
THE EFFECT OF ELECTRICITY MARKET DEREGULATION ON LOCAL PROPERTY TAX ASSESSMENTS & FISCAL STABILITY

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I NTRODUCTION: BACKGROUND TO THE ANALYSIS

Federal Energy Policy Act of 1992

The 1992 Comprehensive National Energy Policy Act mandated restructuring the regulated electric utility industry in the United States to a competitive pricing environment. While it also encouraged energy efficiency, and the expanded use of renewable energy sources, the Act's primary thrust was to require competition (most especially competitive pricing) in the electricity generation segment of the electric utility industry. This meant competitive pricing of wholesale electricity at the generating plant "gate." The traditional vertical integration of the generation-production, transmission and distribution functions within the electric utility industry was effectively dismantled. Wholesale price competition was to be achieved through ownership-operation of generating facilities by non-regulated, non-utility owner-operators.

The transmission function, on the other hand, was required to remain under regulation by both the Federal Energy Regulatory Commission (FERC) and state regulatory commissions. Subsequent to the passage of the Act, FERC has mandated equal access to the transmission network, for all generating facilities, and at the same fees. The distribution function also remains with existing regulated local utility companies, who must deliver electricity to customers of all power suppliers within their former franchise areas at the same fees and with equal access.

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From the base of the initial requirements and specifications of the Act, individual states were encouraged to pass their own restructuring legislation. In the absence of any such state legislation, federal standards and requirements were to go into effect by 2002.

State Action

Since 1997, several major states have passed legislation that both created a timetable for the development of a competitive pricing system for electricity and mandated choice of electricity providers for non-residential and residential customers alike. Approximately a dozen states in New England, the Middle Atlantic Region, and the Upper Mid-West (plus California) have such programs in place or in process. In most instances, non-residential ("commercial") customers were given the option to choose electricity providers or sources before such choice was offered to residential consumers.

Nearly all the state legislative programs require divestiture of generating facilities by regulated investor-owned utilities (IOUs), or at least "encourage" it. Municipal utility companies, other governmentally-operated utilities, and electric cooperatives are generally exempt from this divestiture requirement. Shifting ownership and operation of generating plants to non-regulated firms means that a market-price basis for local assessment and taxation of power stations must replace the existing system of relying primarily on net book value. The market evidence from the first two years of divestiture to non-IOUs indicates changes in plant values that will likely have strong impacts on both the local revenues and fiscal policies.

EMERGENCE OF A MARKET FOR GENERATING PLANTS

Because of the mandate or "encouragement" of divestiture in state "deregulation" laws, a reasonably active market for generating plants has developed since late 1997. The first sales were in California, which set the pattern for most of the other transactions that have occurred subsequently. Divestiture of generating plants is accomplished through public auction, most commonly with sealed bids. After bids are submitted and reviewed, there is usually direct negotiation between the seller and the short list of "acceptable" bidders.

Figure 1 presents summary information about sales volumes and prices through October 1999. The 55 reported sales transactions included over 200

generating plants. Multiple-plant transactions are not uncommon. At the same time, it is unusual for one purchaser to acquire the entire generating plant capacity of an IOU.

Figure 1 also provides averages for plant capacity, reported sales price, book value (when available), and reported sales price per KW, by type of fuel. There is a residual "Other" category in addition to the major fuel types: nuclear, hydroelectric, coal, and natural gas. "Other" sales include combinations of facilities using different types of fuel in the same transaction, without the necessary information to permit allocation of price by individual generating plant, or by category of fuel.

While all of the hydroelectric facility transactions (and many of the coal, natural gas, "fossil fuel," and geothermal facility sales) were multiple-plant transactions covering several communities, all of the nuclear-fueled power station sales involved only one facility (or a partial interest in one facility) in one community. Since the purchasers are non-regulated, the impact of sales prices on assessed values will directly affect the local community (town, city, or county) in which each plant is located and taxed.

Comparative Sales Prices by Type of Fuel

Average Sales Price per Kilowatt (SPKW) varies considerably by type of fuel. Not surprisingly, hydroelectric generating capacity commands the highest average SPKW, because its operating expenses are extremely low. Next is coal, followed by "other." Natural gas-fired facilities have commanded generally relatively low SPKW, in part because the plants that have transferred have generally been older and less efficient. In addition, their fuel costs have been rising in recent years, reflecting increased demand for natural gas, especially from new construction, which is discussed below.

Nuclear-fueled power stations have sold at the lowest average SPKW. This is also not surprising, given the uncertainties of operating license renewal or extension, decommissioning costs (both amounts and timing) and on-site nuclear waste storage costs. This latter uncertainty stems from the lack of a national nuclear waste storage site, or even a designed future location. Moreover, to date, no nuclear power station (NPS) has received a license renewal. In response to the pressures of competition, however, as of November 1999 there were over two dozen NPS license renewal applications pending before the Nuclear Regulatory Commission (NRC).

Figure 1

Summary of Sales of Electricity Generating Plants

Fuel	Number Sales Reported	Average Capacity (MW)	Average Sales Price (\$000,000)	Average Book Value ^(a) Reported	Average Sales Price Per KW (\$)	Sales Price as Percent of Book Value ^(c)
Nuclear	10	567	28	1,718	61.55	2%
Hydroelectric	3	692	445	250	596.14	170%
Coal	7	991	746	206	518.25	127%
Natural Gas	10	1,401	289	217	174.67	133%
Other ^(b)	25	1,359	354	429	342.33	116%
Totals	55	1,139	328	557	260.78	103% ^(d)

- (a) Book Value Not Available for All Facilities
- (b) Includes "Fossil," Geothermal, Mixed, Multiple
- (c) For Only Sales with Book Value Available
- (d) Weighted Average; Non-nuclear Weighted Average 125%

NOTE: Multiple Plant/Facility/Source Sales Make "Per Plant" Data Unavailable.

SOURCE: Seller 8-Ks (plus Press Releases; Articles; and Baltimore Gas and Electric Co., PG&E and Southern Energy, Inc., Web Sites). All sales information obtained from the Internet is *not* guaranteed to be accurate.

Sales Price vs. Book Value

The early (1997 through mid-1998) auctions produced sales prices well in excess of book value. This led to a widespread belief that the "stranded costs" of IOUs would be fully offset by the "profits" from the sale of their non-nuclear generating plants. Subsequent transactions, however, have reduced the ratio of sales price to book value. These figures are summarized by type of fuel in the far right-hand column of *Figure 1*. Quite clearly, nuclear-fueled power stations have sold at a very small fraction of their book value. On the other hand, hydroelectric facilities and natural gas-fired generating plants have sold at prices notably higher than their book values. Coal and "other" fuels have sold at lower ratios, but prices still average higher than book value. *Figure 1* also shows, that on average, non-nuclear facilities as a group have sold at about 25 percent above book value. These findings have implications for local property tax and assessment policies, which are discussed below.

NEW PLANT CONSTRUCTION

One of the elements of a competitive market is the response of supply to increased demand. Virtually all of the new construction that has been reported over the period November 1997 - October 1999, has been natural gas-fired. They have been predominantly combined-cycle gas turbines, with a sprinkling of co-generating facilities (which are effectively gas-fired jet engines). Some 40 new electricity generating facilities have been completed or started, totaling approximately 22,280 Megawatts of capacity. The average cost per kilowatt was \$456. That figure has risen over the two-year period covered, largely because of increased demand for gas turbine generators and for skilled, experienced contractors.

The forecasts for new capacity construction and fuel demand provided in the sources cited in the Selected References all agree that reliance on natural gas turbine facilities will continue. Nuclear power is not environmentally or politically acceptable. Both

coal-fired and hydroelectric facilities face potentially insurmountable regulatory barriers, as well as opposition from environmental groups. Further, it is exceedingly difficult to produce a "new" geothermal facility. Finally, renewable energy sources (e.g., wind, solar) cannot compete in the current and projected competitive-price market environment without subsidy. Moreover, they do not have a record demonstrating sufficiently high levels of reliability to serve in any role except as peakers in the overall electricity grid system of the U.S.

It is also easy to see why large numbers of purchases of existing natural gas-fired generating facilities have taken place between November 1997 and October 1999. The SPKW prices for existing facilities shown in *Figure 1* is still substantially lower than the cost per kilowatt for new facilities. Nevertheless, on net balance, it is expected that natural gas-fired combined-cycle turbines will continue as the technology of choice for new construction, at least during the coming decade (or until an as yet unknown competitive alternative emerges).

IMPLICATIONS FOR PROPERTY TAXES

- On average, the new, non-IOU owner-operators of non-nuclear facilities will likely face higher assessments, and pay more property taxes, than the former IOU owners did when assessments were based on book value. This will occur, however, only after assessors are able to utilize sales prices as the basis for new, higher assessments. In the inevitable ensuing debates over the Market Value of the real property (and taxable tangible personal property) of existing generating facilities that have sold, more explanatory details of the transactions will most likely emerge. Few "clean" sales of the tangible real property and personal property of electricity generating plants have been reported. Nearly all include acquisitions of fuel contracts, power purchase contracts with the selling IOU (some of which are long-term, fixed-price contracts), employment guarantees for existing plant personnel, and other intangible, non-realty assets. There will likely be considerable debate between taxpayers and assessors over the allocation of sales prices to taxable property. In particular, there will undoubtedly be major arguments over the extent to which reported sales prices reflect non-taxable, intangible assets.
- New, non-regulated owner-operators of nuclear plants will undoubtedly seek dramatic

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reductions in their assessments and property taxes. Assessors will resist these efforts as strongly as possible, because of the large dollar reduction in the local (county or municipality) tax roll that "marking to market" will entail. In addition, assessors' organizations in states with multiple nuclear-fueled power stations will seek help from the state legislature to obtain compensation for, or at least amelioration of, the potentially cataclysmic impact on local revenues. This has already happened in Illinois and Connecticut, for example. Similar fiscal catastrophes have impacted local communities in which nuclear power stations have closed (e.g., Brookhaven, Suffolk County, New York; and East Haddam, Connecticut).

It will probably not matter whether any nuclear power station that has sold to a non-regulated IOU is in a state in which IOU properties are assessed and taxed state-wide on a unitary basis, or whether real property is assessed and taxed directly by the county or municipality in which it is located. The new owner(s) will not be a regulated IOU with interconnected property throughout the state. Even if the new owners acquire more than one power station within a given state, those generating plants will be separate, free-standing facilities. The transmission lines and distribution lines with which the power stations are connected will be still be owned and operated by a regulated IOU.

Therefore, the likely fiscal problems associated with the sale of a nuclear power station, or a petition for revaluation based on market evidence, will be felt directly and fully by the local taxing jurisdiction.

- Some nuclear stations will likely stay in operation longer than has been anticipated. The prospect of extending the current license period is a

real possibility in the emerging competitive market environment. As noted previously, as of November 1999, there were over two dozen license renewal/extension applications pending before the NRC. For the county or municipality in which the nuclear power station is located, this can mean some fiscal relief, although it will generally be minor relative to the loss associated with decreased Market Value.

- Non-nuclear facilities will, on average, likely be assessed and taxed at somewhat higher levels than would be associated with valuation through net book value (depreciated original cost). There will likely be a considerable range of variation in the ratio of sales price to book value (and current assessment), depending on the type of fuel involved, with serious argument over the extent to which sales price reflects intangible assets (as has been discussed previously).
- To the extent that assessed values in the local taxing jurisdiction are reduced (dramatically, in the case of nuclear power stations), the affected counties and municipalities will be confronted with the unhappy choice of reducing local services or increasing taxes on the remaining property owners within each affected taxing jurisdiction. Political turmoil may be created in some instances, as homeowners (who vote) seek to shift as much of the increased tax burden onto commercial and industrial property owners (who do not vote).

OPPORTUNITIES FOR COUNSELORS

Awareness of the issues involved and sensitivity to their fiscal implications can equip Counselors to prepare to meet the demands for new or expanded counseling, advisory, and some valuation services. A few select Counselors who are already established appraisers and are prepared to meet the challenges of valuing generating plants in a competitive environment for electricity prices will likely find their valuation skills much in demand. A broader range of opportunity exists, however, in providing market analysis and advice to potential bidders, as additional generating plants are made available at auction. Similar opportunities exist to assist and advise IOUs about the review of bids, or further negotiation for acceptability to the sellers.

In the public sector, many assessors will need counseling advice about how to proceed in dealing with, or negotiating with, both new, non-regulated owner-operators of generating plants located within their

jurisdictions, and with existing owner-operators. The latter will be competing on the wholesale market for the sale of their product, even though they may still be regulated IOUs.

Finally, industrial and commercial clients seeking appropriate locations need to be made aware that there is one more location factor (or hazard) to be considered when an electricity generating plant (especially a nuclear power station) is located within a community.

As a first step in preparing to meet these opportunities, interested Counselors should become familiar with the sources of data and information about wholesale (and soon retail) electricity markets, and with the functioning of markets for generating plants. The *Selected References* that follow provide an appropriate starting point.^{REI}

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