



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

March 8, 2001

MEMORANDUM TO: Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield

FROM: Dennis K. Rathbun, Director *DR*  
Office of Congressional Affairs

SUBJECT: ELECTRICITY DEREGULATION AND THE CALIFORNIA  
EXPERIENCE

The House Energy and Commerce Committee has been holding hearings on the California energy crisis. Recently the Subcommittee on Energy and Air Quality held a hearing on lessons learned about electricity markets from the California situation. At that hearing, John W. Rowe, president and co-chief executive officer of Exelon Corporation, testified that California is not a signal that competition and deregulation cannot work; he described the positive experiences in both Illinois and Pennsylvania. During his testimony he highlighted the fact that in 1999 nuclear generation accounted for approximately 50% of the electricity generated in Illinois and 36.5% of the electricity generated in Pennsylvania. He said that substantial nuclear baseload capacity helps insulate utilities from the extreme variability experienced in natural gas prices.

Mr. Rowe's testimony is attached.

Attachment:  
As Stated

cc: EDO  
OGC/Cyr  
OGC  
SECY  
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ACRS/ACNW  
OCAA

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John W. Rowe, president and co-chief executive officer, Exelon Corporation

FEBRUARY 15, 2001

EXECUTIVE SUMMARY OF TESTIMONY BY JOHN W. ROWE

The recent crisis in California is not a signal that competition and deregulation have failed, but a forceful lesson on the importance of doing it right. The Illinois and Pennsylvania experiences are proof that restructuring can work. Illinois is allowing all customers to choose their electric supplier on a phased timetable. To date, nearly 30% of eligible sales in the service area of ComEd, Exelon's Illinois utility, have chosen to take unbundled service. In Pennsylvania, more customers of PECO Energy, Exelon's Pennsylvania utility, have chosen a competitive supplier than those of any other electric distribution company. Unlike California, restructuring in Illinois and Pennsylvania has had positive results for customers.

Unlike California, both Illinois and the Pennsylvania-New Jersey- Maryland Interconnection ("PJM") to which PECO Energy belongs have seen adequate development of new generating supplies. Less than 1,000 MW of new generation have been built in California in the last five years, while over 2,000 MW have come on line in ComEd's territory alone, with another 3,600 MW expected this year. In PJM, 16,000 MW are expected to come on line by 2004. These come on top of a diversified generating base which is less dependent than California on natural gas and has extensive baseload nuclear capacity.

Both Illinois and Pennsylvania have avoided the market structure flaw that has come close to bankrupting the California utilities. While utilities retain fixed price obligations to retail customers, they have the tools necessary to manage their electricity costs, including the ability to retain generation ownership, the ability to enter into long-term power purchase agreements, and the authority to hedge their exposures on the wholesale market.

TESTIMONY OF JOHN W. ROWE

Mr. Chairman and Members of the Subcommittee:

I appreciate the invitation to appear before the Subcommittee to discuss the impact of electricity market restructuring both in California and in other states. My name is

John W. Rowe. I am the President and Co-Chief Executive Officer of Exelon Corporation. Exelon, formed last year by the merger of Unicom Corporation and PECO Energy, is headquartered in Chicago, Illinois. We serve over five million customers principally in Illinois and Pennsylvania, which have both restructured their electricity markets. My testimony today will focus on the very positive results in both of those states, and will briefly suggest some actions that I believe Congress should take to enhance electricity supplies and competition in wholesale markets nationwide.

California heralded the New Year with a wave of rolling blackouts, spiraling wholesale electricity prices, and threatened utility bankruptcies. The state which symbolizes the electronic age, and that represents roughly an eighth of the U.S economy and of its population, faces electricity supply issues not seen since the Great Depression and the collapse of the great utility holding companies. Nonetheless, the recent crisis in California is not a signal that competition

and deregulation have failed. It is my firm belief that market-oriented restructuring of the electric industry remains the best opportunity we have to provide consumer benefits and to develop reliable new sources of supply. Indeed, the experiments in market-based restructuring that are underway reflect the previous failures of public confidence in long-term planning by public utilities and regulators.

Both the Illinois and Pennsylvania experiences - about which I will be speaking today - are proof positive that thoughtful, market-oriented, evolutionary restructuring works well for all concerned. The California experience was not an accident or the product of bad luck. It was the product of choices - choices about siting generation and transmission, and choices about a market design that imposes asymmetric risks on utilities to the ultimate detriment of all. If other states make similar choices, similar consequences can be expected to follow. In short, the California experience is no reason to reject restructuring; it is rather a forceful lesson on the importance of doing it right.

#### Status of Restructuring in Illinois and Pennsylvania

When Illinois restructured its electric industry, it was cognizant of the risks that both utilities and consumers faced. Instead of the radical approach taken by California, Illinois adopted a phased-in plan that protected consumers, allowed utilities to manage their costs, and encouraged the development of new generation. Illinois' Customer Choice law was enacted in late 1997. It allows all retail customers to purchase delivery services from their utility and to choose their electric supplier on a schedule phased in over three years. The largest customers were eligible for such choice in the fall of 1999, and all non-residential customers are now eligible. Recognizing that the benefits of supplier choice accrue first to large customers, which competitors are more eager to supply, the legislature deferred residential customer choice until May 2002. In exchange, the law provided for an automatic 20% rate cut for residential customers. Customers were shielded from the volatility of market prices for electricity because ComEd is required to continue offering bundled retail service at cost-based rates until a fully competitive market develops. At the same time, however, utilities are given tools to manage their electricity costs, including the ability to retain ownership of generating plants, to enter into long term purchase power agreements and to hedge their exposures on the wholesale market.

As of February 7, 2001, over 10,000 customers in ComEd's service territory alone have chosen to take unbundled service. This amounts to 4,500 MW of load (a megawatt is about equivalent to the power needed to serve 1,000 homes) and 17.8 million MWh of electric service. This constitutes nearly 30% of the sales that were eligible for unbundled service under the law. Illinois has experienced no adverse consequences from restructuring; neither reliable electric supply nor the financial health of the utilities has suffered, and new construction of generation has received an impetus.

Pennsylvania has also embarked on a successful restructuring. Pennsylvania's retail restructuring began in December 1996 and all retail customers have had the right to choose their electric supplier since January 2000. To date, about 18% of the customers of PECO Energy, Exelon's Pennsylvania utility, have chosen a competitive supplier, and because the larger customers have a higher rate of switching, this amounts to about 35% of PECO's peak demand. PECO has more customers in the competitive market than any other U.S. electric distribution company. One reason for the higher rate of switching in Pennsylvania is that customers were given higher incentives to switch and a certain number of customers were actually required to switch suppliers.

Pennsylvania also has significant advantages that will allow it to avoid the California experience. Wholesale electric markets in Pennsylvania and neighboring states, and the institutions that manage those markets, are the most mature in the country. PECO Energy's service territory is located in a regional transmission organization and power pool known as the Pennsylvania-New Jersey- Maryland Interconnection, or "PJM." PJM is the most mature, liquid, and efficient wholesale electricity market in the country. To date, these institutions have shown themselves sufficiently flexible to avoid the price spikes experienced in California. In large part, this success has resulted from the fact that PJM provides a reasonable and stable environment for companies to make investment decisions about generation and because PJM operates a wholesale market in which power sales can occur efficiently. Pennsylvania law also contains protections for retail customers, while at the same time allowing utilities to recover and manage their costs of supply. Like Illinois, Pennsylvania's rules for the transition to competition were designed to protect retail customers while the market matures. In PECO Energy's service territory, there will be a transition period until 2010, during which PECO is required to provide service at capped rates. Rate for energy delivery are capped through 2006. As in Illinois, this transition period provides significant protection for all retail customers.

Illinois and Pennsylvania Have Avoided the Supply Problems Experienced in California In a restructured market, it is essential to encourage development of new generation by independent producers that is adequate to meet growth in demand. In Illinois, ComEd has taken a proactive stance in encouraging developers in its service territory, and the results have been gratifying. Today, 2,000 MW of new capacity have already come on line. This year we expect over 3,600 MW more to come on line, all of which is permitted and is currently under construction. In 2002 another 7,500 MW are scheduled to come on line, of which 3,600 MW are currently in a definitive stage, that is, either construction has begun or equipment has been ordered. For the longer term, over 11,600 MW are projected for 2003; none of those projects is yet in a definitive stage.

PJM has also been successful in encouraging adequate development of new capacity. Currently, 46,000 MW of new generation projects have applied to be interconnected to the PJM transmission system. Of that amount, 16,000 are in a stage that gives confidence they will come into service by 2004 - 4,200 MW are already under construction, construction is about to begin on another 9,100 MW, and 3,700 MW consist of upgrades to generation stations that are already operating.

The capacity increases in both Illinois and Pennsylvania have come on top of a large base of reliable generation using diverse fuel sources. ComEd has at its disposal a number of large nuclear and coal units for its baseload generation. Exelon owns the largest nuclear fleet in the country and in recent years the plants have been performing extremely well. California has not only experienced great difficulty in expanding its generation to match growth in demand, but is far more dependent on natural gas and imports from other markets. By way of illustration, in 1999, just over 16% of California's power was generated by nuclear plants(1), while nuclear generation accounted for approximately 50% of the electricity generated in Illinois(2). Although ComEd also can turn to extensive natural gas fired resources during peak hours, for the 12 months ending last September, we depended on gas-fired generation only about 1% of the electricity we sold.(3) In Illinois as a whole, gas was responsible for less than 3% of power generated in 1999(4), whereas it was responsible for 31% of electricity consumed in California (5). Pennsylvania, like California, has substantial nuclear generation and less reliance on natural gas. In 1999, nuclear  $\geq$  power accounted for 36.5%, and natural gas 2%, of Pennsylvania's

electricity.(6) Substantial nuclear baseload capacity helps insulate utilities from the extreme variability experienced in natural gas prices.

California's record on building generation of any type has also been poor, and analysts agree that this is a root cause of California's problems. Less than 1,000 MW of new generation have been built in the entire state of California in the last five years.(7) Far from reducing California's dependence on imports, this construction has failed to keep pace with demand during a period of significant growth in the California economy. For example, between 1996 and 1999, 672 MW of new generation came on line in California, and during the same period the peak demand increased by over 5,500 MWL8@. The bedrock lesson of the California crisis is that states must recognize the need to encourage new power plant construction. States must avoid imposing unduly restrictive regulations and lengthy and labyrinthine permitting and siting procedures, and must be ready to site not only gas-fired peakers, but new baseload capacity as well. Illinois and Pennsylvania Have Avoided the Market Failures Experienced by California

Illinois and Pennsylvania have also shown that restructuring can be accomplished while avoiding the market flaws inherent in the complex California scheme. Unlike California, where the legislature imposed rigid and inefficient market structures in advance and required a flash-cut to competition with no transition period, Pennsylvania had a pre-existing wholesale market and restructuring in Illinois was phased in over three years, giving market participants time to develop workable offerings as the market evolves on its own. Both have avoided the market design flaw that has nearly bankrupted the California utilities.

First and foremost, both Pennsylvania and Illinois allow utilities to manage their supply obligations and hedge the costs of meeting them. Mature, stable commodity markets include spot, short-term, long-term, forward, option, and futures products and buyers and sellers use these products to reduce and manage their risks. Electric utilities use these tools, as well as their own physical generation or generation under contract, to manage their risks.

California made that difficult or impossible. In California, the utilities were required to divest all non-nuclear and non-hydroelectric generation, and to sell their remaining generation into a daily central spot market from which they were required to buy all the power they needed to serve their customers every day. The utilities' ability to hedge their exposure in that market was severely restricted. The restriction on hedging was compounded by the sale of the utilities' generating assets. California utilities sold much of their own generating capacity and retained obligations to serve retail customers at fixed prices, while at the same time being unable to enter into long-term power purchase agreements with the buyers - the type of contracts that California officials are now turning to in an attempt to address their problems. When the problems with this became apparent, California had artificial rate caps imposed, which further blurred price signals to generators.

By contrast, Illinois and Pennsylvania utilities are able to use market tools to manage their supply risks. Both Illinois and Pennsylvania utilities are free to hedge their exposure to wholesale market risk through power purchase agreements and other market tools to control future price risks. They have also been able to divest generation where it is economically rational to do so, while entering into long-term purchase arrangements with the new owners of the plants - as well as other generators. Exelon provides an example of how this policy can be successfully implemented. Exelon believes that all generation in a competitive market should be on the same unregulated footing, and also that all generation in a control area should not be in the hands of a single owner. Consistent with this philosophy, ComEd sold all its fossil generation to

non-affiliated parties by 1999. This year, both PECO Energy and ComEd transferred their nuclear generation to an affiliated generating company, Exelon Generation Company. In both cases, however, the utilities were able to enter into long-term power purchase agreements that assure an adequate supply of power at reasonable prices. In short, Illinois and Pennsylvania have chosen to keep their utilities as active players in the power markets, rather than to drive them out.

In sum, restructuring has not been the cause of California's problems. Policy choices have, however, contributed to the crisis. We must avoid making similar policy choices, just as we must continue to move toward efficient competitive markets in electric power. Both Illinois and Pennsylvania show that this can be accomplished, to the benefit of all.

For the longer term, Illinois and Pennsylvania, as well as all other restructured markets, will have to find solutions to the chicken-and-egg problem inherent in the transition to full competition. The more responsibility for arranging supply the delivery company is made to retain, the less incentive and ability new entrants in the market will have to compete. Wholly eliminating the delivery company's supply obligations would expose customers to too much risk, but requiring the delivery company to supply electric service to all customers at low rates may stifle competition. The utility will be forced to lock up so much of the available supply through forward contracts that competitive suppliers will have reduced wholesale supply choices. Moreover, if delivery company rates for supply are kept low, competitors may have difficulty beating them. Creative solutions to this problem are the final stage of restructuring. Such solutions must be found, because there is simply no going back to the model in which a monopoly utility makes all the plans for an area of the country.

#### What Should Congress Do About Electricity Markets?

I hope that my testimony today will convince the Members of the Subcommittee that competition and deregulation can, indeed, lead to positive results. The situation in California, when contrasted with Illinois and Pennsylvania, clearly shows the importance of doing it right. Proper market structures are not something of importance solely to academic economists; they are vitally important in the real world.

As the Members of this Subcommittee contemplate their legislative agenda for the new Congress I would encourage you to think about an electricity supply initiative. It is vitally important that we have adequate electricity supplies to serve a healthy, growing economy. It is also vitally important that we have robust, healthy, wholesale electricity markets. Most observers believe that the retail market issues are best addressed by State authorities. However, the wholesale market issues are clearly the responsibility of Congress and other Federal officials.

There are a number of statutes on the books, such as the Public Utility Holding Company Act (PUHCA) and the Public Utility Regulatory Policies Act of 1978 (PURPA), that inhibit development of electricity supplies by limiting market entrants. There are also a number of tax issues that the Congress should address, such as the tax consequences of selling transmission assets to form Regional Transmission Organizations (RTOs) and depreciation schedules for utility assets. Action on both fronts is long overdue and would facilitate the development of more robust, competitive wholesale markets to the benefit of all consumers.