THE ELECTRICITY DEREGULATION EXPERIENCE
SUMMER 2000

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A number of other states have attempted to restructure their electricity markets. Their restructuring legislation was largely based upon untested economic theory and incorporated little of the experience from the markets that are furthest along in the process. This paper is based upon newspaper articles published in the Summer of 2000 in those states which have actually deregulated their electricity generation sector. These articles make it clear that states which have implemented deregulation or restructuring of the electricity market have not experienced the expected short-term benefits. The theoretical long-run benefits have yet to be realized in any market and probably will be very difficult to document in practice. In general, the non-storability of electricity, the fact that electricity is a necessity with no real substitutes and the need for real time balance of supply and demand to ensure reliability, have made restructuring of the electricity market an extremely difficult exercise.

I. DEREGULATION OF ELECTRICITY MARKET PRESENTS A UNIQUE CHALLENGE

1.1. *ELECTRICITY UNLIKE OTHER PRODUCTS.* Over the past thirty years, many industries such as airlines, long distance telephone service, and trucking have been deregulated. Minnesota consumers have experienced both benefits and problems from such deregulation. Today, some large volume electricity users and utilities favor deregulating Minnesota's electric industry. But several unique characteristics of electricity make deregulation of electricity a much greater challenge than that experienced with other deregulated industries.

1.2. *NECESSITY.* First, electricity is a necessity for every aspect of modern life. If long distance charges or air fares are too high, consumers can choose not to buy the product or can choose an alternative, such as mailing a letter, driving, or simply waiting for a lower price. But consumers depend on electricity for heat in the winter, air conditioning in the summer, light at night, and for the refrigeration of their products. The purchase of an airline ticket is not a critical necessity of life. The operation of a hospital, the air conditioning of a senior high rise complex, and the heating of a home all have critical consequences that depend upon the reliability and the affordability of electrical power.

1.3. *NO STORAGE OR ALTERNATIVE SUPPLIES.* Second, unlike any other commodity supplied by competitive markets, electricity cannot be economically stored. Other commodities – grain, natural gas, even petroleum - can be stored so that supplies are available to keep prices low even while meeting peak levels of consumer demand. The lack of storage and lack of alternatives to electricity mean that there are no such buffers for periods of peak electric demand. Further, because electricity is such a necessity, consumers tend to reduce consumption very little as the price increases. Economists refer to this as "inelastic demand." As a result, on a hot summer afternoon when temperature and humidity are at peak levels, there must be enough generating plants to produce electricity to meet that demand, or unregulated market prices for electricity will increase dramatically. In addition, any shortage in supply can lead to brownouts, rolling blackouts or regional power failure. These characteristics make it very difficult for competitive markets to supply electricity reliably and efficiently.

1.4. *"REAL TIME" GRID BALANCE.* Third, electricity is unlike most products in that the sum of electrical generation from all generators must equal the total amount of power used by all customers at every moment in time. Balancing supply and demand without overloading particular transmission lines depends upon a complex "grid" system that manages generators and power lines across North America.. An imbalance between electric supply and demand doesn't just mean a few consumers won't get all the power they would like. Rather, such an imbalance, if not quickly regulated within the "grid", can lead to reduced power levels or a complete power failure within the system. This necessity of continuously balancing the electricity grid results in electricity consumers being dependent on the existence of an effective and fair grid regulator who is independent from the owners of power plants and transmission lines.

1.5. *GENERATION, TRANSMISSION AND DISTRIBUTION.* The electricity industry has three distinct components: *generation, transmission*, and *distribution*. Once electricity is *generated*, whether by burning fossil fuels, harnessing wind, solar, or hydropower, or through nuclear fission, it is sent through high-voltage, high-capacity *transmission* lines to the local regions in which the electricity will be consumed. When the electricity arrives in the region in which it is to be consumed, it is transformed to a lower voltage and sent through local *distribution* wires to end-use consumers.

1.6. *BUNDLED PRODUCT.* Historically, each of these vertically related sectors have been tied together to produce a "bundled" product called electric power. For many years, electric power has been sold at regulated prices by the distribution utility

that had exclusive rights to serve specific geographical markets. The distribution utility would either own, or buy transmission and generation services at federally regulated rates. The end result was a regulated monopoly supply.

1.7. *ELECTRICITY REGULATION: 1935 - PRESENT.* As discussed in a recent news article, electricity has a long history of being regulated as a "natural monopoly":

> In the 1930s an epic struggle began over regulation of the electrical utility industry. East Coast holding companies had captured the emerging industry, charging exorbitant rates and refusing to extend service to rural farmers and consumers. By the mid-1930s, some 150 holding companies controlled 1400 utilities.
>
> A typical scenario was that of Clark County, Washington. The Northwestern Electric Company leased lines and transformers from Pacific Power and Light Company. American Power and Light Company, based in Chicago, owned all the shares of Northwestern Electric and Pacific Power. American Power and Light was, in turn, wholly owned by Electric Bond and Share Company (now known as EBASCO.)
>
> Former Supreme Court Justice William O. Douglas, then a key advisor to President Franklin Roosevelt, noted, "Through exaggerated fees, the (holding) company saddled the operating companies with enormous charges, which in turn were paid by the consumers of gas and electricity."
>
> Roosevelt barely pushed through Congress the Public Utility Holding Company Act of 1935 in one of the toughest legislative battles of the New Deal. The act closely regulated private utilities and restricted their practices when operating across state lines.
>
> Soon after, the Rural Electrification Administration was formed to provide electrification to rural farmers refused service by private utilities. Massive public works projects such as the Tennessee Valley Authority and the Bonneville Power Administration were built.
>
> In Washington, private utilities bitterly fought the construction of the Grand Coulee Dam in 1934. They also fought the emergence of public power in the form of public utility districts (PUDs), consumer-

owned electrical suppliers that were supported by an unlikely alliance of Grangers and organized labor.

* * *

Against this historical backdrop, Congress and many state legislatures are poised to pull the plug on regulating electrical utilities and once again leave consumers at the mercy of the 'free market.' Utilities have long acted as regulated "natural monopolies" because they control generation, long distance transmission and local distribution of power. Now, under the 1992 Energy Policy Act, those services may be divided amongst competing marketers. This could result in the wholesale giveaway of cheap electricity to large industrial users. And once again the small customer may be left sitting in the dark. (Tab 38)

1.8. *PURPA AND "WHITE ELEPHANTS"*. The roots of electricity deregulation go back to 1978 and the federal Public Utility Regulatory Policy Act (PURPA). Under PURPA, utilities were required to buy power from "qualifying" independent power producers (mostly small generators, or ones using renewable energy sources) at a price approved by regulators. Because the goal of PURPA was to decrease dependence on foreign oil and to encourage alternative energy supplies, regulators in many states approved very high prices for long-term PURPA contracts between utilities and independent power producers. These state regulators then permitted the utilities to pass these prices through to consumers when approving electricity rates.

At the same time, many utilities were building nuclear power plants. Many of these nuclear plants, originally planned to provide cheap and clean power, turned out to be extremely expensive because of unforeseen construction costs, increased safety regulation, and higher than anticipated upkeep and waste disposal costs. Regulators typically approved higher electricity rates so that utilities could recover their excessive nuclear plant costs from retail customers.

As a result of these uneconomic "PURPA" contracts and "white elephant" nuclear power investments, consumers in some states found themselves with electricity rates that were substantially higher than neighboring communities. In the meantime, many communities, including most areas of Minnesota, retained relatively low electric rates. This was particularly the case with communities electrified by generators powered by natural gas, which was substantially cheaper

in the 1980's. Those states with high rates have had the most extensive debate, generally promoted by large industrial consumers, concerning the restructuring of the electricity industry.

1.9. *FEDERAL DEREGULATION EFFORTS.* The Federal Energy Regulatory Commission ("FERC") regulates the interstate transmission of electricity and the wholesale sale of electricity. In 1996, FERC required transmission owners under its jurisdiction to provide open access to their transmission services and to sell those services to wholesale buyers on a competitively neutral basis. FERC's intent was to introduce competition at the wholesale level and to keep utilities from using their control of the transmission system to limit the entry of lower-priced generation. More recently, FERC has ordered utilities under its jurisdiction to propose plans to join Regional Transmission Organizations ("RTOs") that will facilitate wholesale electricity trading and help manage the reliability of the transmission system.

1.10. *TRANSMISSION LINE "GOVERNORS".* The management of the transmission of electricity critically affects the reliability of the electric supply. The supply of electricity must match the demand for electricity in "real time" in order for the electrical grid system to be reliable. If too much electricity is transmitted, the resulting power flow can overload transmission lines and cause blackouts. Conversely, if insufficient electricity is transmitted the system can suffer from "brownouts." Accordingly, the transmission system must be continually monitored to make sure that the supply and demand are balanced, and that transmission lines are not overloaded.

These operations are currently maintained by regional reliability councils ("RRCs") that make up the North American Electric Reliability Council ("NERC"). In a number of regions that have deregulated, Independent System Operators ("ISOs") have been created to implement and oversee grid management in much the same manner as the regional reliability councils.

II. ELECTRICITY DEREGULATION EXPERIENCE

2.1. ELECTRICITY "DEREGULATION" IS A FORM OF RE-REGULATION THAT SHIFTS REGULATORY CONTROL TO INDUSTRY BOARDS.

The principle behind deregulation is that competition, not a public regulatory board, will allow the consumer to select the optimum price, service and quality of a product. The experience with electricity restructuring, however, is that it transfers

many economic decisions from a public regulatory board to a private board, and not to the consumer.

Under the current regulated structure, the Minnesota Public Utilities Commission or other local authorities set the rates Minnesota utilities charge consumers.

In a deregulated structure, the consumer pays several different companies. The consumer chooses to purchase electricity at a deregulated "market" price from one of several generation companies. (Tab 29) The consumer also pays for the monopoly transmission services that transmit the energy from the power plants where it is generated to the substations of the local distribution utility. The distribution company then distributes the electricity from the substations to the consumer. Transmission and distribution will continue to be regulated monopolies and to charge rates approved by federal and state or local regulators.

Because the electric transmission system is the sole means of transporting electricity from competing power producers to consumers, and because reliability of the transmission system can directly affect whether competitors have access to the market, most deregulation efforts require an Independent System Operator ("ISO") to operate the transmission system as a "level playing field" that is fair to all competitors. In so doing, ISOs, like state regulatory authorities, can have significant impacts on the price of electricity. But, unlike state regulatory authorities, ISOs are not directly accountable to state and local elected officials and citizens.

2.1.1. *CALIFORNIA EXPERIENCE*. In 1996, California enacted legislation to deregulate the electricity industry. The legislation enabled the creation of a private "nonprofit" corporation known as the California Independent System Operator or "CAL-ISO." (Tab 17) CAL-ISO is a non-profit corporation managed by a 26-member Board of Governors composed predominantly of industry and special interest group members. It owns hundreds of millions of dollars worth of computer hardware and software, and has 450 employees who monitor and operate the California electric system. (Tab 17)

To maintain system reliability, CAL-ISO must constantly monitor and regulate the flow of electricity so that the electricity generated by competing generators equals the electricity consumed by the consumers at any given time. Every four seconds CAL-ISO acts as a governor and increases or decreases competing generators' electricity production to balance the amount of energy

pouring into the transmission system with the amount of electricity consumed in the state. (Tab 17)

CAL-ISO can also serve as a regulator of price. On several occasions since 1998, the California electricity grid has experienced power shortages during peak demand. On some occasions CAL-ISO has ordered temporary power interruptions to its consumers or "rolling blackouts". (Tab 13) In such instances, the loss of power caused tremendous consumer outrage and adversely affected business development. (Tab 13) On other occasions, CAL-ISO purchased electricity on an emergency basis, paying up to $9,999 per megawatt-hour on June 13, 1998. (Tab 17) These prices are far above the usual $35 to $70 it costs most utilities to produce a megawatt-hour. (Tab 17) Consumers reacted angrily to bills showing tremendous and unpredictable price increases. (Tabs 25, 26, & 27) For instance, in July of 2000, San Diego consumers experienced a 240% increase over the rate paid 45 days earlier. (Tab 7)

After the 1998 energy crisis, CAL-ISO established a rate ceiling at which it would purchase electricity: $750 per megawatt-hour. (Tab 17) In June of 2000, CAL-ISO paid this rate and passed it on to unhappy consumers. As a result, Senator Steve Peace, the author of the 1996 electricity deregulation bill, demanded that CAL-ISO lower its price ceiling to $250 per megawatt-hour. (Tab 5) CAL-ISO refused to do so, stating that with a cap of $250 per megawatt-hour, energy generators would bypass California and sell the critically needed electricity to consumers in Phoenix and Las Vegas. (Tabs 16, 17) After much protest, CAL-ISO in July agreed to establish a $500 per megawatt-hour price ceiling. (Tab 15)

During the June 2000 peak, CAL-ISO also found that it could not buy all the energy it needed at the $750 per megawatt-hour rate. Accordingly, it ordered Pacific Gas and Electricity Co. to institute a "rolling blackout" where three power substations, each serving about 35,000 San Francisco Bay area consumers, were alternatively shut down for about an hour and a half. (Tab 13) This particularly alarmed Silicon Valley businesses because of the critical need such high-tech companies have for reliable and continuous energy. (The electricity industry standard for reliability is to have no more than eight hours of power interruption per year. The reliability standard for the high-tech industry, however, is to have no more than 30 seconds of power interruption per year. (Tab 16)

The California experience with CAL-ISO is that the ISO has taken over many functions carried out by a Public Utility Commission and regional reliability councils ("RRCs") prior to restructuring. For example, it has taken over the

responsibility to balance energy production and consumption and to determine, at peak periods, the amount of energy customers can consume. ISO has also taken over other functions carried out by state regulators prior to restructuring, such as:

- ordering Pacific Gas & Electric to shut off electricity on 97,000 consumers (Tab 13)
- purchasing electricity at a rate of $9,999.00 per megawatt in 1998. (Tab 17)
- establishing a price ceiling at which it would purchase electricity at $750 per hour. (Tab 17)
- lowering the price ceiling to $500 in July of 2000. (Tab 15)
- implementing an emergency plan where certain consumers will be ordered to turn off electricity in exchange for price discounts. (Tab 14)

Thus, CAL-ISO acts as both a utility and a regulatory board. But as a utility, it is not regulated by the state, and as a regulatory board, it is not accountable to state or local elected officials.

Without restructuring in Minnesota, a regional ISO will simply take over some of the transmission and reliability management functions carried out now by Minnesota's utilities and the Mid-Continent Area Power Pool ("MAPP"), which is Minnesota's regional reliability council. But "deregulating" Minnesota's electric industry would allow an ISO to directly influence the so-called "unregulated" market prices Minnesota customers would pay for power, as has occurred in California. The Minnesota experience with non-profit corporations in the health care industry, the financial industry, and the insurance industry has been that the board of a nonprofit entity is not always as responsive to the needs of the public as are public officials.

Minnesota should consider the California ISO experience carefully before deregulating, which would transfer control over a significant part of our economy to a private board beyond the direct reach of state and local regulatory authorities.

2.2. THE PRICE OF ELECTRICITY IN DEREGULATED JURISDICTIONS HAS NOT BEEN SUBJECT TO THE DISCIPLINE OF A COMPETITIVE SYSTEM DURING PEAK DEMAND PERIODS.

2.2.1. *National And California Experience.* The American economy has had an unprecedented growth in its appetite for electricity, increasing

approximately 2% - 3% per year over the past decade. (Tab 16) Ten years ago the use of computers and the Internet consumed 4% of the energy consumed in the United States. It now consumes 14%. (Tab 16) This summer, the nation's power plants will be able to produce about 780,000 megawatts, which is only 80,000 megawatts more than will be consumed. (Tab 2) While there appears to be a balance of supply and demand on a national level, there are inadequate supplies on a regional basis. For instance, during peak demand in California, over 28% of electricity is consumed for purposes of air conditioning homes and industrial plants, and the total peak demand is in excess of the electricity that can be produced in the state. Thus, the state must either purchase electricity (through CAL-ISO) at exorbitant rates or must impose blackouts on consumers. (Tab 17)

Part of the inability of the energy industry to meet the demand of consumers at peak times is because little investment was undertaken in the electricity industry over the past decade. During the 1990s American industry, faced with the prospect of deregulation and of delayed approvals from government, declined to gamble dollars and time on constructing large generation plants that could turn out to be "white elephant" investments. (Tabs 1, 2, &16)

The reluctance of American industry to invest in the electricity industry also extended to the large amount of capital necessary to build transmission lines, which can take five to ten years to complete. As a result, even if there was sufficient energy, the transmission capacity is so limited in parts of California that energy cannot be transmitted to meet peak demand. (Tab 16) The limitation of transmission capacity is also apparent in other parts of the country, such as Wisconsin. (Tab 3)

The imbalance between California energy production and consumption has caused tremendous frustration for California consumers. High tech companies in Silicon Valley complain that it is critical for computers to have a reliable stream of electricity. A power interruption of more than 30 seconds per year is considered to be below computer industry standards, a standard far higher than the eight hours per year set by the energy industry. (Tab 16) According to Bob Hepple, President of cPOWER, a four-month old company that builds small, on-site power generators for data centers, telecommunication companies and other firms, the business is "explosive:"

> "We have rolling brown outs…in the high tech capitol of the world. They will pay millions to make sure their power doesn't ever

go out. They are starting to realize the fragile nature of the grid." (Tab 17)

At the same time residential consumers complain about the unstable prices. San Diego consumers, facing a 240% increase in generation charges over a 45-day period this summer, are particularly angry. (Tab 7) According to Michael Shames, Executive Director of Utility Consumers Action Network in San Diego:

> "…this is just the beginning. This is obscene. ... San Diego consumers are "the ghosts of summer future." (Tab 17)

Patricia Randall, a San Diego senior citizen that lives on a fixed income states:

> "I'm moving my food next door and unplugging the refrigerator…" (Tab 50)

The average bills for San Diego customers have increased from 1999 to 2000 as follows: (Tab 46)

	July 1999	July 2000
Residential	49.50	100.30
Small Business	166.00	334.00
Schools	4,441.00	8,691.00
Supermarkets	19,204.00	41,868.00
Hospital	79,072.00	173,048.00

Attached as Tab 25 and Tab 27 are letters to the editor of the San Diego Union Tribune expressing anger about deregulation. In fact, the anger is so strong that Senator Steve Peace, who authored the deregulation bill in California, is asking consumers to express their anger by withholding payment on their July bill. (Tab 47) The consumer revolt is so strong that 50% of San Diego residents recently indicated in a poll that they would start withholding utility payments. (Tab 47) Senator Peace has now declared:

> "(The state) needs to tell the feds that the power market is not functional in the west and these prices shouldn't be passed on to the consumers." (Tab 48)

The southern California region will be billed $500 million more this year than last year because of deregulation. (Tab 48) Analysts of the California experience conclude that deregulation should not have occurred until there were adequate energy generators and transmission line capacity to create a competitive environment in the marketplace. (Tab 17) During peak demand the capacity of the electricity industry is so tight that even a small generator with a small market share can charge prices far in excess of the cost of production. (Tab 23) For instance, on June 13, 1998, CAL-ISO paid a record $9,999 per megawatt, which is produced by the Los Angeles Water & Power Company for $70. (Tab 17) Unlike other products, the consumer cannot acquire and store an inventory of megawatts to use when there is a shortage of available electricity. As a result, during peak demand periods virtually all generation companies can demand extremely high prices.

Senator Peace, the author of the deregulation law in California, is now conducting legislative hearings to determine whether the deregulation law should be repealed. (Tab 45)

Republican Congressman Brian Bilbroy from San Diego has vowed to hold congressional hearings on whether federal deregulation should continue. (Tab 47)

These price increases have been likened to a multi-billion "energy tax." (Tab 35) At present heavy industries in Oregon, Washington and Montana have cited power bills as a reason for job cuts. Dixie Land Lumber in San Diego operates 12 warehouses locally and has its utility bills at some locations rise from $7,000 to $10,000 and more. Hamid Daudani, the company controller, states his company "can take a little bit of this, but not much more." (Tab 19)

2.2.2. *NEW YORK EXPERIENCE.* The New York Times notes that "Deregulation, which promised more competition, more alternative power sources and lower costs to consumers, appears to be playing transitional tricks…" (Tab 9) The Times attributed a 19-hour Manhattan blackout in July of 1999 and blackouts this summer to the fact that the deregulation process began when the City did not have access to sufficient alternative power sources. (Tabs 40, 42). When Consolidated Edison, the local distributor, purchased electricity on the spot market this summer it passed on a 30% increase in rates to 2.8 million accounts, an act described by Mayor Giuliani as "outrageous." (Tabs 9, 40) The New York City Council is now holding hearings on the issue and the Times called upon the legislature and governor to provide more oversight. It points out that competition won't work if there is insufficient energy sources during peak periods. (Tab 9) Time Magazine noted the following:

> How can power companies be short of power? Under deregulation, vertically integrated utilities like SDG&E and Con Ed (as in Edison, as in Thomas Edison, the man who electrified Manhattan) were allowed to sell their power-generation businesses and become middlemen that buy electricity on the open market from new generator operators and distribute it to their customers. "We work hard to find the best deal for our customers," says Steve Bram, Con Ed's senior vice president of central operations. "But we're at the mercy of the sellers." Those sellers, on the other hand, are at the mercy of--wow!--no one, and with capacity shortages driving up unregulated wholesale prices as much as 50 to 100 times the normal rate, they're doing quite well. "Owners of power plants can extract monopoly rents," notes Edward Smeloff, executive director of the Pace University Law School Energy Project. (Tab 42)

2.2.3. *EXPECTED MINNESOTA EXPERIENCE.* Minnesota utilities own roughly 9000 megawatts of generating capacity within the state. Yet the state's utility consumers currently use over 11,500 megawatts of electricity at the time of the state's summer peak demand and over 10,500 megawatts at the winter peak demand. Minnesota utilities own or have purchase agreements for over 1,500 megawatts of power production outside of the state, predominantly in North Dakota and Manitoba. In other words, Minnesota is like California in that it depends on low cost power produced outside of the state to meet demand and keep electricity prices low.

Currently, the transmission capacity between Minnesota and states to the south and east is limited. (Tabs 3, 20). Minnesota and Wisconsin utilities are planning a number of new power lines, however, which will have the effect of linking low-cost power plants in Minnesota, North Dakota and Manitoba with consumers in states like Illinois, which have higher electricity costs. As in California, this will give higher-cost markets outside of Minnesota greater access to the low-cost power currently accessible to Minnesota. And, as in California, the result is likely to be reduced power availability and higher prices. (Tabs 17, 46)

Because Minnesota is a low-cost energy state as compared to other states, the results here could be even more dramatic than in California. For example, the estimated average cost of producing a kilowatt-hour of electricity in Minnesota is

2.9 cents. In North Dakota, it is 3.1 cents. By contrast, the estimated average cost of production in Illinois is 5.1 cents per kilowatt-hour. (Tab 30) Increased transmission capacity between Minnesota and Eastern Wisconsin will allow consumers and energy marketers in Illinois' deregulated electric industry to bid up the prices for low cost Minnesota, North Dakota and Manitoba energy.

Under current law Minnesota investor utilities must sell energy within their trade area at rates which are established by the Minnesota Public Utilities Commission. Under deregulation, Minnesota utilities would be free to charge a higher market price created when Illinois producers and consumers bid higher prices to buy our low-cost electricity.

2.2.4. *CONCLUSION.* Because Minnesota is a low-cost energy state relative to others, the likely impact of deregulation is adverse to residential and small business consumers. Competition from consumers of other states -- particularly Illinois -- will raise the price of electricity currently available in Minnesota. Any legislation to deregulate the electricity industry should realistically evaluate the economic impact of such legislation on Minnesota. Minnesota should be reluctant to deregulate until it has sufficient long-term generation capacity to economically support its consumption at peak periods.

2.3. Even When There Is Sufficient Energy Capacity To Serve The Consumers In A Geographic Area, The Electricity Market Is So Dominated By A Few Generation Companies That They Can Engage In Monopolistic And Oligopolistic Pricing Behavior. The Antitrust Laws, However, Are Not Effective To Protect The Consumer In This Area.

For a competitive market to work, there must be an adequate number of sellers and buyers who will readily and knowingly negotiate on the price and quality of a product. If there is an insufficient number of competitors to impose such discipline on the market, a few companies can dominate the market and charge excessive prices.

2.3.1. *BRITISH EXPERIENCE.* In 1990, the United Kingdom deregulated its electric industry. Since that time economists have concluded that the British have paid excessive prices due to the market power of a few generation companies. (Tab 22) For instance, in 1992 the Office Of Electricity Regulation ("OFFER") investigated a rapid rise in rates after deregulation started. OFFER determined that two generation companies, National Power and Power Gen, accounted for 70% of

the energy pool. OFFER found that on several occasions Power Gen took generation plants "off line" in order to reduce the supply of electricity in the market and raise rates. (Tab 22) One economist found that National Power and Power Gen consistently charged prices 20-30% above the predicted competitive price. Other economists reviewed the period of 1991 through 1995 and found evidence that both Power Gen and National Power "gamed" the shutdown of generators in order to tighten the market and charge excessive prices to consumers. (Tab 22)

2.3.2. *MINNESOTA HHI INDEXES.* Minnesota has a highly concentrated energy market. The Federal Energy Regulatory Commission ("FERC") and Department of Justice refer to the Hirfendahl Hirsch Index ("HHI") as a guide to whether adequate competition exists in a particular market. An HHI of 1800 indicates that a company has such strong dominance in a market that there is likely to be insufficient competition to maintain a fair price. According to FERC records, NSP has an HHI of over 3,000 in its Minnesota market. (Tab 32) Minnesota Power has an HHI of 2737 in its market. (Tab 32) Seven of the largest generation companies in Minnesota have HHI levels above the 1800 level during peak demand. (Tab 38)

These levels of concentration are particularly difficult in the electric industry, which as noted earlier is prone to monopoly pricing during peak demand. The experience in England and California demonstrates that the electric industry is especially vulnerable to market power because of the inability to store electricity, the necessity of its consumption, the lack of alternatives (or "inelastic demand") and the need to balance generation and supply to maintain reliability.(Tab 23)

2.3.3. *CONSUMER INERTIA.* There must be a "willing consumer" or a "shopper" in order for a competitive market to efficiently price a product. The experience with electricity deregulation, however, is that most residential and small business consumers do not quickly change vendors. Indeed, at least one publication asserts that the incumbent utility essentially "owns the customers." (Tab 6) Consumers, seeing little advantage in switching from the incumbent utility to a new supplier, are said to be ruled by inertia. (Tab 6) For instance, in Pennsylvania residential consumers report that they could not find competitive alternatives to the incumbent provider. (Tab 37) The Pittsburgh Post Gazette attributed it to:

> "the fact that households just don't use enough electricity. Many companies are eager to compete for lucrative commercial and

> industrial accounts. Far fewer are willing to spend the money and hire the people to attract small usage residential customers." (Tab 37)

It is estimated that the cost of getting a residential consumer to switch from one generator to another may be as high as $600. (Tab 6)

2.3.4. *PREDATORY PRACTICES.* Because several geographic markets in Minnesota are dominated by an incumbent generation company, and because it is difficult and expensive to move residential consumers from one company to the next, Minnesota's electricity market may be open to predatory practices that shut out effective competition. Predatory pricing is a marketing tool whereby the incumbent utility company can defeat the entry of another competitor in a geographic market. For instance, if a competing generation from out of state desires to market its electricity to a business in a state, the local incumbent utility can defeat the challenge by simply lowering its price for electricity to the target business at a price below the cost of generation. The incumbent utility would continue to keep the price low until the out-of-state generator recognized that it would not be able to put together a critical mass of customers to which it could efficiently sell power in the state. The incumbent utility could subsidize the deep discount to the target business by "cost shifting" those costs to smaller residential customers who are not being solicited by the out-of-state generation company. The reason why the out-of-state generation company will not solicit the residential consumer is because of the estimated $600 in marketing costs per customer. (Tab 6) Under these circumstances, the out-of-state company cannot economically afford to compete. Once the out-of-state generator concludes that the incumbent utility will fight the solicitation of consumers by using "predatory price" tactics, it will then leave the market, at which point the incumbent can once again raise its rates.

2.3.5. *ANTI-TRUST LAWS ARE LIMITED IN THEIR APPLICATIONS TO THE ELECTRICITY MARKET.* U.S. Department of Justice Principal Deputy Assistant Attorney General A. Douglas Melamed recently testified to Congress:

> "The authority of the Department of Justice to enforce the antitrust laws with respect to the electric power industry does not sufficiently address the ability of electric utilities to exercise market power that can thwart free competition within the industry. The antitrust laws do not outlaw the mere possession of monopoly power that is the result of skill, accident, or a previous regulatory regime. Antitrust remedies are thus not well-suited to address problems of market power in the

electric power industry that result from existing high levels of concentration in generation or vertical integration." (Testimony before the United States House of Representatives, Committee on the Judiciary, July 28, 1999.)

2.4. THE PROTECTION OF LOW-INCOME CONSUMERS IN A DEREGULATED SYSTEM MAY BE ADVERSELY AFFECTED. BY BUNDLING ELECTRICITY WITH OTHER PRODUCTS A UTILITY CAN ENCOURAGE LOW-INCOME CUSTOMERS TO "VOLUNTARILY" TERMINATE SERVICE.

2.4.1. *UNIVERSAL SERVICE RULES.* Heating, air conditioning and night lighting are necessities of life in today's world. In the current regulated system, the monopoly utility must offer electricity to all customers in its service territory, even if the customers are unattractive because of low income or location. (Tab 39) In exchange for its monopoly market, the distribution utility must also comply with universal service rules which protect the least fortunate customers. These universal service rules prohibit service disconnection during severe weather and authorize rate reductions for certain classes of people.

2.4.2. *BUNDLED PRODUCTS.* The guarantee of universal electricity service for all consumers may be impeded by a deregulated electric industry. Even if such universal service rules were incorporated in a state's restructuring law, competitive companies can find ways to discourage low income or "high risk" consumers from being serviced by them. (Tab 39) One way to reduce the number of such accounts is to bundle the electricity product with other products in such a manner that it will discourage low income customers from continuing service with the company.

For instance, a distribution utility and a generation company could offer electricity alone at a rate higher than what a truly competitive market would support, and then discount the price to a low level if the customer agrees to purchase cable television access, Internet access, appliance maintenance or warranty contracts, or other products such as burglar alarms, fire alarms, and appliances. (Tabs 4, 6) By discounting the electricity price when bundled with luxury products, the utility company discourages low income customers from purchasing service.

Such a practice is common in other industries. For instance, automobile insurers will commonly offer a 20% to 25% discount on auto insurance if the

policyholder purchases homeowners coverage from the same insurer. The net effect of this "discount program" is that policyholders who don't own a home pay approximately 20% higher rates for automobile insurance. Many insurance companies utilize such a discount program.

The electricity industry is very open about plans to bundle products, such as bundling the price of electricity with the purchase of cable TV access and high speed Internet access. An energy executive foreshadows the block of customers that are the target market:

> "People today are educated and they have money. If you have 3.5 million customers mostly educated and pretty well off - there are pockets where that's not true - but there are huge groups that fall into that category. We ought to be able to sell to them." (Tab 4)

Low-income individuals, however, do not have ability to pay for or have access to cable television and the Internet. Larry Irving, Assistant Secretary for Communications and Information at the U. S. Department of Commerce, noted the following on July 8, 1999 at the National Press Club:

> "Income plays a significant role in the level of access to computers and the Internet. High-income households (earning more than $75,000) are 20 times more likely to have access to the Internet as households at the lowest income levels. (Tab 4)
>
> Those in rural areas, across all income levels, are lagging behind households of similar incomes in urban areas in central cities. A low-income household in a rural area has a less than 1 in 30 chance of having Internet access at home. A rural, Black household has less than a 1 in 13 chance of having home Internet access." (Tab 4)

Mr. Irving also noted that there is a racial divide with regard to the purchase of such products:

> "If you are Black or Hispanic, your chance of having Internet access at home is less than 1 in 10. To put it another way, 90% of Blacks and Hispanics do not have Internet access at home." (Tab 4)

Low-income consumers can be unprofitable to an energy company. Because of the universal service rules, an energy company is unable to quickly terminate the service of a low-income consumer who cannot afford to pay the electricity bill.

Because low-income consumers traditionally have received discounted rates, cold weather discontinuation deferrals and other subsidies, an energy company who is able to "encourage" low-income customers to terminate service is in a far better economic position. By pricing electricity at a rate higher than a competitive market, and by giving a discount to the price of electricity if it is bundled with cable access, Internet access, and other products, the energy company will be able to push away the low income consumer.

2.5. THE EXPERIENCE OF ELECTRICITY DEREGULATION IS THAT ENVIRONMENTAL CONCERNS ARE GIVEN LITTLE CONSIDERATION.

Nationwide, the electric industry is responsible for 30 percent of greenhouse gas emissions, 68 percent of sulfur dioxide emissions, 25 percent of smog precursors (Tab 21) and a large share of toxic metal emissions, including mercury. Competition in the electricity industry forces the energy companies to sell the cheapest energy. As it turns out, the cheapest electricity is on many occasions the dirtiest electricity. At present, over 600 coal and oil burning plants have been exempted from the strict emission limits that newer plants must meet under the Clean Air Act. This exemption makes it cheaper to run these older, dirtier plants and rewards their owners for creating more pollution. (Tab 18) The Environmental Protection Agency notes that dozens of utilities have increased the capacity of coal fired plants in violation of health-based air quality rules, with the worst offender illegally emitting pollution over a year equal to the exhaust of 1.5 million automobiles. (Tab 18)

In addition some utilities are trying to bring a motley assortment of old, inefficient plants back from retirement. Detroit Edison has fought for the past two years to restart a 50-year old coal fired plant, which was mothballed over a decade ago. (Tab 18) Illinois Power has already reactivated five oil-fired units that were previously closed. (Tab 18) In January the air quality officials from eight northeastern states wrote to EPA Administrator Carol Browner expressing concerns about the air quality deterioration because of the start up of these plants. (Tab 38) In Louisiana and Arkansas, Entergy is trying to revive a collection of decrepit plants closed for a dozen years. (Tab 18)

The energy industry has turned to the production of these polluting generation plants because of the increased demand for energy. While the increased demand for energy will take place whether or not electricity is deregulated, in a regulated system a utility company can pass on to the consumer, as part of the

regulated rate, the additional cost of a generator plant that is more compatible to the environment.

This is not the case with a deregulated or a competitive market where the consumer will choose to purchase electricity from plants that may produce cheaper energy but more emissions.

2.6. ELECTRICITY DEREGULATION HAS ENCOUNTERED QUESTIONABLE TRADE PRACTICES THAT HAVE HARMED CONSUMERS.

There have been many problems with consumer deception in the early stages of electricity deregulation. These deceptive practices include con artists who scam investors, energy suppliers that "dump" customers during peak demand times, and the "slamming" of shadow charges on to utility bills. Other deceptive practices include high pressure door-to-door sales pitches, "legalese" contracts which confuse the terms, signatures obtained from unauthorized persons, use of negative option ("opt out") solicitations, early termination penalties, and abuse of the elderly, the mentally ill and the vulnerable. (Tab 43)

2.6.1. *CONSUMER DUMPING*. The theory of electricity deregulation is that, with more generation companies competing for customers, electricity prices should be driven down. New Jersey and Pennsylvania which have always had some of the highest electricity rates in the country, jumped onto the deregulation bandwagon to get the benefit of lower energy prices. (Tab 11) In order to make sure that a customer would always have access to a utility company, the New Jersey deregulation law provided that the four existing electric utilities would be "default providers" who would provide power to customers if they were terminated by their competitive electricity supplier and could not find other alternatives. (Tab 11) As part of deregulation these "default utilities" sold their generation plants so that they could act as the local distribution utility. As a result, GPU Energy and Conectiv, two of the "default utilities," did not have access to long-term contracts with energy suppliers. (Tab 11)

When electricity deregulation commenced in New Jersey many electric generation companies ("suppliers") offered low prices to attract consumers. During the high demand season, however, these suppliers terminated contracts with the consumers or, if they were prevented from terminating the contracts, strongly "encouraged" the consumers to terminate the contract. As a result, the consumers were "dumped" onto the default utility companies, including GPU Energy and Conectiv. Because neither of these two companies had any generating

capacity, they were forced to purchase electricity on the open market in order to service the customers that were "dumped" onto them by the energy companies. Ironically, both companies ended up purchasing the electricity from the same suppliers that "dumped" the customers. Because GPU and Conectiv had to pay higher prices for the electricity, these higher prices had to be passed then on to the consumer. Thus, consumers are forced to indirectly pay a higher cost for electricity generated from the same company that previously promised to sell it directly to them at a lower cost. (Tab 11)

The State of Pennsylvania also went through deregulation, and encountered the same "dumping" phenomena by suppliers. Like New Jersey, the State of Pennsylvania required the incumbent utility companies to be "default" suppliers for consumers who were terminated by a competitive supplier. Unlike New Jersey, Pennsylvania does not permit the distribution utilities to charge the consumers the higher price. (Tab 11)

The State of Massachusetts also encountered the same phenomenon. Massachusetts Electric Company recently requested the State to permit it to raise its rates by 54% on the 200,000 consumers who were "defaulted" to it. (Tab 8) The State of Massachusetts denied the rate increase, and as a result the company will incur a $42 million loss. This loss eventually will be absorbed either by its investors or, more likely, be included in a higher rate increase for all of its consumers. When Massachusetts Electric increases its rates to pay for the dumped customers, its rates will probably be higher than the suppliers who dumped the consumers. (Tab 8)

2.6.2. *UTILITY BILLS.* The experience with deregulated utility bills in California has been similar to that of Minnesota consumers with telephone bills. A copy of recent statements issued by Pacific Gas & Electric Company and San Diego Gas & Electric is attached as Tab 29.

The statement of San Diego Gas and Electric is presented in a manner such that consumers will find it difficult to decipher the unbundled product. The statement indicates that the ratepayer's total charges are $66.68. (Tab 29) The only clear charges stated on the bill are the electric energy charge that amounts to $16.89, and the transmission/distribution charge which amounts to $21.78. Although these charges are relatively straightforward, the consumer still has no way of knowing which part of the bill reflects the deregulated rate. Even though competition requires a knowing consumer that will force suppliers to compete on

the price and quality of a product, the confusion in the utility bill camouflages the information that consumers need.

The rest of the charges on the statement are poorly explained. For instance, at the top of the bill the company generously grants the ratepayer a 10% reduction in rates that is mandated by the legislature and amounts to $6.67. (Tab 29) At the bottom of the bill, however, is an unexplained Trust Transfer Amount ("TTA") which is listed as $6.69. The consumer is not advised that the legislative rate reduction is funded by the payment of the Trust Transfer Amount, which pays the cost of bonds issued to fund the legislated 10% reduction. The cost of the principal and interest over the ten years will in fact cost the consumer more money than the legislative reduction will save them.

The bill also describes the "stranded cost" charge as a Competition Transition Charge ("CTC"). The stranded cost, discussed in section 2.7 below, is set forth as $12.05. (Tab 29) At no time is the ratepayer advised that this charge is to compensate the utilities for past investments which were deemed to be unprofitable and would render the company unable to compete in the open market. The customer must pay this amount even if it purchases its energy from a competitor.

Finally, the bill also includes a Public Purpose Program charge of $2.30 and a Nuclear DT Commissioning Charge of $.30. The statement gives no description as to the purpose of these charges, which is to finance low-income assistance, energy efficiency programs and the retirement of nuclear plants.

2.6.3. *SCAMS.* Among the crop of new, unfamiliar companies gearing up to sell power are a few shady operations intent on scamming the investor.

One case involves Christopher Mee, who owned a marketing company named Boston-Finney, based in Harrisburg, Pennsylvania. (Tab 12) When California enacted energy deregulation, Mr. Mee registered Boston-Finney as an energy service provider with California regulators and then began recruiting "independent marketers" who would recruit distributors to sell electricity to the California consumer. Each "independent marketer" was expected to pay a franchise fee to Boston-Finney. These marketers in turn were to recruit distributors who would pay a fee of up to $300 to Boston-Finney as well as the recruiting "independent marketer." The business of the firm was supposedly to sell electricity to homeowners using power bought by Boston-Finney on the California Power Exchange. The company quickly developed an Internet presence as

marketers in search of new recruits trumpeted electricity deregulation on their web pages as a shortcut to riches.

The problem, however, was that Mr. Mee never made any arrangements for Boston-Finney to purchase electricity. "He didn't have an electric contract with the utility and didn't have anyone on board who knew anything about the business," says Kyle Devine, a spokeswoman for the California Public Utilities Commission.

Both the California and Pennsylvania Attorneys General sued Mr. Mee and Boston-Finney for violation of the securities laws, seeking restitution for approximately 8,000 people who were recruited in the scheme which bilked at least 20 million dollars from duped investors. (Tab 12)

2.6.4. *OTHER DECEPTIVE PRACTICES (Tab 43).* In Michigan, door-to-door solicitors wearing the uniforms of the incumbent utility company "switched" consumers to competing companies. Energy America LLC is under investigation in Maryland, Georgia, Ohio and New Jersey for high-pressure sales tactics. In Pennsylvania, a company is accused of forging the signatures of consumers on enrollment forms and of misrepresenting the identity of the vendor. Other abuses include the "switching" of prices and terms, use of prizes and gifts which confuse the terms of the enrollment, enrollments signed by children, and explaining the terms of English language contracts to foreign language consumers in a misleading fashion. (Tab 43)

2.7. MANY STATES THAT DEREGULATED ELECTRICITY HAVE ERRONEOUSLY ENRICHED UTILITY COMPANIES BY TENS OF BILLIONS OF DOLLARS WHEN THEY FORCED CONSUMERS TO PAY FOR "STRANDED COSTS".

Monopoly utilities were able to build large-scale generation plants because they could depend upon long-term customer demand from their exclusive geographic trade area. When energy deregulation was first debated, industry experts predicted that the monopoly utilities would have to lower their rates in a deregulated environment so that they could compete with newer and cheaper energy generation companies. (Tab 36) If the monopoly utilities lowered their rates, however, they would not be able to pay for the capital costs that were incurred to build the old generator plants. (Tab 36) Industry experts calculated that there would be billions of dollars of "stranded costs" because utility companies

would be unable to charge sufficient rates to pay for their debt service and investments in such plants.

Because of the above predictions, many of the states that initially deregulated the electricity industry went to great effort to make sure that the monopoly utilities, in order to compete in a deregulated market, would be able to recoup their "stranded costs." (Tab 36) For instance, in California the state sold bonds to pay off the utilities' so-called "stranded costs." These bonds are to be repaid by a "stranded cost" assessment collected from each consumer for the next ten years, who must pay the bill regardless from which generation company the consumer purchases its energy. The utilities in Pennsylvania were able to rely on the taxpayer, where the state agreed to underwrite bonds for the payment of "stranded costs." (Tab 36)

As it turns out, analysts today believe the industry is holding its own. (Tab 36) While the industry predicted that energy rates would decrease in a deregulated environment, the opposite has occurred. Because rates have increased in those states that have deregulated, what originally turned out to be a "stranded cost" now turns out to be a windfall for the utility company. As a result, the existing plants are more valuable then ever before. (Tab 36) For instance, five years ago Moody's Investors Service estimated the electricity industry's "stranded cost" at $135 billion. Today, Moody's puts the figure at under $10 billion. (Tab 36)

The irony of the current situation is that ratepayers in the deregulated states now pay higher electricity rates *and* an additional assessment to pay for the phantom "stranded costs". According to an analyst at Warburg Dillon Read in New York, American utilities are on track to generate over $92 billion in free cash flow from 1999 through 2001. (Tab 36) In Pennsylvania alone, consumers will pay an extra $21 billion to the old monopoly utilities for "stranded costs." (Tab 35) This charge-back to ratepayers is being severely criticized, with several groups noting that Pennsylvania consumers would have saved $3.4 billion in 1999 alone if they had been allowed to simply pay the competitive market rate. (Tab 35) The average Pennsylvania consumer would save $2300 during the deregulation transition period if they didn't have to pay for the utility's phantom stranded costs. (Tab 35)

Rather than utilizing this windfall to build new energy plants, many of the utility companies, such as PECO Electric Company of Pennsylvania, utilized the windfall to retire debt, buy back stock, and bolster first quarter earnings. (Tab 36) In other words, rather than building additional electrical generator plants, the utility

company simply enriched the value of its stock. If PECO had not received the "stranded cost" subsidy the consumers would have had their rates cut by 40%. (Tab 36)

The lesson out of this experience is that policymakers should be wary of permitting utility companies to levy a mandatory "stranded cost" assessment on utility consumers. If there is to be a deregulated market, it should be a competitive one and not one where certain competitors are subsidized.

2.8. STATES THAT HAVE DEREGULATED ELECTRICITY HAVE EXPERIENCED CONSIDERABLE DIFFICULTY WITH RELIABILITY OF THE ENERGY MARKET.

The interconnected power grid is the backbone of the $215 billion electric services industry. (Tab 1) It is a backbone, however, that was built in an age of regulated monopoly service territories, and was never designed to support a competitive environment between electricity providers. (Tab 1) A competitive environment between electricity providers demands adequate transmission capability to service all areas in a territory as well as sufficient generation capacity such that the competitors will compete based upon cost. Without adequate system capacity competing providers will simply bid up the prices for scarce electricity.

Over the past ten years, approximately half of the states have partially deregulated their electricity market. During that same period energy producers have delayed decisions about building any additional power plants, or the transmission lines needed to transmit the power, because they don't know if they will ever recover those costs in a competitive market. (Tabs 1, 2) The grid capacity crunch that exists in the United States market today is in large part due to the fear of a deregulated environment. Utility companies are unwilling to risk the financial investment for an unknown return in a deregulated market. (Tabs 1, 2)

As a result, the transition period has been difficult in many parts of the United States. In June of 2000, CAL-ISO ordered rolling blackouts in San Francisco affecting approximately 97,000 consumers because of a shortfall in electricity capacity. (Tab 13) In late June, Detroit suffered power outages that caused people to be stuck in elevators and trains, to cause schools to shut down early, and caused the closing of courthouses. The 87,000 street lights and the 1,200 traffic signals in Detroit simultaneously were shut down because of the power outage. (Tab 2) Other power outages have occurred in New York, Arizona, New Mexico and in New England. (Tab 2) The experts predict that during the

summer of 2000 there will continue to be more periods of "power interruption," where utilities forcibly reduce voltage and power flows in order to avoid power outages.

Federal energy officials have expressed substantial concern regarding the reliability of the nation's electricity system. They note that brownouts and blackouts may replace the current concerns over the price of gasoline as we move through the summer. (Tab 17) To meet the challenges of impending competition, many utilities have engaged in a race to cut costs and have reduced investments in reliability related programs. Little attention has been paid to fixing the aging systems that are not large enough to bear the new interregional traffic. Without these investments, electricity deregulation only places additional stress on an already fragile system. (Tab 1)

While there has been little investment in electricity generation or transmission over the past decade, the demand for electricity has substantially grown. Over the last 10 years the demand for electricity has grown by approximately 2% - 3% per year. (Tab 16) Over 14% of electricity today is consumed in Internet related and computer technology. This contrasts to only 4% of the energy demand in 1990. (Tab 16) Further, as the economy continues to grow, so will the utilization of electricity grow.

The reliability of the electric system is critical in our high-tech age. According to industry officials, the reliability standard for power for the high-tech industry is no more than 30 seconds of power interruption. (Tab 16) This contrasts with the current industry standard for electricity generators, of 8 hours of interrupted power per year. (Tab 16) It is ironic that, as reliability becomes a primary concern for business, and high-tech business in particular, the nation has not invested appropriately to serve it.

III. CONCLUSION

The theory of deregulation is that competition, not a government agency, is the most efficient regulator of rates, quality and service. The cost of energy was supposed to go down. In fact, the residential and small business consumers in the United Kingdom and almost every state that has deregulated energy to date have one thing in common: their prices have gone up.

When Minnesota considers electricity restructuring, it should consider the following actions:

(1) Ensure that the Public Utilities Commission ("PUC") has the right tools to step in and regulate utility rates and practices as needed to assure the reliability and universal service needs of the public.

(2) Provide ample means, such as a transitional price cap plan, standard offer, or alternative form of regulation, by which the PUC and other local utility regulators can ensure that incumbent utilities provide service to residential and small business consumers at prices that reflect Minnesota's low cost of production until effective competition is demonstrated to ensure equally affordable prices.

(3) Empower the PUC to license and discipline marketers of power at all levels.

(4) Legislate a strict code of market standards for all levels of the system and enable the PUC or district court to issue awards to consumers that are damaged by participants in the system.

(5) Empower the Department of Commerce to initiate actions before the PUC to discipline or revoke the license of participants at all levels in cases of consumer fraud, unfair trade practices, and anti-competitive behavior.

(6) Ensure that the Attorney General's Office has the right tools to take consumer actions regarding energy provider and utility fraud, unfair trade practices and anti-competitive behavior before both the PUC and in District Court.

(7) Establish a competitively neutral mechanism to underwrite cost-effective conservation programs that do not favor incumbent utilities.

(8) Empower the PUC and the District Court with increased authority to disapprove mergers and acquisitions, and to require the divestiture of generation plants to prevent undue market concentration.

(9) Publish an inventory of current generator plants serving Minnesota, a forecast of needed generation and transmission capacity in Minnesota and the surrounding region, and, in coordination with other states and regional transmission authorites, a set of options that would

economically and responsibly meet generation and transmission needs.

(10) Establish policies to ensure the adequate, appropriate and economical development of generating plants and transmission lines necessary to support an effectively competitive market.

(11) Empower the PUC to draft and approve a standard residential energy contract, in boilerplate form similar to the concept used in statutory insurance policies, that clearly describes the prices, terms and conditions so consumers can accurately and readily compare competitive offers.

(12) Make any deregulation bill effective only upon the PUC issuing findings that there are sufficient generator plants and transmission lines to support effective competition in Minnesota for the five years following deregulation.

(13) Require the PUC to establish competitively neutral, efficient and fair terms and conditions for open access to utility distribution systems and customers by licensed electric marketers.

(14) Require the PUC to establish power quality and safety standards for distribution utilities that minimize the risks posed to workers, customers, property and commerce by poor power quality and inadequate maintenance of power distribution facilities.

To date, deregulation in some states has resulted in abuses similar to those that caused the enactment of utility regulation in the depression era. In California, the Senate author of the deregulation bill is being so vilified that he is holding hearings on whether the bill should be repealed. In New York, Mayor Guiliani labeled the price hikes stemming from deregulation as "outrageous" and is now holding hearings in front of the City Council on deregulation. In Massachusetts, consumers are looking at a 54 percent price hike. In Pennsylvania, consumers are being forced to pay over $2000 each for an industry bailout of phantom "stranded costs."

Policymakers who are bedazzled by market theorists and should be reminded that those people who fail to understand history are condemned to repeat it.