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EFFICIENCIES IN ELECTRIC UTILITY MERGERS

With the expansion of competition in the electric utility industry, both anticompetitive effects and efficiency-enhancing effects of mergers have become more likely than before. This is most apparent when a merger provides efficiencies that enable a utility to compete more effectively with neighboring utilities in bulk generation or transmission markets. In these cases, efficiencies should be weighed against any possible anticompetitive effects of the merger. That is not to say, however, that every electric utility merger is likely to create efficiencies. Cost savings forecasts are inherently uncertain, and there is considerable statistical evidence that expansion beyond a certain utility size will result in only limited efficiency gains. Beyond this size, the loss of managerial control and other size diseconomies dominate any cost savings. Moreover, many efficiencies may be achievable without merger. Thus, careful analysis is needed to assess the efficiency claims of merging utilities.

As the importance of scale economies in plant-level generation has declined in the last 25 years, technological changes in the other vertical stages of utility operation have increased the likelihood of realizing firm-level economies. Some of these economies could also be achieved, however, through power pools and other contractual relationships which do not necessitate increases in firm size. There are four types of firm-level economies. The first, known as dispatch economies, stem from increased vertical coordination of utility system operations (either within a firm or between firms through contracts), allowing the least-cost choice of generating units to meet particular load characteristics. These economies can only be exploited if there is a broad enough mix of plants with base load, intermediate load, and peaking capabilities, as well as a highly-developed transmission system. The second type, diversity economies, are achievable when load patterns differ across areas or customer types; if areas or customer types are combined, capacity construction may be deferred and fuel costs may be reduced. The types of diversity include, for example, different peak seasons in adjacent areas and the use of different generation fuel types. Density economies, the third type, arise as more customers are served by a given utility system or as consumption per customer increases. Finally, economies can be gained by coordinated operation of systems to improve system reliability, reduce the cost of maintenance downtimes, and improve emergency responses.

Mergers between electric utilities that are situated to take advantage of vertical coordination are the most likely to produce efficiencies. For example, physical interconnection between merging utilities is necessary to achieve dispatch economies. Similarly, coordination efficiencies are enhanced by greater diversity between the merging utility systems, either in load or fuel type. For mergers between utility systems lacking opportunities for vertical coordination, the largest potential source of efficiencies is likely to be overhead consolidation or other manpower savings. However, in the case of mergers between very large utilities, even these efficiencies are likely to be suspect.

A number of mergers of electric utilities in recent years have involved efficiency claims. The merger of Pacificorp with Utah Power and Light (UP&L) was predicted to produce large savings (5.4 percent of operating revenues). These savings were available largely because Pacific Power and Light, which is Pacificorp's operating subsidiary, has a winter peak while UP&L has a summer peak. The expected efficiencies were found to be sufficiently compelling that

ALSO IN THIS ISSUE

the merger was approved, with conditions, even though there were some potential competitive problems. In the proposed Southern California Edison/San Diego Gas & Electric merger, the claimed labor savings from corporate staff reductions were found to be greatly exaggerated, and the lack of diversity between the merging parties' systems limited other savings. Because anticompetitive effects were deemed likely as well, the merger was not approved. In the recently proposed Entergy/Gulf States Utilities merger, projected merger savings stem from fuel cost reductions, deferred capacity, and lower overhead costs, but lack of diversity as well as the large size of the merged entity is expected to limit their overall magnitude.

Although limited in some important ways, the efficiencies that merging utilities can achieve are important to antitrust review. Under certain circumstances, the cost savings can be substantial and thus be important counterweights to anticompetitive concerns. Under others, cost savings are dubious and are viewed skeptically by the regulatory authorities.

Senior Economist Robert D. Stoner has testified on behalf of Occidental Chemical Corp., one of the intervening parties in the Entergy/Gulf States Utilities matter. He has conducted competitive and efficiency analyses of many industries both at Economists Incorporated and previously at the Federal Trade Commission.

REGULATORY CHANGES AHEAD FOR THE AIRLINE INDUSTRY

A changing regulatory environment appears likely to affect several aspects of airline industry operations. The market-based approach to allocating slots is under review, rights to sell international route authority may be changed, and international investment by carriers is being scrutinized. All of these could have a significant impact on the airlines' profitability.

Under the Reagan and Bush administrations, a market-based approach toward the airline industry allowed for the sale of scarce landing rights or "slots" at four airports. This helped ensure that those rights went to the carrier or other interested party with the highest value for the rights. The process of converting the slot allocation process to a market-based system is not complete, however. For example, some slots continue to be reserved for commuter or general aviation operations, and some are allocated by the Federal Aviation Administration (FAA) for international operations.

The market allocation of slots could be stalled or reversed by the Clinton administration. The FAA continues to reject proposals to eliminate the restrictions on certain slots allocated to commuter flights as well as proposals to eliminate the right of the FAA to take back slots and allocate them for international use. Instead, the administration has decided to take a "fresh look" at the entire slot allocation process. At issue is not only how to allocate the scarce resource, but also at which airports the resource is truly "scarce." Some carriers argue that technological and other changes could reduce congestion without allocating slots.

The allocation of international route authority is also under scrutiny. Currently, routes are allocated initially through a route proceeding, but may be bought or sold once route authority is granted. The Department of Transportation (DOT) has reportedly considered prohibiting the sale of route authority. In response, legislation has been introduced to require DOT to accept bids for the transfer of international route authority. Also at issue is whether municipalities should be permitted to bid for international routes. The municipality of Nashville recently submitted a request to purchase international route authority on behalf of an airline willing to serve that route.

In another area of apparent policy change, the government has supported claims of anticompetitive behavior against new entrants by incumbent carriers on certain routes. For example, DOT objected when Northwest Airlines responded to a new entrant by starting its own service on many of the entrant's routes. This involvement by DOT may be repeated; the entry of a significant number of new carriers has spawned several other claims of anticompetitive conduct against incumbent carriers.

In addition, the advent of more international investment by airlines has increased the need to provide competition analyses to foreign governments. While decisions concerning the allowed amount of foreign investment are often based on political (and military) considerations, economic questions often accompany the applications. For example, American Airlines requested that Canadian Airlines terminate

its contract with Gemini, a computer reservation system (CRS), prior to American investing in Canadian Airlines. This precipitated an analysis of whether the withdrawal of Canadian from Gemini would significantly reduce competition by hindering Gemini's ability to compete effectively with Sabre, American's CRS.

Some activities by the carriers, like mergers and acquisitions, have always been scrutinized by regulators. It now appears that aspects like slot allocation, which had just recently been opened to market forces, may be subjected to renewed regulation. This shift is likely to increase the burden of the airlines in responding to domestic and foreign government regulators.

Senior Economist Gloria J. Hurdle participated in the Justice Department's comments supporting market-based approaches to slot allocation procedures. In addition, she testified before the Competition Tribunal on the effect of Canadian Airlines' termination of its contract with Gemini in CRS markets in Canada.

AN ECONOMIST'S PERSPECTIVE OF THE *KODAK* DECISION

In the *Kodak* case, the Supreme Court dismissed Kodak's contention that, without market power in the sale of copying equipment, Kodak could not have market power in service and parts. The court based its decision largely on economic theory involving opportunism and imperfect information. While these theoretical considerations may be important in understanding how some markets function, their use in the *Kodak* decision essentially created an antitrust issue out of actions that, at most, amount to a misrepresentation by Kodak to its customers.

The "lifecycle" price of copiers can be thought of as comprising a price for equipment and a price for parts and service. To maintain the profit-maximizing lifecycle price, an increase in the price of parts and service would have to be offset by a corresponding decrease in equipment prices. Unless it could attenuate the relationship between equipment sales and the prices of service and parts, an attempt by Kodak to increase its profits by eliminating the independent service operators (ISOs) and increasing its parts and service prices would not likely be viable in the long run.

The Court, however, identified two reasons why it believed the relationship between service and parts prices and equipment sales could be less than perfect. It found that (1) lifecycle pricing of complex durable equipment is difficult, costly, and varies among customers, making it possible to raise the prices of parts and service to some customers; and (2) if the cost of switching is high, consumers who already had purchased equipment could be "locked in" and thus would tolerate some level of price increase in the aftermarket before changing brands.

One difficulty with the Court's use of these concepts is that it fails to explain why Kodak's parts policies towards the ISOs were necessary for it to exercise market power. Presumably, Kodak could have exercised any market power it had in the sale of parts by offering equipment at a competitive price, while raising the price of parts charged targeted customers. The logic of the Court's findings may be salvaged, however, if eliminating the ISOs increased Kodak's ability to discriminate in price between targeted and non-targeted aftermarket customers.

The Court's finding also raises questions about the nature of competition in the sale of copiers. Kodak's actions toward the ISOs may be interpreted as opportunistic behavior designed to exercise market power over its installed base of customers. Were Kodak to behave this way, purchasers of new equipment would then become reluctant to purchase a Kodak copier unless they were assured that such opportunism would not be repeated in the future. New customers may be able to protect themselves by negotiating competitively priced parts and service contracts at the time of their equipment purchase. It is unclear, however, why previous customers could not have done likewise. If, by contrast, service contracts could not protect new customers, Kodak could exercise its market power over its installed base of customers only by raising aftermarket prices to the "monopoly" level while lowering equipment prices on new sales by an equivalent amount. There is a serious tension, however, between this strategy and the strategy for exercising market power over unsophisticated non-lifecycle purchasers of new equipment. Because equipment prices are low, market power over unsophisticated customers could only be exercised by raising aftermarket prices *above* the monopoly level.

If Kodak could not discriminate in price between sophisticated lifecycle purchasers and unsophisticated non-lifecycle purchasers, the need to compete for the

former would probably protect the latter. The key fact in this case is that Kodak lacks market power in the markets for its equipment. That not only limits its ability to increase aftermarket prices, it also means that any market power it does have in an aftermarket exists because purchasers failed to protect themselves at the time the equipment was purchased. Even this limited notion of market power assumes that such opportunistic behavior will not significantly restrict Kodak's future ability to compete in the equipment market. It is implausible that future consumers will ignore such opportunism. Consequently, Kodak could undertake such behavior only at great risk.

EI Principal Barry C. Harris has testified on antitrust matters in many industries. He recently served as Deputy Assistant Attorney General in the Antitrust Division of the Department of Justice. This article was adapted from a presentation to the New York State Bar Association Antitrust Law Section Symposium in January 1993.

MARKET-BASED APPROACH MINIMIZES POLLUTION CONTROL COSTS

The government often chooses an environmental cleanup and restoration strategy that is based on a command-and-control approach which costs far more than market-based programs that can achieve the same objectives. Recently, the federal government reached an agreement with Florida involving a series of mandated controls for reducing phosphorus pollution in the Everglades. Yet a system of tradeable "restoration credits" could harness market forces to accomplish the same results with a much smaller price tag for farmers, industry, and taxpayers.

Phosphorus reaches the Everglades from runoff of fertilized farmland, discharges of sugar mills, and even rainwater. Excess phosphorus is thought to cause environmental damage by encouraging the growth of plants that crowd out native species of plant life. The government-mandated plan calls for controlling phosphorus runoff by constructing 35,000 acres of experimental filtering marshes at a cost of $400 million. An estimated 20,000 jobs would be lost as a result of the fees levied to finance the plan and the replacement of farmland with the filtering marshes.

An alternative plan that is based on market forces could substantially reduce the cost of controlling phosphorus discharges and minimize the loss of farm employment. The idea is to give farmers and plant operators maximum flexibility in achieving phosphorus reductions through a system of tradeable restoration credits. A similar arrangement has been built into the 1990 Clean Air Act to curb acid rain. The starting point for a market-based approach is the same as the command-and-control approach: the government sets target levels of phosphorus discharges from the farm region into the Everglades. Ideally, this is the amount of phosphorus the waterway can safely absorb. With a market-based approach, the government then issues restoration credits to all sources of phosphorus discharge in the region including farms, sugar mills, and municipal waste facilities. Each credit allows the owner to discharge one pound of phosphorus into a canal.

The key is that credit owners have the freedom to use or trade their credits. The tradeability of credits gives farmers and other credit holders a powerful market incentive to reduce phosphorus discharges in the most cost-effective manner. Farmers or plant operators whose water is easily cleaned will find it most profitable to reduce phosphorus and sell their excess credits. Those whose phosphorus discharges are more difficult to control will likely buy credits. By making excess credits marketable, the system provides an incentive for the development of innovative cleanup technology, an aspect that is absent under the command-and-control system. Indeed, farmers and plant operators may discover that they can remove more phosphorus than they now believe is possible, thereby lowering public cleanup costs.

Cost is the biggest obstacle to environmental cleanup and the greatest source of contention between industry and government regulators. In many circumstances, the government's environmental objectives can be met at a substantially lower cost to industry and society through a market-based system of tradeable credits for environmental protection.

Robert W. Hahn, Special Consultant to Economists Incorporated, worked on behalf of U.S. Sugar Corporation in this matter. He has published extensively on market solutions to environmental problems, including a recent op-ed piece in the New York Times *on restoring the Everglades.*