

Retail wheeling

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In the past few years, Maine's electric utilities have begun to face the forces of competition. Maine is experiencing the effects of a national trend, a shift from a traditional and regulated system to a more innovative and competitive one. The following four articles offer differing perspectives on this complex and controversial issue. In the first of this series, Gordon Weil, active in Maine and elsewhere in promoting increased competition in the electric industry, explains the forces for competition. Mr. Weil traces the history of the electric power market from its beginnings as a monopoly, to its present status where all of the forces promoting competition nationally are at play in Maine.

The latter three articles are taken from the authors' presentations at a December 1994 conference entitled Retail Wheeling, sponsored by the Margaret Chase Smith Center for Public Policy's Project for the Study of Regulation and the Environment. William C. Perkins analyzes a number of potential costs and risks of full-scale retail wheeling. Armond Cohen explores the environmental impacts that are at stake in restructuring and offers some possible solutions. Finally, James F. Mitchell describes some of the political and financial limits to restructuring and provides suggestions for how to proceed in creating full and fair competition.

False competition and fulfilling the promise of retail wheeling

James F. Mitchell

I hope to convey three key points in my analysis of retail wheeling. First, retail access will not necessarily provide the promised benefits until there is fair and full competition in the generation market, which does not exist today. Significant restructuring of the market is required. We cannot just graft retail wheeling onto today's marketplace. Second, the solution is to dissolve utilities as they currently exist. Third, if done properly, that de-integration could help resolve the stranded investment riddle.

A little more than one hundred years ago, during the Great Power Debate, Thomas Edison organized demonstrations in which dogs, cows, and horses were regularly put to death with electric current in order to show that Westinghouse's alternating current electric system was dangerous and even deadly. America's greatest inventor authorized a wide variety of activities to discredit Westinghouse and the alternating current system. Some evidence indicates that Edison and his backers, through back channels and an engineer by the name of Harold Brown, fought hard to have New York state adopt alternating current as the best method for supplying electricity to a newly devised system for execution at the state prisons. And since the word "electrocution" did not then exist, there was even hope the term "to westinghouse" would explain the fate of the unfortunate inmates on death row. I relate this historical anecdote because I think it illustrates in a small way one of several points I hope to convey. In a democracy, courting public opinion is critically important. Edison knew that and so do his descendants in today's

modern utilities. But technological and economic truths will eventually win out because, in the long run, cost and convenience are more powerful determinants than fear and uncertainty.

Today's limits to retail wheeling are not primarily technological ones; they are political and financial. Should we break down these political and financial barriers, so that retail wheeling is made easy for Maine's energy users? The problem in answering that question with confidence is that the full benefits of retail wheeling depend on a competitive generation market.

Retail wheeling is a device that could cut in two ways. It could facilitate the goal of a fully competitive and more efficient electricity industry. Or, it could slow the transition to a more competitive market by shifting wealth from one group of energy users to another group. Once that shifting starts, there will be very powerful interests who will seek to have the benefits of low cost power continue while delaying the necessary re-allocation of past investment. That could be a particularly perverse outcome, since the revenue stream from all classes of rate-payers has enabled utilities to build or buy capacity—low cost and high cost—during the last one hundred years.

The real question is how to enable the transition to a restructured industry that is both fair and efficient. Or perhaps more accurately, can a competitive market structure exist in electricity? Some might object that electric utilities already face competition—from self-generation options, from conversions to gas, and even from industrials threatening to relocate. But that analysis confuses the business question, "Am I in danger of losing customers?" with the public interest question, "Is there a competitive market structure?" And competition is certainly not defined in terms of how the sellers feel. Competition is a market structure characterized by many sellers, many buyers, and ease of entry—including access to materials and facilities essential for competition.

Why should we care about a competitive market structure? After all, in a regulated industry, as in any industry, the goal is economic efficiency: producing and consuming the appropriate amount of the product at the appropriate price. But a competitive market structure is not merely one convenient way to economic efficiency; it is the most reliable means. Economists are most convinced that an outcome is "efficient" if it is the outcome of a competitive market structure.

The electric utility industry does not now have a competitive market structure. Early on, people assumed that distribution, transmission, and generation together constituted a natural monopoly. Over time, law and regulation were devised to create, maintain, and restrain the monopoly provider. Not surprisingly, these policies, combined with profit-maximizing behavior by the utilities, have produced systematic advantages for utilities over non-utilities, even as the industry has recognized that generation of electricity is not a natural monopoly. But isn't generation now competitive? There are many suppliers—Independent Power Producers (IPPs), qualifying facilities (QFs), and the like. Many in the generation side of the business have long touted the benefits of competition as justification for their existence. But the generation market does not really meet the criteria for being a competitive market. For each service territory there are not many buyers of generation. There is only one buyer—the utility. What's more, that buyer is usually a seller of generation as well. So the normal action of a competitive market, where the seller tries to maximize profit and the buyer tries to minimize cost is warped.

The solution seems simple: Create a situation with multiple buyers within a service territory—retail wheeling. Multiple buyers could be industrials just as easily as utilities. Then a utility making the wrong decisions about buying or building options would lose business.

But even with multiple buyers, there will be circumstances where the regulated utility will not make the cost minimizing choice. If the utility facing retail competition is still under rate-base regulation, the utility may calculate that losing some customers is worth the return earned by keeping or building its own generation facilities. With captive customers, as in the electric industry, profit maximization and cost minimization are not always mutually enforcing behaviors.

Furthermore, captive customers and their nearly guaranteed stream of revenues create unfair circumstances in the retail access world that may have short term benefits, but which may limit the long term goal of full and fair competition. Utilities can erect entry barriers to independents by subsidizing their competitive efforts with captive revenues.

As the historic provider of electricity service, the utility has amassed assets and talent, funded with government-approved revenues from captive customers. Clearly, these assets and employees have tremendous value, and that value gives utilities a competitive advantage over independents in a retail access world. For example, a utility power plant with book value far below market value can be put to use at a lower cost than a comparable plant built by an independent. The utility's cost advantage is a function of its monopoly status, not its abilities or skills. Utilities with surplus capacity can be formidable competitors. The Northeast Utilities/Madison Electric Works experience is somewhat instructive for those of us in Maine.

But more important is what the future might hold for all consumers if retail wheeling moves forward in a regulatory regime that allows full cost recovery for facilities from captive rate-payers. The utility would then sell into other markets below costs, thereby creating and maintaining a huge barrier to entry for independents. That barrier to competition will not lead to the benefits we all desire from retail wheeling: a more efficient electricity market. As long as utilities are both buyers and sellers of electricity in their service territories and have their revenues based on cost of service, competition will be undermined.

The real issue is not how to graft retail wheeling onto an existing industry structure that doesn't work, but how to create a new structure that permits real competition.

The most logical reform is to get utilities out of the generation business. And this step should be real divestiture. Halfway steps such as unbundling generation services from other utility services or placing generation in subsidiaries with separate accounting but with the same board of directors will not be enough. These halfway methods will leave utilities with incentives to use their monopoly power, where it exists, to gain competitive advantages. Utilities should sell their generation assets to entities that are entirely independent from transmission and distribution (T&D) companies. The result would be strictly T&D companies, which would continue to sell monopoly services under a regulated regime.

Divestiture also can help us grasp firmly at least some of the jello that is "stranded investment." Estimates of the scale of the stranded investment problem in the electric industry range from a low of \$24 billion to a high of \$200 to \$300 billion. Through divestiture, the market will

determine the true cost of stranded generation investment. A market determination will give us real numbers. The separation of generation from transmission and distribution allows policymakers and utilities to deal with uneconomic generation assets as a one-time transitional cost.

Here is how it might work: Utilities must be given some economic incentives to exit the generation business. In other words, shareholders must recover stranded costs. As a utility sells its generation assets, some would sell above book value and some would sell below. If the aggregate sales exceeded book value, the proceeds would be distributed equitably between shareholders and rate-payers under some previously regulated formula. If the aggregate sale proceeds were below book, the difference would be the stranded cost attributable to generation assets. Utilities could then recover this net stranded cost from all rate-payers over a period of time. Under this scenario, utilities would have some incentives to retire generating assets with non-competitive operating costs, if they could count on some transitional revenue equal to the plant's fixed cost. A portion of this cost to rate-payers could be offset by the "surplus" from divested assets with positive market to book ratios.

Divestiture has some important benefits. Competitive forces, which have successfully pushed down the costs of new IPP generation, could have the same effect on the 700,000 megawatts of existing utility assets once they are spun off into a truly competitive market. (Only about 6 percent of the nation's generating assets are now unregulated.) Divestiture not only frees the distribution company to seek the best deal for its customers, it also removes utility incentives to favor its own generation. It allows utilities to use their transmission system as a revenue source, not as a tool to stifle competition. The distribution companies will be free to select the best resources for their customers. And, in most cases, those customers will have fewer and fewer incentives to seek alternative suppliers.

Full and fair competition is not here. And industry reforms should not be adopted on the premise that it is. The defects of the current market must be corrected so that the push and pull of producers and consumers pursuing their own interests will result in an efficient outcome. Correcting the defects in the generation market will help all consumers enjoy the benefits of efficiently produced electric power. Indeed, the divestiture I have described here could make the retail wheeling debate as irrelevant as Edison's experiments on farm animals.

Author's note

Significant portions of this article were taken from materials developed by the National Independent Energy Producers and, in particular, the work of Ellen Roy's restructuring committee of the NIEP.

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