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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.

Electric service: The next generation

Gordon L. Weil

The operating environment for the electric power industry has changed fundamentally. Monopolies, thought to be inevitable and immutable, are crumbling. Competition, unthinkable even a few years ago, is now the watchword. What has happened?

In the beginning: Monopoly

Electric utilities began as small municipal or industrial power generators serving a limited number of customers—those who could be reached economically by the power lines. At the outset, they looked much like water utilities do today. Each was a separate company or municipal entity, frequently not even serving all of a single town. Edison's original light company served only a portion of Manhattan. As the advantages of electric power became more evident, these small electric companies proliferated, pushing aside the gas light and hydro-mechanical power as the driving force of the local economy. These electric utilities provided a bundled service: The generation and distribution of power to its customers.

By the second decade of the twentieth century, regulation of electric utilities had become common. On the surface, regulation by state bodies was designed to protect the customers of monopoly utilities from exploitation, but it also established franchise territories from which one electric company might exclude competitors. The utilities claimed that without such protection

they could not achieve the stability and economies of scale required to provide economical service.

As a result of the early introduction of regulation, competition was never given an opportunity. Customers gained by the utility's obligation to serve all customers in its franchise area, but they soon were required to rely on regulators alone as the surrogate for competition. Thus, an administered system was called upon to simulate, as well as possible, the effects of a competitive market.

Some electric utilities wanted more than the ability to dominate a local market area; their aspirations were national. With the enactment of the Public Utility Holding Company Act (PUHCA) in 1935, Congress ended the threat of domination of the electric market by a few national utilities. With the Rural Electrification Act, it helped establish new utilities in areas where the power companies chose not to provide service.

The energy crisis and its aftermath

There matters stood until the energy crisis of the 1970s. The electric utility business was seen as a natural monopoly with captive customers whom utilities had an obligation to serve. As part of the response to American dependence on foreign oil, Congress enacted the Public Utility Regulatory Policy Act (PURPA) of 1978. In its effort to promote indigenous renewable resources, PURPA authorized the creation of a new entrant into the utility world, one that would break the monopoly relationship. By encouraging the creation of so-called "qualifying facilities" (QFs), which used generating plants not controlled by utilities but from which utilities were required to purchase power, PURPA inadvertently set in motion the trend to competition.

Bundled electric service was no longer inevitable. The local electric utility might well no longer own all of its own generation; instead some might be obtained from QFs. In effect, these generators could market their power if they could compete successfully against the utility's own resources.

Other utilities move toward competition

While these modest beginnings occurred in the electric industry, other utilities were undergoing more accelerated and more substantial change. The national monopoly held by AT&T was ended because it could no longer be justified technologically. The method used was unbundling of different telecommunications services, such as long distance service and customer equipment. While many lamented the end of a simpler era, customers had to recognize that unbundling meant competition and that competition offered the potential of lower costs.

In the natural gas industry, federal regulators determined that pipeline companies, which owned and controlled natural gas during transmission between the producer and the local distribution company (LDC), might better be limited to a transportation function, without actually owning the commodity. Customers were encouraged to shop directly for gas supplies and then to contract for transportation. As a result of unbundling services, pipelines and even LDCs would become simply carriers of other people's natural gas.

Some in the electric industry continued to feel that, because of its high capital costs and the inability to store its products, the electric industry was different and immune from the forces of competition. But close scrutiny revealed that competition was eating into the traditional monopoly even as major changes were occurring in other sectors. "Wholesale utilities," such as municipal distribution utilities that generate little or none of their own power, were increasingly interested in purchasing from other than their traditional suppliers. And escalating electric rates were driving customers to alternative fuels.

Northeast Utilities/Public Service merger

Public Service Company of New Hampshire (PSNH) had been forced to file for reorganization under the U.S. Bankruptcy Code as the result of its ill-fated investment in the Seabrook nuclear station. Ultimately, Northeast Utilities (NU), one of the two largest electric companies in New England, offered to acquire PSNH to resolve the problem. This merger required the approval of the Federal Energy Regulatory Commission (FERC). Most importantly, FERC was required to find that the proposed merger was not anti-competitive. With its acquisition of PSNH, NU would have what one witness called a "transmission curtain" across the face of New England. Utilities in eastern Massachusetts could not purchase power from Maine, New Hampshire, Vermont, New York, or Canada without passing through the expanded NU system. NU had significant generation surpluses (thanks in part to Seabrook) and might make access to transmission across its system both difficult and expensive to encourage purchases from NU itself. Utilities on the wrong side of the curtain complained that the merger, unless subject to strict conditions, would produce an anti-competitive result. NU countered that such utilities could always purchase power from QFs close to home and could thus avoid the NU system.

FERC was persuaded by these worries. While it authorized the merger, FERC required NU to file transmission tariffs that were strictly cost-based and that would not hinder the access of others to the market. FERC went so far as to prescribe rules for allocating costs of new transmission facilities between "native load" customers and third parties. Using the unusual circumstance of having a powerful grip on a large utility, FERC forced recognition that a utility should not be allowed to use control of transmission to control markets. Yet that was precisely what most utilities had been doing.

The Energy Policy Act (EPAct) of 1992

On Capital Hill, Congress watched the NU-PSNH case with interest while it considered amendments to PUHCA. Electric utilities, unhappy with a growing share of generation in the hands of non-utility generators that they could not control, sought the right to develop generation outside of their own market area and to become generating companies.

As a quid pro quo for such PUHCA reforms, Congress considered the issue of transmission access. Utilities had always been permitted to offer transmission service to others, but had relatively seldom done so. FERC was authorized, under certain circumstances, to require wheeling, but it had never done so. The EPAct reformed two sections of the Federal Power Act. It required owners of transmission facilities to provide wheeling to utilities and non-utilities. The EPAct specifically stated that open access wheeling would not apply to retail wheeling, i.e.

transmission to end-use customers. In this important respect, the federal treatment of electricity differs from the regime applying to natural gas or telecommunications. The established utilities, while forced to accept open access as the price of PUHCA reform, successfully fended off retail wheeling.

Although not included in the EAct itself, the concept of regional transmission groups (RTGs) gained wide acceptance during the legislative process and was later adopted by FERC. Large groups of utilities and non-utilities are encouraged to form RTGs to set ground rules for open access within a specific area, within FERC-imposed standards, including the construction of new facilities and transmission pricing. RTGs could amount to subordinate regulatory entities to the FERC, making transmission access easier through the establishment of detailed rules and dispute resolution procedures. RTGs could help accelerate the development of the open power market.

New England attempted to develop a regional transmission arrangement (RTA), first as part of the settlement of the NU-PSNH merger case and later as an ambitious effort to create a regional pricing mechanism. While this effort failed, a renewed attempt has been made by New England utilities, regulators, and non-utility generators to develop an RTG.

Maine utilities lag behind others in the region in not having filed transmission tariffs with FERC. Access is clearly impeded when potential customers do not know the cost of transmission. A New England RTG is likely to cause Central Maine Power (CMP) and Bangor Hydro-Electric (BHE) to develop their own tariffs; Maine Public Service, not a likely RTG participant, will only do so if subjected to market pressures.

A new day for wholesale utilities

There are about 2,000 municipal electric utilities and 1,000 electric cooperatives in the United States. Many have been captive customers of their suppliers. In theory they had access to the open market, but this access depended entirely on the willingness of the utility that surrounded their service territory to provide transmission service. FERC authority to order this transmission was so circumscribed as to be nonexistent.

The transmission barrier to wholesale market access began to crumble even before the passage of the EAct. Entergy, a holding company of several southern utilities, agreed to provide access on its system to its wholesale customers, provided they would pay for the cost of any Entergy facilities that were "stranded" by their exit. On a smaller scale, other utilities had offered open access but with many conditions. During the NU-PSNH merger case, as FERC began to recognize the anti-competitive effect of transmission domination, a group of New England transmission dependent utilities (TDUs) attracted attention for their demands for unfettered access. During the New England RTA negotiations, many of them were able to negotiate new arrangements with their surrounding utilities to ensure access to the market and fair calculation of their share of transmission costs.

In another case, Unitil, a New Hampshire utility, wanted to end its purchases from PSNH to avoid Seabrook costs. PSNH claimed that, as a matter of public policy, Unitil should not be

allowed to avoid its share of the Seabrook costs. But FERC ruled that a supply contract between Unitil and PSNH provided for termination of service without payment.

A case from Maine was yet another step on the road to competition. Houlton Water Company, Maine Public Service Company's largest customer, and the other wholesale customers of Maine Public argued that they had the right, pursuant to a 1985 contract, to terminate service from Maine Public. In opposition, Maine Public maintained that Houlton had an obligation to pay Seabrook-related costs, whether or not it remained a customer. In short, Maine Public asserted that Houlton was obligated to pay stranded investment if it were to leave. Houlton argued that a contract provision must prevail over Maine Public's claims and that its contract both dealt directly with Seabrook costs and contained explicit provisions to terminate service by paying an "exit fee." FERC ruled in favor of Houlton.

The Houlton case lent further support to the benefits of open competition. While the Houlton complaint was pending at FERC, Maine Public filed for and received an 11 percent rate increase. When Houlton, using its right to terminate its contract with Maine Public, went to the market, the lowest bidder was Maine Public itself, based on a 19 percent rate cut. The Houlton case clearly indicates the merits of competition over regulation in setting power prices.

But it was a case involving Madison Electric Works (MEW) that gained Maine national attention and came to symbolize the opening of the competitive market. MEW and its large industrial customer, Madison Paper Industries, represented about three percent of total CMP load. When MEW issued a bid solicitation, CMP failed to submit a bid before the deadline. MEW selected Connecticut-based Northeast Utilities as its supplier, with a savings of 42 percent on its power supply costs. The shift of a large part of its load to an out-of-state utility aroused CMP's opposition, but the matter was ultimately resolved to allow the new contract, effective September 1, 1994.

To be sure, the EPAct would allow any utility to do what MEW had done, but the boldness of the move and CMP's belated response attracted wide attention to the opportunities provided by the new law. MEW's success became an advertisement for municipal power, beginning a movement under which Maine municipalities seriously undertook to investigate the creation of new, local utilities.

New players in the market

The EPAct, which opened transmission access to non-utilities, stimulated the creation of electric marketers and brokers, intent on taking advantage of the new market opportunity. Brokers have proliferated, seeking to put together deals between existing market participants. Few have been successful, because utilities have a long tradition of selling power among themselves without intermediaries. But the presence of brokers has at least helped to stimulate the market.

Marketers, who purchase power and re-sell it, appear poised to play a more significant role. Entities such as Enron Power Marketing and Louis Dreyfus Electric Power, both parts of enterprises with annual revenues exceeding \$10 billion, purchase power and repackage it for the

market. They can add value through risk management and power dispatch services, which may make them more attractive to utilities than brokers.

The power of the bid solicitation

The most significant force stimulating greater competition is the request for proposals to supply power. As the MEW case proved, no potential supplier can afford to ignore any opportunity to sell power and no potential customer can afford to ignore a chance to pay less for its power supply. The bid solicitation is the trigger mechanism for both.

In one case, a Virginia municipality sought power supply bids even before it had created a power district, using the process to help decide if it should create a district. In another celebrated case, the city of Las Cruces, NM did much the same; the city council created a power district, obtained a power supply and then went to the public, which overwhelmingly supported the creation of a power district. In Maine, nine consumer-owned utilities have used the bid process.

Competition is particularly fierce now, at a time of substantial surpluses. If ever there were a time to resort to the open market, it is now. Because low cost power is available, purchasers can afford the expense of inevitable litigation with former suppliers and still pay less than their current costs. In the future, when the market tightens, those who have established their position in the market will be assured of an opportunity to buy at the lowest available price.

Retail wheeling: When?

While the EPAct specifically banned use of the Federal Power Act to require retail wheeling, efforts have increased steadily to create a market more akin to natural gas, where the individual customer can select its own power supply. Britain is well along the path toward a completely open market for all customers. In California, the Public Utilities Commission has gained wide public attention for its consideration of a system under which market access is gradually extended to smaller customers.

Retail wheeling may be less imminent than many had thought after the passage of the EPAct. First, wholesale wheeling offers many of the advantages without creating a situation in which the large industrial customers leave behind residential and small commercial customers. The creation of new municipal utilities is now legally possible in far more states than is retail wheeling. Second, stranded investment issues must be resolved before retail wheeling will be possible. Third, many customers cannot manage their power supply and need the services of a utility or dispatch facility.

Furthermore, as Bangor Hydro-Electric (BHE) has shown, an existing utility may provide almost the same benefits as retail wheeling. BHE has developed a designated supply arrangement, under which it will purchase power from a specific resource, mark its price up and sell the power to a specific customer. The customer obtains the benefits of the open market price plus the reliability of the utility, and the utility assures itself of a contribution to its fixed costs through the mark-up. Other customers benefit from this contribution and avoid the risk of receiving no contribution if

the larger customer chooses to self-generate and leave the system. BHE has developed such a mechanism to retain James River Paper as a customer.

Stranded investment: The dark side of the competitive force

Electric utilities have always faced the risk that customers will leave the market area or will self-generate. However, utilities now perceive the competitive market as an added risk and one caused by government action. A debate now rages as to whether the utilities should have been aware that the loss of customers through competition was inevitable.

Regulators are beginning to grapple with the fact that the remaining customers or the shareholders of a utility may be saddled with costs left behind by departing customers. If a utility has invested in generating facilities to meet its obligation to serve all customers and then loses some of those customers, should the remaining customers or the shareholders be required to pick up those costs? Such costs are called stranded investment, and regulators are trying to find them a home.

A threshold question is if these costs even exist. In the only court decision to date, the U.S. Court of Appeals for the District of Columbia Circuit ruled: "There are no stranded investments" because a utility can always price its generation to be sold. Yet nobody will buy a Maine utility's Seabrook costs for which it receives no power. Perhaps the court would say that such costs, known as regulatory assets, should be recovered from shareholders.

Once this threshold question is addressed, a number of subsidiary questions arise. If stranded investments exist, what investment is stranded? For example, transmission investment is not likely to be stranded because alternate power supplies are likely to be transmitted over the same transmission lines. Could stranded generation costs be mitigated by retirement or sale of the plant to others?

If we find that these costs exist and can identify and quantify them, who should pay them? Perhaps shareholders should be deemed to have accepted responsibility as part of their investment risk. Perhaps all customers should contribute because all benefit from competition. Perhaps the departing customers or the alternate supplier should pay.

These are real and legitimate issues that merit early resolution if the competitive market is to develop. But some utilities use stranded investment as an anti-competitive tool. CMP, for example, suggests that stranded investment is actually lost revenues and that it is entitled to all of the revenues, possibly net of variable costs, that it otherwise would have received. In other words, while stranded investment may be concerned with insuring a return of an investment, CMP seems also to seek a continuing return on that investment. The result is a definition of stranded investment so broad as to preclude a customer from going to the competitive market.

FERC has begun the regulatory process to develop stranded investment rules. FERC plans to deal with the creation of new municipal utilities and with situations when retail customers become wholesale customers, as well as wholesale transactions. At the state level, the Maine Public Utilities Commission (PUC) will ultimately deal with retail wheeling, but it has

withdrawn a proposed stranded investment rule in light of the FERC proposal and almost universal opposition to its proposal.

The competitive response: Incentive regulation

It would be preferable for utilities to avoid pitfalls on the path to competition. To do so, they must be willing to compete for their own current customers. Incentive regulation can make that possible.

A utility needs greater pricing flexibility to be competitive and to act more like its unregulated competitors than has been possible in the past. But, because the utility will still have captive customers, the utility must protect them from the effects of bad marketing judgments. By the same token, the utility should not be required to share with those protected, captive customers the benefits of its good judgment. A price cap mechanism, which limits rate increases, provides the best protection.

The Alternative Rate Plan (ARP) developed for CMP in its 1993 rate case is an attractive model. CMP may make rate concessions to retain or build load with limited PUC review, which puts in play as much as 15 percent of its expected revenues. But it may not raise its rates more than an amount determined by an inflation index less a sizeable offset for productivity.

Anticipating approval of the ARP, CMP negotiated a 15 percent reduction in rates to its largest customers, those most likely to have alternatives. Other customers will be protected from a rate increase that would have otherwise resulted from such a rate concession. Either CMP will sell more energy to its large customers or it will bear the loss. Only in a relatively unlikely worst case would other customers have to share a small portion of the costs.

Through the ARP, the benefits of the competitive market are made available to any customer who has a viable alternative to CMP with little or no risk to other customers. It and other forms of incentive regulation help bring the competition to all customers while giving utilities time to wind down stranded investment.

Conclusion: Maine in the vanguard

Virtually all of the forces promoting competition in the electric power market are at play in Maine. These include:

- A lively consumer-owned power sector using the bid process effectively;
- Open access transmission with pricing yet to be resolved;
- Designated supply contracts similar to retail wheeling; and
- An incentive rate mechanism.

Much remains to be done, notably to insure that utilities are not allowed to block competition and that stranded investment issues are resolved through constructive negotiation and not destructive conflict.

Even now, however, the steps that have been taken quite possibly have made Maine the most competitive power market in the U.S. In a corner of the country where rates have been among the highest, that can only be good news.

Gordon L. Weil heads an Augusta-based consulting firm promoting increased competition. Mr. Weil negotiated the Madison Electric deal, proposed the first Alternative Rate Plan for CMP, negotiated in the New England RTA talks, and served as an expert in the NU-PSNH case.

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