

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
NATURAL GAS-FIRED, PEAK-LOAD) R01-10
ELECTRICAL POWER GENERATING)
FACILITIES (PEAKER PLANTS))

COMMENTS OF CHARLES E. FISHER

Thank you for the opportunity to offer comments today. My name is Charles E. Fisher and I am the Executive Director of the Illinois Commerce Commission. The Commission regulates public utilities in Illinois, including the electricity industry. In recent years, federal and state laws have required the Commission to oversee the transition of the telecommunications, natural gas and electricity industries from monopoly-based market structures to more competitive ones. The ICC consists of a chairman and four commissioners appointed by the Governor by and with advice and consent of the Senate. By law, the Commission jointly hires an executive director, who is responsible for the supervision and direction of the Commission staff.

I note at the outset that the ICC as a body has not taken a position on the issues Governor Ryan asked you to address, that these comments are my own, and that they do not necessarily represent the views of the commission or of individual commissioners.

I have been asked to offer some background for what will follow in these proceedings by talking about how the industry has come to this point. Why are so many peaker plants being proposed in Illinois at this time?

I would first like to offer some general historical context.

For most of the twentieth century, the electricity industry in the United States was thought best to consist of natural monopolies. Government agencies designated stockholder-owned companies to provide electric service to the public within specific service territories. There are three major components in the provision of electricity to retail customers: generation of power, transmission of power, typically at high voltages, from generating plants to substations, and distribution of power, typically at lower voltages, to homes and businesses. For the most part,

the industry has been vertically integrated, with public utilities owning the assets for all three components.

We have a national electric transmission grid (see map). Every day, excess power generated by a company in one area may be sold and delivered over transmission lines to a company in another area for resale to customers in that utility's service territory. For most of the last century, these transactions were primarily made by regulated utilities in the interest of security and reliability of the transmission grid. The wholesale sale and interstate transmission of power is regulated by the Federal Energy Regulatory Commission. Distribution of power from the electric utility to the retail end-user is regulated by the states, in Illinois, by the Commerce Commission.

Electric utilities did not historically, and do not today, have a total monopoly on ownership of generation, but there was little development of large-scale independent generation in this country because the utilities controlled access to and availability of the transmission network, and the price of necessary transmission services was not conducive to the independent generation of electricity.

The model for traditional regulation of electric utilities is the “regulatory bargain.” The essence of the regulatory bargain was that, in exchange for a governmentally granted monopoly service area, the electric utility was obliged to serve all retail customers without discrimination and without delay, at a price set by a regulatory commission during periodic rate cases. Rates set in such proceedings were statutorily required to be “just and reasonable” both for the utility and for its customers. The basic theory was to allow the utility to recover its reasonable expenses, as well as a return of and a fair return on the investment.

Focusing more specifically on Illinois, today we have nine investor-owned companies that are certified as electric utilities. I should note that some cities operate their own electric utilities and some areas of the State are served by electric co-operatives, or co-ops, which are customer-owned. As you can see on the map, the northern one-third of the State is largely served by Commonwealth Edison Company, and many of the other urbanized areas of Illinois are served by Illinois Power Company.

For the first two-thirds of the 20th century, rate cases generally resulted in a gradual lowering of prices as utilities enjoyed the efficiencies of technological improvements and economies of scale. Generating plants were built by each utility -- in anticipation of growth in demand for electric power -- to meet their obligation to serve. In some circumstances, utilities chose not to build their own generating plants but to import excess power from other utilities when doing so was less expensive.

In the 1970's and 1980's, unexpectedly higher costs associated with building and operating nuclear power plants resulted in significant increases in the price of electricity for customers of those utilities which chose to invest in nuclear power. Other utilities faced varying degrees of increasing costs to comply with air pollution standards and to keep up with general price inflation. As a result, while the retail price of electric power varied among utilities across the country and here in Illinois, there were significant price increases for most customers of electricity.

The price increases of the 1980's set the stage for significant changes in government regulatory policy, at both the federal and state level, during the 1990's.

At the federal level, Congress enacted the Energy Policy Act of 1992, making a number of changes in national energy policy. Of greatest interest for purposes of our discussion, the new law gave the Federal Energy Regulatory Commission, usually referred to as "the FERC," clear authority to require public utilities owning transmission lines to make those lines available to wholesale market participants who wished to move electricity from one part of the grid to another. This is generally called "wholesale wheeling." Following these changes to federal energy policy, the FERC issued its landmark Order 888 in 1995. Order 888 required electric utilities to implement open access; that is, access to its transmission system by any entity interested in wheeling power for wholesale purposes. What that means is that a generator in Ohio could, if it found an economically attractive customer in Illinois, purchase transmission access from the monopoly utilities in Ohio and Indiana to deliver power across these lines to that wholesale customer in Illinois. This economically attractive possibility spurred non-utility entrepreneurs to build new generating plants to meet growing electric demand.

At the retail level, industrial customers, who were faced with increased international competition, strove to cut costs, including energy costs. Some looked longingly at the price of wholesale power compared to the retail prices they paid to their utility. They went to their state capitols, requesting the right to purchase power on the open, wholesale market. Significant changes in state regulation happened first in California, and then in Pennsylvania and other states. In late 1997, the Illinois electricity choice law was enacted. Among other objectives, the law was intended to spur innovation and drive down prices through competition among Illinois' traditional utilities, and to attract new competitive power suppliers to the state.

While the FERC's opening of the transmission grid to greater wholesale power transactions through Order 888, was a major impetus to the competitive generation of electricity, Some of the companies proposing to build peaker plants in Illinois are involved in selling power at both the wholesale and retail level. So, to a lesser extent than FERC's opening of the transmission grid to greater wholesale

power transactions, the Illinois "deregulation" law added is a factor in to the economic attractiveness of non-utility generation.

But, perhaps even more of a factor in the growing economic interest in peaker plants so is the increased peak demand for power. The remarkable economic expansion of the past several years, coupled with the proliferation of electronic devices in our homes and offices, has have increased the overall demand for electricity. While base load capacity remains adequate to meet base demand, peaking capacity has not expanded to keep up with increasing peak demand. As but one example, one July day last summer ComEd set a new peak demand of 21,243 megawatts, nearly 2,000 megawatts, or 10 percent over peak of the preceding summer. A megawatt serves approximately 500 homes at times of peak demand.

The Midwest experienced two very warm summers in 1998 and 1999. Utilities throughout the region had to pay very high prices for wholesale power on peak demand days during those summers. Those prices attract new peaker plant development.

Natural gas has become the fuel of choice for peaker generators. Peakers are typically powered by natural gas-fired turbine engines, very similar in design to large aircraft jet turbine engines. As a matter of comparative economics, ComEd's final least cost energy plan, which was approved by the Commission in 1996, identified combustion turbines as the least-cost alternative for construction of peaking capacity. Modern gas-fired combustion turbines cost about \$400 per kilowatt of generation capacity, whereas new coal-fired plants are estimated to cost about \$1,600 per kilowatt of generating capacity. By way of further contrast, existing nuclear generating plants have cost between \$2000 and \$5000 per kilowatt of generating capacity.

During the 1970s and 1980s, federally-imposed restrictions on building gas-fired generation existed because of perceived tightness in natural gas supplies. These restrictions have been removed, however, and a number of factors have combined to enhance the economic attractiveness of gas-fired generation. These include lower natural gas prices in the 1990's, improved efficiency of gas-fired generation units, and the ease and speed of construction of gas-fired generation plants. Even though the cost of natural gas has risen this summer, the push for gas-fired generation does not appear to have dampened. Two additional factors - the apparent environmental consequences of gas-fired generation as compared to coal-fired generation, and the absence of the stigma and high cost associated with nuclear generation plants - have also contributed to the increased economic desirability of gas-fired generation. Furthermore, peakers are very flexible in terms of their operating schedules: they can rapidly be turned on and off as demand rises and falls, and their relatively low capital cost permits them to

provide high capacity to sell into the market for short periods of time when the market prices reflect peak demand.

Just as Illinois is a rail and air hub, many of the major natural gas pipelines terminate in or are otherwise available to provide service to the state (see map). In addition to ready access to fuel sources, any electrical generating plant requires access to significant transmission capacity to move its product to the market. The closer a combustion turbine peaker is to natural gas supplies and electric transmission lines, the less expensive it is to bring the plant on line. Public resistance to new power lines has reduced the attractiveness of line construction as a way to increase electric power availability. While FERC's Order 888 guaranteed open wholesale access to utility transmission lines, open access has a price, and, under the current FERC-approved transmission tariffs, longer transmission hauls cost more.

I would also like to briefly address another subject. For decades, electric utilities would come to the Commission requesting the authority to construct new generating plants in specific sites. Utilities seeking a certificate of public convenience and necessity for a new plant were required to demonstrate an economic need for the additional generating capacity. If they did, the ICC granted such authority, including, if required, eminent domain authority. Non-utility generators did not have to request such authority, either before or after the 1997 Illinois deregulation law: provisions of Illinois law addressing siting of electric generating facilities have not changed. What changed is that electric utilities could no longer be ordered to construct new generating plants if they did not request such an order. Also, as noted earlier, and probably more significantly, the FERC's 1995 order opened the interstate transmission system to wider access and made non-utility generation economically attractive, especially over short distances. Thus, the builders of new generating plants to meet demand in Illinois are not primarily utilities.

A final point I would like to touch upon is a concern which has arisen recently about the future of the retail price of electricity in Illinois. The 1997 restructuring law froze utility base rates at 1996 levels until the end of 2004. Some of those rates had already been in effect for a number of years by late 1997. During the period that the utility base rates have been frozen, wholesale electric power prices have been rising, and it is anticipated that those prices will continue to rise if the power supply does not keep pace with the demand for electricity. At the beginning of 2005, Illinois utilities are going to be permitted to adjust their rates to reflect the wholesale electric power prices in effect at that time. If wholesale prices have continued to rise, there is the prospect of a very significant increase in retail electric power prices. Therefore, as policymakers address the numerous issues related to the current boom in peaker plant construction, they should be aware of the need for a reliable portfolio of electric power supply sources that are adequate to meet demands.

I would be happy to answer any questions.