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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.

Retail wheeling: A closer look

William C. Perkins

Introduction

I would like to make three points that must be kept in mind by anyone interested in the move toward retail competition in the electric industry in Maine.

First, although this is beginning to change, much of the dialogue over the potential benefits of retail competition inappropriately blurs the issue of efficiency and the issue of how to allocate cost and risk among different groups. For many of the more vocal proponents of retail wheeling, the prospect of allocating costs and risks away from themselves is the benefit that most attracts them. I'd like to focus on the promise of efficiency gains that may come from retail wheeling. I will not quantify them with any degree of accuracy, but I hope to further the dialogue so policy makers can assess the efficiency aspect separate and distinctly from the cost and risk allocation issues.

Second, as with any significant restructuring proposal, retail wheeling brings many uncertainties and will almost certainly impose costs as well as present opportunities. The opportunities (at least for the present) seem much more weighted toward large consumers of electricity while the costs and risks tend to disfavor small commercial and residential customers. Policy makers who wish to explore retail wheeling must either find ways to more equally share the benefits and the

risks of retail competition between all customer classes or to ensure that the costs are placed on those parties with the greatest opportunity to benefit. Customer groups who are not poised to benefit from these changes should at least be held harmless from the costs of achieving them.

Third, events that impact the dialogue over retail competition continue to change rapidly and this is nowhere more true than right here in Maine. I'd like to spend a few moments discussing why the issue truly is different here than it may be elsewhere.

Retail wheeling's efficiency gains may be less than expected

Let us look at the promise that competition will make utilities more efficient. Regulators and legislators are looking at retail wheeling primarily out of frustration that traditional cost of service regulation has failed in its objective of providing a surrogate for competition. Such frustration runs especially high where rates are high or have been rising rapidly over the last few years, or both (as presently is the case in Maine, unfortunately). The suggestion, then, is that it may be preferable to replace the regulatory surrogate for competition with the real thing. In so doing, it is hoped, competition will give utilities the same impetus to slim down and operate at maximum efficiency by keeping operating costs low, maximizing profits, keeping rates low, and maintaining high levels of customer service and customer satisfaction.

This, then, is the promise of retail wheeling. What remains to be explored, however, is the magnitude of benefits that can be expected. Despite the piles of articles I have accumulated on this topic, this is one area that has received little attention. So I have undertaken an exercise, using Central Maine Power (CMP) as an example, to help put the issue in some perspective.

First, we must identify those sectors of the utility business that would experience significant additional competitive pressures if retail wheeling were introduced. Retail wheeling should not strongly affect the cost of generation because the generation sector already is open to competition, thanks to the Public Utilities Regulatory Policies Act and the effectiveness of the Energy Policy Act in opening up the wholesale wheeling market. In New England the generation market is fairly competitive and the authority (if not the infrastructure) already is in place to let this competition grow. As to fuel costs, most commissions have instituted a fuel adjustment clause because utilities arguably have limited control over the cost of fuel. Because the fuel clause isolates the utility's earnings from its fuel costs, there is room for additional efficiency gains in fuel procurement practices. Much can be done to promote such efficiencies, however, simply by doing away with the fuel adjustment clause itself. This has already been done for CMP and is under consideration for Bangor Hydro Electric Company. Energy sales made at the wholesale level are fully competitive already. Retail competition will have little incremental impact. Finally, transmission and distribution systems continue to be acknowledged by virtually everyone as natural monopolies.

This leaves one area where additional competition can have a significant impact on costs: operational efficiencies. But how big a piece of the revenue puzzle is this? CMP's total operating revenues in 1992 were \$896 million. Of this total, expenses were accounted for as follows:

- Fuel for Generation and Purchased Power: \$408M
- Purchased Power Capacity Costs: \$79M
- Taxes: \$68M
- Depreciation: \$40M
- Amortization of Cancelled Plant: \$18M
- Return on Equity and Debt Coverage: \$102M
- Other Operation and Maintenance: \$179M

Two things are apparent. First, operations and maintenance, the portion of expenses to which incremental competition would provide the most impact, is a significant but nonetheless relatively small percentage, only about 20 percent. Second, impacts on the cost of capital (which in this example comprises 11 percent of total costs) are of roughly equal concern as the efficiency of operations. Any increase in risk that is incurred to promote the acquisition of operational efficiencies can quickly undermine the savings through a higher cost of capital.

In addition to the effects of wholesale wheeling, utilities (at least in Maine) already face considerable competition. This competition already exerts considerable pressure on a utility to keep its operations efficient. Retail wheeling would provide yet more competition to which utilities must respond. But it would be inaccurate to call this an unprecedented introduction of competition into the electric utility arena. Significant competition exists from alternative energy providers, such as heating oil, diesel, kerosene and natural gas providers. Self-generation increasingly is becoming a competitive option for many large customers. Despite franchise protections, neighboring utilities fight for the ability to attract new customers and to retain energy intensive customers who can justify moving their operations to obtain lower energy prices. Finally, utilities in New England have found that their high costs can make or break the ability of certain customers to continue in operation.

Nonetheless, retail wheeling does represent yet another form of competition to which the utility could be exposed—competition from other retail suppliers of electricity. I do not dispute that, despite these other forms of competition, utilities still operate at less than peak efficiency. But how much less efficient? Certainly, one cannot assume the complete elimination of operating costs. For my example, I have assumed that incremental competition could eventually squeeze 20 percent out of the utility's total operating and maintenance budget. (Although my 20 percent assumption is arbitrary, it is consistent with the only two similar estimates I have seen. And even if the reader chooses somewhat different assumptions, I think the basic analysis is unaltered.) If we reduce operating and maintenance by 20 percent, which itself represents 20 percent of total revenues, then about four percent of total revenues might have been saved through increased efficiencies. For CMP, that would mean a one-time rate reduction of approximately \$36M. This is significant, although for CMP it amounts to less than most recent annual fuel adjustment increases. It is, however, much smaller than I had envisioned when the prospect of trimming utility inefficiencies through competition was first raised.

Keep this example in mind when people discuss how the introduction of competition has resulted in utilities that almost immediately cut rates. Lower rates do not necessarily mean that operational efficiencies have been achieved. The lowering of rates in the face of competition is more often an exercise of transferring costs from someone who has competitive options to

someone who does not. The costs do not go away, they simply become borne by someone else. Rate reductions that are premised on these cost transfers result in "stranded investment." Assets are stranded when the customer for whom they were built escapes the responsibility of the costs of those assets.

When assets are stranded three parties are generally recognized as the potential payers: remaining ratepayers with no competitive options ("captive customers"), the utility's investors, and taxpayers. The implications of imposing stranded costs on each of these potential payers must be considered before you can conclude that reductions in rates are nonetheless a good thing. I identified this cost/risk allocation issue earlier, and it must be kept distinct from potential efficiency gains from retail wheeling.

The costs and risks of retail competition must not be underestimated

I turn now to a review of the costs and risks that arise in the pursuit of these gains. This is important not just to ensure that the risks and opportunities under retail wheeling are fairly distributed among customer classes. It is the net gains that are available under retail wheeling (that is, the operating efficiencies less the cost of achieving those efficiencies) that must remain the focus of this debate. Let's consider what costs must be paid to acquire this potential efficiency savings of four percent.

Cost of capital can be almost as significant a portion of a utility's costs as is operating and maintenance expense. An important question is: What costs will increased risk impose on a utility's revenue requirement? Small changes in the cost of capital can quickly consume the savings achievable under retail wheeling.

Consider again the calculations based upon CMP's 1992 costs. If retail wheeling were to raise the risk of investing in electric utilities enough to raise the cost of capital by just one percent, this would increase the cost of capital for CMP in 1992 by almost \$12 million. This one factor could consume a substantial part of the \$36M of predicted savings.

How much risk does retail wheeling represent? For an answer to this, I looked to California, where threats of retail competition are further advanced. Daniel Sotto (1994), Senior Managing Director of corporate bond research for Bear Stearns & Co., reported:

The California Public Utilities Commission has opened a rulemaking proceeding to consider restructuring the state's electric services... This shift itself is sufficient to warrant a ratings downgrade, since utilities traditionally have enjoyed lower credit scores vis-a-vis industrial companies because of the revenue "assurance" conveyed by regulation. Thus, the typical financial profile—consisting of debt leverage in excess of 50 percent, less than 100-percent internal funding of capital expenditures, and 2.5x interest coverage— would warrant a low rating, using an industrial benchmark... Accordingly, it was no surprise when both Moody's and Standard and Poor's placed three major electric utilities—PG&E, San Diego Gas and Electric and So. California Edison—under review for possible downgrade. Because the proposed changes strike at the heart of the industry's strength, we believe the downgrades could involve several notches.

Mr. Sotto concluded his remarks by stating: "Our impression of the proposed rulemaking is not good. We believe it increases the risk profile of utilities at several levels." And finally, "Whatever course this proposal takes, we fear that certain forces may have been unleashed that can only serve to hurt credit quality in the industry."

The impact of this risk on equity prices can be inferred from the stock prices and market ratings of electric utilities over the last year. Indeed, in the Wall Street Journal's review of second quarter 1994 performance, they noted that utility stocks were beginning to strengthen because investors were beginning to see retail wheeling and competition as less of a near term threat. As a final comparison, the cost of capital for independent power producers reportedly averages around 14-15 percent. This is substantially higher than most utilities are earning today.

A second cost is the risk that electric utilities will simply not survive under full competition. If the loss of the franchise utility is a potential outcome of retail wheeling, many new risks become apparent. How reliable is an electrical system that is dependent on a network of small independent generators? Who will supply backup and maintenance service? Can a system of independent generators provide a system mix that optimally meets the existing and anticipated load mix of electricity customers? A related question is whether large baseload systems, such as nuclear and hydro, can continue as a resource option in this brave new world. I do not suggest that these problems are unsolvable or that retail competition is necessarily unattractive simply because these types of questions arise. But, some combination of accepting these risks and creating solutions to adequately address these risks must be borne in the creation of a retail wheeling system. The costs associated with solving these problems, or living with them, are costs that must be netted against the potential benefits of the new regime.

A third risk is that competition will result not in many small independent suppliers but rather in the emergence of one or a few powerful suppliers in each market. Neighboring utilities, or if the Public Utility Holding Company Act is abolished, any utility, may bankrupt the franchise utility by stealing load and forcing a merger. Even if the franchise utility does compete successfully, one of the strategies for successful competition in the unregulated business community is to merge with or acquire other businesses. The issue here is "effective competition." Dr. William Shepard, Chair of the Department of Economics at the University of Massachusetts, concludes, competition is not "effective competition" unless it meets three minimum objectives: (1) no firm holds more than about 40 percent of the market, (2) there are at least five comparably strong competitors, to exclude problems of collusion, and (3) there is freedom of market entry. If neighboring utilities dominate because of a leaner and meaner corporate structure, because of access to lower cost power, or because of buy-out and merger activity, they could represent an even greater monopolistic threat than did the pre-existing franchise utility. Not surprisingly, some utilities are strenuously fighting retail wheeling while others are welcoming it. Utilities who welcome it see opportunities to expand their power base, which should give little comfort to those who believe that dropping franchise protections will further restrain monopolistic behavior. While strenuous enforcement of antitrust laws could provide some protection, the recent history of antitrust regulation does not support the proposition that antitrust supervision will be adequate to replace regulation.

Competition gives rise to serious problems with respect to universal service. What if a competitor utility wants to "cream skim," that is, serve only the most densely populated areas or customers with large loads? What if no energy provider "wants" to serve certain energy loads? Is an obligation to serve consistent with competition? If cream skimming by other utilities is allowed, would the franchise utility providing services to the remaining smaller and more dispersed customers remain financially viable? The answers to these questions do not yet provide comfort to small consumers that retail competition will benefit them. However convincingly the case can be made for competition being "effective" for larger loads, I do not believe anyone now makes the case for effective competition at all levels of utility service. Any move to retail competition in the delivery of electricity at this time will leave behind small, dispersed customer classes. Location alone will provide a strong advantage for whatever competitor generates nearest to small communities because of the severe penalty associated with line losses.

From the perspective of the small customer, the movement toward retail wheeling is a move to accelerate system bypass. This exacerbates the problems that make utilities appear uncompetitive today. Policy makers cannot rewrite the rules of the electric utility industry because of perceived benefits from competition, and finance this transition by passing the costs incurred onto parties who are unlikely to benefit from the new system. Bypass cannot be encouraged or permitted without passing on the cost of system bypass to those who seek its benefits. It is absolutely critical to distinguish between those who simply desire immediate access to lower cost power (at the expense of higher costs for someone else) and those who are looking to implement a more efficient system. If retail wheeling loses its appeal once charges for stranded investment are imposed, there are no net efficiencies from retail wheeling and the real effects are cost shifting. Those who see net benefits from the introduction of retail wheeling should be willing to finance the transition that will allow those benefits to be realized. Cost shifting to captive customers will result in tradeoffs within the local economy, with larger customers benefiting at the expense of smaller companies and residential ratepayers. I am unaware of any study showing that such a tradeoff would result in net economic gain, and I am concerned that such a presumption is especially suspect in Maine where job growth is dependent on economically sensitive small businesses.

Retail competition will make energy planning and the implementation of state or regional energy policy more difficult. Integrated resource planning will require some significant new vehicle for implementation if it is not to be one of the casualties of this new regime. We risk losing the acknowledged benefits of demand side management, notably its reduced environmental impact, its contribution to economic competitiveness, its creation of local jobs that is superior to most other forms of energy production, and its role in promoting increased awareness and market acceptance of energy efficiency opportunities that exist in unregulated areas of the economy. Another cost will be the increasing secrecy with which planning will occur for each utility or generator. In New England, cooperation between neighboring utilities has permitted each to learn from the successes and mistakes of others, and to plan for needs on a regional basis. Competition largely will shut the doors of communication—indeed, just the threat of competition already has had a chilling effect on such communication.

Finally, retail wheeling is a particularly poor idea to promote on a utility-by-utility, or even statewide, basis. It must be introduced at least on a regional basis, it seems to me, to make sense.

Why should Maine allow PSNH or Boston Edison to compete for Maine's most lucrative electricity loads if New Hampshire and Massachusetts keep their doors closed to competition from Maine utilities?

I am not against greater competition in the utility arena. However, there are many models other than retail competition that can and should be considered. Whatever model of restructuring is adopted in Maine and elsewhere, the importance of electricity to all the stake-holders must be considered in this debate. If the risks to small consumers can be addressed so that they share fairly in the costs and benefits of any new system, the Public Advocate's office will be one of the supporters of this new approach.

A postscript

As it pertains to Maine's largest investor-owned utility (CMP), much of this discussion may well prove somewhat academic. Many alternatives to improving efficiency in the provision of electricity services exist and should be explored. One of these has just recently been adopted by the Maine PUC. Under "price cap" regulation, CMP will not raise its rates by amounts that equal or exceed inflation for any customer class. It provides incentives for CMP to cut its costs by allowing CMP to receive the benefits of any cost-cutting up to a cap of 3.5 percent above the allowed rate of return. It also permits CMP to exercise greater pricing flexibility to respond to existing competition. The adopted rule provides some limits on the exercise of pricing flexibility, provides notice requirements to guard against unfair competition, and provides targets for continued integrated least cost planning (with penalties for failure to comply with least cost conservation or to meet demand side management opportunities). The new system will proceed for five years.

This system may provide many of the incentives of competition that are missing from traditional regulation without risking the more drastic consequences of full retail competition. For the simple reason that this new regulatory format deserves an opportunity to prove its benefit to the state, any move toward retail wheeling at this juncture is, in my opinion, ill-advised. Moreover, CMP has received assurances from most of its largest customers that, in return for rate decreases of 15-18 percent, they would not seek alternative electricity suppliers for at least five years, even if retail wheeling were available to them. Since retail wheeling holds the most promise for exactly these large customers, it is unlikely that its introduction would be of much benefit to anyone in the next few years.

Five years is not that long. CMP's large customer contracts will have expired by then. We should not waste the interim years in the hope that the problems will go away or will be resolved satisfactorily by others. We should devote significant time and resources to determining what improvements will be necessary when the present experiment is over. If retail wheeling is one of the improvements to be reviewed at that time, significant effort must be devoted to finding ways to permit all of CMP's customers to benefit in such an environment.

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