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The California Challenge: energy and the environmental consequences for public utilities

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Abstract

The California experience with energy over the last two years has been a warning signal to other states and nations. As the fifth largest economy in the world, California has needed to establish its “energy independence”, as Governor Davis labeled it in order to ensure reliable reasonably priced power to all its citizens and industries. Actions taken to ensure that California power flowed included co-ordinated emergency services, conservation, efficiency, long term contracts, power peakers and renewable energy. However, that plan foretold the need to redefine the energy sector and establish a near term action plan as well as a long term plan for future generations of Californians. © 2002 Published by Elsevier Science Ltd.

1. Introduction

The events prior to and since “911” have changed the world as we have known it. California may have been the focal point for the American energy sector in 2000–2001, but terrorism on the East Coast of the USA, brought the transportation industry under close scrutiny. What were once considered public sector entities that had been de-regulated or privatized and subject to market forces, have now come under close re-examination.

As if the energy crisis and terrorism were not enough, the Enron Corporation bankruptcy has verified and will dramatically change the role of governments and policy makers as they consider these and other infrastructure sectors. The underlying economic issues that Enron demonstrated continue and persist today as witnessed by Ross Perot needing to testify in person (11 July 2002) in Sacramento, California about his firm supplying software (as evidenced by internal Memos) to companies gaming the California market. Growing corporate

governance problems from accounting to executive bonus packages along with the linkages to public policy makers may never be fully revealed or simply dismissed as “political”, but there has been an impact on the public confidence, as Rich (6 July 2002) points. “No flowery speeches (by President Bush) are required to describe the reforms needed now,” Rich says. The behaviour of the Stock Market over the summer of 2002 best quantifies the general investor and business fears.

What proves illustrative are events over the last year that occurred in California in the energy sector, and their impact on other infrastructure sectors such as water, waste, transportation etc. Far more disturbing has been the spread of these same issues throughout the USA and now being watched carefully globally. International organizations such as the United Nations, World Bank and IEA are reconsidering their privatization and liberalization programs and policies toward energy. In the USA, “de-regulation” has been the label to which other nations call the process of the private sector entry into energy infrastructure markets historically controlled by the public sector. In either case, the result is the same: public sector responsibility for energy being conveyed to “market forces” (Clark and Lund, 2001; Lund and Clark, 2002).

Since the California “energy crisis” emerged a year before in Summer 2001, most experts and commentators, including the Economist, recognize that Governor Gray Davis and the citizens of California have been managing

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its impact and consequences. Everyone now is fully aware that de-regulation was not only “flawed” (that is “dysfunctional”) but also was wrong in the first instance. The naïve political promises of earlier California policy makers, heavily influenced by companies such as Enron, when de-regulation legislation was signed into law (AB 1890) in 1996, are reflected in this prediction:

This landmark legislation is a major step in our efforts to guarantee lower rates, provide customer choice and offer reliable service, so no one is literally left in the dark (Wilson, Gov. P. 23 September 1996 Press Release).

2. Energy deregulation in California: a failure

There is no need to comment further on that statement. As most reasonable observers now agree in late 2002, energy de-regulation was a failure in California, but the sector will not be re-regulated either. Neither will the energy sector be allowed to be subject to the so-called “market forces power” advocated by some economists, policy makers and corporations. The past two years in California were marked by the huge financial advantage taken by out of the state energy suppliers. The issue of energy generators extracting exorbitant profits can not be tolerated again under any political administration anywhere. What California has done in the last year, under Governor Davis’ leadership, is to seek “energy independence” and perhaps for the first time, define what sustainable development means to any nation-state.

Consider the international view of what happened during the Spring and Summer of 2001 in California’s energy sector. The Economist, for example, ran a Special Issue on “The Electric Revolution” (5 August 2000) extolling the virtues of privatization and de-regulation. Then the California energy crisis hit. By the winter and spring of 2001 the Economist published several articles about the crisis as being the result of a “flawed” market structure with many recommendations all resulting in the need to keep de-regulation or further privatization in place. One article after 911 on energy in September 2001 from the Science and Technology section on “Economic Man, cleaner planet” (2001a) noted that market forces could play a significant role in a cleaner planet. Well known economists such as Borenstein et al. (2002) and Woo (2001), among many others, echoed that same theme. In fact, a group of economists, including two Nobel Laureates, issued a Manifesto in the early Spring of 2001, calling upon the State of California to let markets work in solving the energy crisis.

These articles along with a series of other reports and pronouncements (see references below) tended to argue that a nation-state, such as California, must cope with its vital public services under extreme conditions through

“market forces”. The simple resolution to the crisis would be, for example, to install “real time metering” so that consumers will know what price they are paying for energy and hence conserve so that prices are lowered based on reduced demand. Many non-market assumptions were ignored and subsequent events surrounding the Enron bankruptcy proved that market manipulation as suspected by Governor Davis and his advisors proved correct (Davis, 2001, 2002).

These lessons are important for other USA states and nations, as security threats since 911 are now apparent in transportation as well as the energy, waste, water and environment sectors. Telecom now appears to be involved too as corporate “misdeeds” emerge over the Summer of 2002. The private sector cannot be relied upon for the security and welfare of citizens either from threat of terrorism or extremist economic-political ideologues. California has demonstrated in the energy crisis that so-called “market forces” must be coordinated, if not controlled in conjunction with the public sector.

When free market economists talk about incentives, they are referring to “government” at some level. Nevertheless government involvement is never acknowledged or recognized for its valuable contribution to stimulating or even in some cases, like California, creating the market. What California is experiencing is a “transition” (CAISO, 2002) to characterize and structure the future of the energy sector—this process must go forward today. California is neither re-regulating or leaving the energy sector open to market forces.

As Governor Davis put it in his State of the State address in January 2001, “a dysfunctional energy market, driven by out-of-state energy companies and brokers, is threatening to disrupt people’s lives and damage our economy.” The facts, documents and court records now support the Governor’s analysis. Energy is a “common good” that cannot be left to the devices of, as the Governor has stated and growing choruses of citizens concur, “skyrocketing prices, price-gouging and an unreliable supply of electricity.”

While the full story may not be completed for several years after legal actions are taken against individuals and corporations, it is clear that the influence and “free market” ideology from companies such as Enron dominated the energy public policy of the 1990s and led to serious corporate ethical as well as economic questions today. Enron is not, as recent articles in the Economist argue, simply a matter of an alleged bad or corrupt accounting firm (Andersen). After all, the rhetorical question is, who asked Andersen, the client, to create and then monitor the Enron finances? And then who accepted the accounting results and promoted them to Wall Street, investors, and employees’ retirement funds?

Enron executives for years told Andersen what to do and why. Enron paid the bills and was the client. The ethics of corporate governance is really the issue. As

Rich notes (6 July 2002) the number of firms using similar mis-information for accounting over the last few years has lead to an erosion in public confidence in the economy as seen in the fact that “the markets had hit their worst half-year finish since 1970, the NASDAQ was at a five-year low, the dollar was on the skids and, despite much evidence to the contrary, a majority of Americans had told CNN/USA Today pollsters that the country was in a recession”.

The impact on market forces controlling sectors such as energy is just moving “government regulated monopolies” like the public utilities in the USA to “private sector monopolies.” The public is the loser in both cases. Governor Davis agrees with observers, like the Economist, who note that the real issue is the energy infrastructure. In fact, soon after his election, Davis formed a Commission for the Building of the 21st Century (Infrastructure) whose final Report was issued in March 2002. The Commission addressed eight infrastructure sectors (energy, water, transportation, education, etc.) and concluded much the same: “lousy infrastructure already costs money”, hence infrastructures need public-private partnerships to improve and rebuild. (Commission, 2002: www.bth.ca).

What all this means for California, as the Economist concluded in its “The Fans are Turning” article, is “By trial and by error, California continues to light the way for the rest of America” (19 April 2001b). Perhaps California leads the world, as the most dynamic industrial economy confronts and solves the energy crisis, by turning it into an energy challenge and opportunity. Prior to the summer of 2001, almost every analyst predicted that California would be about 5500 MW short of power from its total consumption of about 55,000 MW capacity. Nevertheless, the summer came and went with no blackouts. Yet the energy crisis is not gone as some shortages occurred in the Summer of 2002, due mainly to transmission line outages from wildfires. However, future energy shortages are predicted and must be met.

Since most economists view sectors in terms of supply and demand as they seek equilibrium between price and quantity, consider both sides now that the Summer of 2001 has come and gone without the predicted energy crises occurring in California. The future of California can be seen in the programs, plans and policies instituted by its Government collaborating and working together. A Report on the Summer of 2001 Energy Crisis (CEC, 2002) from the California Energy Commission confirms that observation—through conservation and efficiency program along with some milder weather, the State got through the summer of 2001 and winter of 2002. Nevertheless, the State needs a reserve capacity of 15–20% to assure its energy needs for the future.

Rather than leave the energy infrastructure to market forces, as legislated under de-regulation in 1996, the State has legislated that there will be more coordination

and planning as well as financing to support the energy needs of its citizens. For California to control its own future, it must guide its infrastructures such as energy in seeking and implementing that future. All nation-states face the same challenge.

Many economic assessments, such as the CBO (2001), mistakenly argue that “the prospects for successful (e.g., energy) restructuring would also improve if consumers faced the full or real costs of electricity and were able to adjust their use of power in response to changing prices.” It is this typically narrow economic analysis that is part of the problem. The World Bank, for example, released a report on the California Energy Crisis in the mid-Fall 2001 with very much the same mistaken analysis. As Woo (2001) and others note, however, the solution in California and other nation-states might well be in “a reversible regulatory system” which is “a safe alternative to an irreversible market system”. In other words, the energy infrastructure must be able to adjust rapidly to demand while keeping prices stable. Homes and businesses cannot operate with uncertain energy costs.

On the supply side, traditional economists have argued too that market power must be free or un-regulated to function properly. Again the CBO notes for example that “removing regulatory restrictions on the sale of power throughout the broad western (USA) market ... would help make the supply of electricity more responsive to changes in prices.” Reality and facts prove a different cause and conclusion however.

What the State of California discovered, the California Public Utilities, the California State Attorney General Office, and now the US Congress have under investigation along with the Federal Energy Regulatory Commission (FERC). Everyone acknowledges that the California energy suppliers were “gaming” the market such that they reaped enormous profits. The collapse of Enron in December 2001 simply provided the proof to the theory. The basic issue is that economic or markets cannot be the sole determining or even primary factor in decisions made about infrastructures. As Brown (2002) commented at an Economic Conference, there are “non-market” forces of more importance. What are those non-market forces? Much of it is in the public or governmental arena as demonstrated by California’s response to the energy crisis.

3. California responds to crisis

While the legal and regulatory issues have not been solved yet, the need for stable and reliable market prices was solved initially by California Governor Davis in an Executive Order in January 2001 requiring the Department of Water Resources to become the stable purchaser of power under long-term contracts. Granted that much of the power was natural gas fired “power peakers” for

the Summer and Fall of 2001, but the decision along with others to keep prices “capped”, re-enforced by FERC in late Spring 2001, stabilized the price of power in California. The market responded by lower natural gas prices creating a stable energy system. Since then, the California government has undertaken a long series of re-negotiations with the companies who provided the long term contracts to reflect the much lower energy prices by the spring and summer of 2002.

Still the long-term strategy requires a more diverse energy portfolio and back-up or reserve power plan. And the market can create new technologies -- fuel cells (Economist, 24 July 1999a) as well as is a partner in the infrastructures of the future—hydrogen (Economist, 24 July 1999b). California’s Governor and legislature, for example, created the California Power Authority (CPA) with \$5 billion in bond funds to build a long term, diverse and stable energy system. The CPA only began operations in the Fall 2001, but its impact has already been felt. It has built upon the Governor’s successes in renewable energy power generation systems and advanced new technologies and resulted in a “Clean Energy Plan” for the State issued in February 2002 California Consumer and Power Authority, 2002 (see www.cpowerauthority.ca)

Furthermore, market structures are needed for renewable and clean energy. Again, the California Governor’s Wind Forum in the Spring of 2001 yielded more than 1500 MW of new wind agreements through the CPA by the Fall of 2001, almost doubling the current 1700 MW installed in the State. Even more significantly, the Wind Forum spun off a Public-Private Sector Intermittent Resources Working Group that successfully solved the issue of how to account for “intermittent power” (e.g., wind, solar and run of the river) by bringing industry, government and the California Independent Systems Operator’s (CAISO) staff together. FERC approved these “revolutionary new tariff rules” on 28 March 2002 (see <http://www.caiso.com/docs/2002/02/01/200202011116576547.html>)

The Governor’s Office has led other public-private initiatives. One important area to the State is in emerging and advanced technologies where the California Air Resources Board formed the Fuel Cell Partnership for Vehicles in 1999 and in late Summer (2001) formed a State Consortium for Stationary Fuel Cells. The former is actively promoting and supporting the mass-market introduction of fuel cell vehicles into the California market. The latter already has developed a new Request for Bids and Proposals that now provides transparent finance mechanisms for the C as well as all state agencies. This is a key issue since the State of California has on the Governor’s Web Site Governor’s Web Site, 2001–2002 (www.governor.ca.gov) identified a matrix with detailed

data about rate-payer, bonds and other funds available for renewable and energy efficiency projects.

Several reports, legislators, and the Governor (March 2002) have called for a Renewable Portfolio Standard (RPS) whereby California will have 20% renewable energy by the year 2010. California will at least double the percentage of the state’s renewable energy generation and then continue to increase it thereafter. In short, California has shown that renewable energy can be produced and be cost effective. The costs for wind power today, for example, are comparable to that of natural gas (Bolinger and Wiser, 2002). Even more compelling is the fact that the wind, for example, does not cost anything to supply! Wind is natural and hence a clean energy source. Drilling for natural gas or use of other fossil energy can be costly, polluting and subject to supply-side price manipulations as was seen in California over the last year (Fairley, 2002).

Clearly in the background, but not so distant, is the role of utilities in not just energy but also in other infrastructure areas such as waste, environment, and water. The aftermath of 911 has seen the federal and state governments respond directly to the security of transportation. The hiring, training and supervision of a massive security workforce demonstrates the need for public oversight and in many areas regulation. The private sector and market forces can be entrusted with the public good and welfare. Corporate needs to make a profit to the degree that Enron and other corporations have done so prove that the role of government must be vigilant and constant.

Furthermore, as Kuttner (2002) comments on the background to Enron, other critical areas of American society are also involved in a similar history of negative results as the energy sector. He notes in particular the telecom industry where the virtues of privatization have now led to market economic crises. That was Kuttner commenting in March 2002, fully 2–3 months before first Global Crossing went bankrupt and now WorldCom stands in the wings, both being prime examples of how market forces will do almost anything to justify the bottom line. In the end the government and the citizens of all nation-states will pay.

California appears to be the first nation-state to define and implement “sustainable development” as outlined by a number of international organizations over the last 20 years (Clark, 1998). Its citizens and leaders are acting now. As the Economist has noted before, the world is watching for California to take the lead again. However, the international energy sector is watching just as closely. Meetings organized by the UN and multilateral groups are carefully reviewing the need and wisdom of privatization or de-regulation for energy (Bradshaw and Clark, 2002; UNEP Paris Meeting, 2002; Pickhardt and Niederprum, 2002, among others).

4. Conclusion

Careful consideration must be given as well to other infrastructures and their relationships to market forces. The future will most likely be public-private partnerships that focus on how private firms collaborate with public needs. Elsewhere (Clark and Lund, 2001) this concept is called “Civic Markets” and the models exist for how such organizations can work (Clark, 1996; Clark and Jensen, 2001). What needs to occur now is a far more intense dialogue and a public process of developing models and organizational plans that can implement such partnerships, such that infrastructure sectors can become more viable and flexible in the future meeting each generation’s demands while providing a clean and healthy environment. Hopefully, this article will inspire such a dialogue.

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