powerful incentives for firms to cut costs and make more efficient investment choices, without adequate competition, firms are unlikely to pass on much of these savings to their customers. During this summer's sellers' market in California electricity, competition has been far less adequate than many had expected.

When one considers the nature of electricity, however, the dearth of competition is not that surprising.

Unlike with most products, there is no economic way to store electricity. This means that supply and demand have to be kept in constant balance. In addition, our ability to "transport" electricity is often severely constrained by the physical nature of electricity flows and the complexities inherent in reliably operating a large network. It's like moving water through a system of pipes, but with very few and very costly valves to control the direction.

Lastly, most electricity consumers have no idea what the cost of electricity is at the time they are consuming it. Thus, the normal market process in which high prices lead to reduced demand does not exist in today's electricity market. This is not a good recipe for robust competition.

Still, there have been a couple of surprises, and they have made the situation worse. The California economy has been roaring along at a faster pace than nearly anyone anticipated, which translates directly to faster growth in the demand for electricity. A straining electricity grid is one price we are paying for the economic boom.

At the same time, the uncertainty about deregulation and the strength of the economy contributed to delays in power plant construction. And buyers, for various reasons, have relied heavily upon "spot" purchases of power rather than entering into long-term arrangements that could provide some insurance against price spikes.

All of these factors have combined to create a tight supply/demand balance. That provides suppliers with enormous leverage during high demand periods, when no alternative sources of supply are available and consumers receive no price signal telling them that it's the wrong time to run the clothes dryer.

Because of the sellers' market power at peak times, one form of regulation remains. Almost every electricity market in the world, including California, has some form of wholesale price cap.

In California, the price cap in the wholesale market was recently reduced to 25-35 cents per kilowatt-hour. That's several times higher than the average wholesale price for the year, but about one-quarter the level of comparable price caps in the eastern United States. San Diego's consumers can take some comfort in the knowledge that without such caps, the wholesale price -- and therefore their retail rates -- would have been much higher.

Power prescription Market will work better if we can react to prices What will it take to make the electricity market work better?

Probably the most important way to reduce bills in the next year is to make this a two-sided market, where consumers -- especially large industrial and commercial consumers -- can see and react to price. Reducing consumption when the price spikes is the best way to avoid price spikes and blackouts.

Also buyers, especially California's three large utilities, need to line up more power supplies under long-term arrangements.

But the demand side and long-term contracts can't do it all. The state needs to streamline the approval process for proposed power plants. The state also needs to develop a strategy for improving transmission lines to relieve bottlenecks in getting power from where it is produced to where it is needed. Since it takes considerable time to build these types of facilities, the benefits won't appear for two to three years.

The disruptions in California's market have been a setback for electricity restructuring in the United States. Other states that started down the restructuring road should take notice and learn from the difficulties we are facing. In the end, some states may decide to stick with the old regulated-utility approach. It will be many more years before we will know whether that is the right lesson to take from the California experience.

Caption: DRAWING: REID BROWN - MERCURY NEWS MAP: MICHAEL RAMIREZ - LOS ANGELES TIMES [California] [Map not taken in database]