

Electrical Industry Restructuring: From Policy to Implementation

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Both in Maine and nationally, one sees continuous evidence of fundamental transformation of the electric utility industry. We continue our coverage of this issue with Evan Richert's summary of the June 1996, fifth annual conference on Public Utility Regulation and the Environment (PURE). Richert relates the conference discussions to the PUC's July 1996 draft plan on Electric Utility Industry Restructuring and to state government's efforts to create a comprehensive energy policy for Maine.

by Evan D. Richert

Like electricity itself, which when generated must be used or lost, participants in the PURE project's fifth annual conference in June seemed to understand the ephemeral quality of their speculations about the electric utility industry. We are in an extraordinarily dynamic period. The federal government has set into motion competition at the wholesale level, and its emerging rules, along with market forces, are pushing states to do the same at the retail level--and to figure out the pathways from monopoly to the generation and sale of electricity in an open market. This is largely unfamiliar territory, so for now every speculation or opinion about the future of the industry has a half-life of a few months at best.

Indeed, that was the situation at the June conference, where some of the most informed state and regional thinkers on the subject recognized that their pondering might evaporate in a matter of weeks, since the Draft Plan of the Public Utilities Commission (PUC) on Electric Utility Industry Restructuring was due in mid-July. That plan, in turn, having been submitted to intense review by industry, consumers' groups, environmental advocates, and ordinary citizens, undoubtedly will be transformed before its final release to the 118th session of the Legislature in early 1997. And the plan will change further under the heat and pressure of the final political process.

Nevertheless, the conference was asked to speculate, advise, and draw upon the track records of other entities more advanced in the experiment in an attempt to discern the likely form of Maine's future electric utility industry. And speculate it did: on the timing and structure of deregulation; on its likely effects on prices and consumers; and on the fate of energy and environmental policy in the wake of reform. With the benefit of hindsight, we also can see how close the conference's conclusions were to the PUC's draft plan released last July 19. This paper reviews the conclusions reached and compares them with the proposals in PUC's draft plan. This juxtaposition not only sheds light on the issues and rationales for proposals to address them; it also helps set directions for Maine's overall energy policy and puts into context the likelihood that deregulation will advance that policy.

Driving the Move Toward Retail Competition

The conference's participants were in implicit agreement that the move to retail competition in the electric industry is not simply a "phase," a toying with the long-time monopolistic structure of the industry that will fade with the return of high oil prices or some other external event. There are at least a half-dozen reasons to believe the move toward deregulation is real and structural. These have been articulated in the past (Guinn, 1996) and are adapted here to Maine's conditions.

First, there is a surplus of generating capacity caused by lower-than-anticipated demand for energy. This is due to demand management and to slower rates of growth than expected, especially in New England. As a result, comparatively low-cost power is available and within physical reach of the region. This may not be true forever or even for a long time, depending on the future of the nuclear industry and oil prices. But it is true for now, and that fact is providing an impetus for retail competition.

Second, technological advances have extended the lives of many older, low-cost power plants--including coal-fired plants in Ohio, Pennsylvania, and the Midwest--to which the market wants freer access. Such plants are a concern to Maine because of their implications for air quality and the potential irony that we may end up trading less expensive power for dirtier air (or, in the worst-case scenario, get only the dirtier air). Governor Angus King and his commissioner of the Department of Environmental Protection, Ned Sullivan, are working actively with the Environmental Protection Agency to prevent such an outcome.

Third, with the advance of generating technologies, large customers realize self-generation is feasible and are more than ready to pursue it if they believe it will benefit their bottom lines. The recent experimental move of Hannaford Brothers Co. to equip some of its supermarkets with self-generation underscores how deeply this potential has penetrated. It is not just the single, large manufacturing plant that can consider self-generation, but also high-energy-using, multi-store commercial enterprises such as a supermarket chain. The electric utility market will be forced to become more competitive in the face of self-generation.

Fourth, while there are no guarantees, Maine is closer to a large and reliable source of North American natural gas than ever before. Permit applications for the Maritime & Northeast Pipe Line project are being filed. The pipeline would deliver natural gas from fields off Sable Island in Nova Scotia through the industrial heartland of Maine en route to a connection point with a national grid in Dracut, Mass. Although uncertainties remain, not the least of which is Canadian politics, the market believes the line will be built and gas will be delivered at competitive prices. This is a driving force toward competition.

Fifth, there was a widespread belief built into the comments of several conference speakers that the transmission grid can be converted to a market-neutral transportation system accessible to any generator, distributor, and customer of electricity. Such a market-neutral grid obviously is a prerequisite to true competition. The Federal Energy Regulation Commission is making that conversion a reality in the wholesale market, and there is no technical reason why it also cannot be a reality in the retail market.

And sixth, policy makers and business and industry leaders dearly want lower-cost energy in the Maine and New England markets, and the prospect of retail competition being able to achieve it keeps state government interested. The importance of energy costs to economic development has been underscored by Robert Tannenwald (1996), who, in a detailed analysis of the factors that have correlated with job growth in different states, came up with only three of statistical significance: productivity of the workforce; quality of public services; and the cost of energy. The cost of energy is more important, for example, than the level of taxation. The cost of energy is a tangible factor in Maine's economic development, so it rivets our attention.

The Range of Possibilities

Retail competition in the electric utility market has no single definition. As presenter Michael Schnitzer pointed out, there is a continuum of possibilities. They range from a model that is fully competitive in the wholesale market but sanctions retail monopolies, to a model that also is fully competitive at the retail distribution level.

At the retail monopoly extreme, generation would be unbundled from transmission and distribution into separate units or separate companies. The generation market would be unregulated, allowing distributors to shop for the best deals. Wholesale transactions (from generators to distributors) would be dispatched along the transmission system by independent system operators in an open market. But the distribution companies would have monopolies on retail sales in their respective service areas.

At the pure retail competition extreme, generation, transmission, distribution, and retail functions of existing utilities all would be separate entities. Generation would be unregulated. Transmission and distribution companies would be regulated monopolies but would have the sole function of serving as a common carrier, responding to the requests of independent retailers and other suppliers. They would recover costs via regulated tariffs. The "action" would be in the contracts between suppliers and customers. Customers could deal directly with a generator, or the system could be complex, with marketers, brokers, and aggregators serving as go-betweens for generators and end-users. Customers would choose their suppliers based not only on price, but also on specialized packages and products. Suppliers likely would segment markets and try to capture them based on mixes of energy sources and packages most attractive to them.

The system that emerges in Maine is not likely to be at either extreme, although it appears it will be closer to the retail competition end. How close to pure retail competition, and how far to the perimeter governmental regulation will retreat, are the subjects of PUC inquiries and the pending debate in the 118th Legislature.

Speculations of the Conference

Where on the continuum we land depends on answers to six key sets of questions:

1. What will be the degree and type of unbundling required?

"Unbundling" refers to the separation of functions that historically have been vertically integrated in the utility industry: generation of the electricity, its transmission to local distribution systems, and distribution to homes, businesses, and other end-users. Several speakers warned that market structure problems have arisen wherever economic ties remain between or among these functions. It was suggested that the fruits of competition, including lowered prices and fair opportunity for all players in the marketplace, will have the best chance of success if there is a complete unbundling and separation of functions. At the same time, nonmarket considerations have given pause to many states considering deregulation. One such consideration, for example, is established relationships and familiarity with homegrown utilities and the ability to more directly affect their corporate policies than the policies of a distant, multi-state or multi-national supplier.

A synthesis of all comments at the conference suggested that functional or structural separation from generation, rather than complete divestiture, would be a plausible direction, perhaps with built-in incentives more generous treatment of stranded costs, for example) for complete divestiture.

Direction of the PUC's draft plan: The July 19, 1996 draft plan recommends that Maine's largest electric utilities be required by the year 2000 to separate their generation assets and functions structurally from transmission and distribution functions. The PUC would require the large utilities to divest themselves of generation assets by 2006. "Full divestiture would eliminate the large [utilities'] opportunities to exercise vertical market power and minimize incentives for self-dealing and cross-subsidization between regulated and unregulated affiliates," according to the draft plan. The PUC would not require municipal utilities and electric cooperatives to separate, nor divest, generation. The separated transmission and distribution companies would be regulated monopolies barred from retail services. Retailing would be by separate companies, with large potential roles for marketers, brokers, and aggregators.

2. What should be the timing of the conversion to retail competition?

Timing, according to several of the conference's participants, depends on our assessment of the significance of the benefits of retail competition. If the benefits will be significant and widespread, that argues for moving quickly; if they are likely to be insignificant or significant for some but disadvantageous for others, that argues for a go-slow approach, perhaps learning from the lessons of other states. In this regard, virtually every speaker seemed to put the brakes on expectations that most customers will benefit financially during the short term. The reality is that the system is relatively closed, so a significant benefit for one class of customers may mean harm for others. Experience elsewhere has suggested that small retail customers have received few benefits. The question facing the PUC and Legislature is the degree to which Maine, as a whole, will benefit: that is, the degree to which efficiencies of competition will translate into an overall public good. States broadly were classified into the "speedy" (implementing retail competition in 1997 and 1998); the "gearing up" (implementing during the period around 2000); and the "later" states (after 2000). The general sense was that Maine would be in the middle group.

Direction of the PUC's draft plan: As indicated, retail access would begin for all customers in January 2000. The draft plan argues for this mid-horizon date for several reasons. It will afford Maine an opportunity to observe successes and failures in other states. It will allow critical regional initiatives, such as creating an independent system operator and the reform of NEPOOL, to be completed and tested. It coincides with the conclusion of Central Maine Power's alternative rate plan and the related five-year contracts with its large industrial customers. And it allows time for the magnitude of strandable costs to diminish, lessening (but certainly not eliminating) future controversy and reducing the risks of miscalculating them.

3. How should stranded cost recovery be handled?

Stranded costs are either above-market fixed costs associated with generation facilities owned by utilities, or above-market costs associated with contracts for generation, most notably purchased power contracts between utilities and "qualified facilities," frequently referred to as non-utility generators, or NUGs. There are multiple approaches to quantifying stranded costs, as described by presenter Michael Schnitzer. Interestingly, all the approaches assumed stranded costs should be recoverable by the utilities. Presenter Jan Hamlin observed that stranded costs are high in those parts of the country, including New England, where demand grew during a period of high interest rates and high costs of alternative generation. This fact, PUC Chairman Tom Welch said, argues for not demonizing any one sector--for not pointing a finger and saying, "You should have known, you're responsible" for all the costs that from today's vantage point are uneconomic. Rather, it argues for looking to a broad base to share in the burden of stranded costs. Beyond these general and important observations, one could not divine from the conference's participants any preferred approach to either calculating or assigning responsibility for strandable costs.

Direction of the PUC's draft plan: The draft plan sets forth the principle that "Electric utilities should have a reasonable opportunity to recover legitimate and verifiable costs incurred or associated with obligations incurred prior to March 1995 that may be stranded as a result of industry restructuring. . . . In determining the level of stranded costs to be recovered, the PUC would require utilities to mitigate stranded costs to the greatest extent possible." The costs that can't be mitigated reasonably would be recovered by the transmission and distribution utilities through regulated rates, or "wire charges" passed on to all customers connected to the transmission and distribution grid. The PUC would establish by January 2000 estimates of strandable generation costs for each of the state's electric utilities through administrative proceedings.

4. How should the system handle customers who, by circumstance or choice, do not shop for retail choice?

Many, perhaps most, individual homeowners and small businesses may not have the immediate ability or interest to elect alternative providers of services historically provided by a monopoly. By sheer numbers, this group will influence legislators in their final determination of a system of retail competition, or, as panelist Jon Clarke of Maine's Office of Policy and Legal Analysis put it, "whether the beast gets out of the barn." Clearly, there must be a provider of last resort, and the question is how market mechanisms can be brought into play so the majority of customers

can share in whatever benefits accrue from restructuring. Comfort with such a provider will be an important element in the electorate's acceptance of the system regardless of how it is otherwise designed.

Direction of the PUC's draft plan: The draft plan proposes a "standard offer service" made available to all customers opting not to choose alternative electricity providers. The standard offer would be capped so the cost of the generation service plus the regulated rates of the transmission and distribution service will not, on average, be higher than the average price for bundled electricity in 1999. In other words, the PUC seeks to assure that customers who take the standard offer--likely most Maine consumers--at least will not be worse off financially after retail competition takes effect in 2000. (The plan notes that "if the standard offer bids cannot satisfy this requirement, it may be evidence that the promised benefits of industry restructuring are illusory.") Providers of the standard offer service would be selected by bids in each service territory of the transmission and distribution utilities.

5. How should the needs of low-income households be served?

Presenter Kenneth Costello argued forcefully to move quickly to pure retail competition, allowing market forces to do their work on behalf of all consumers. Yet others pointed out that while the marketplace is unparalleled in efficiently allocating resources and creating wealth, it does not meet all the societal objectives, including the fair distribution of the wealth created. Consequently, several panelists argued that any system of retail competition must retain a safety net for low-income households. It also was suggested that restructuring of the industry creates an opportunity to spread safety-net responsibility from electricity alone to all fuels, so that energy sellers are on an even playing field in an era of full-scale energy competition. Currently, Central Maine Power, Bangor Hydro-Electric, and Maine Public Service each administers a low-income assistance program funded through utility rates.

Direction of the PUC's draft plan: The draft plan states, "The needs of Maine's low-income citizens are independent of the structure of regulation; for that reason, the act of restructuring the industry should not itself reduce the availability of low-income assistance." The PUC strongly recommends that the Legislature take the opportunity of restructuring to eliminate inequities in responsibility for low-income assistance: preferably by funding it through the tax system or through an all-energy-source-funded program. Alternatively, assistance would be built into the transmission and distribution companies' rates, comparable in amount to the assistance in rates as of 1999.

6. What should be the fate of energy policy and the environment in a competitive environment?

Presenter Costello argued unequivocally to leave energy policy to the marketplace: if it makes economic sense, it will be provided for; but other panelists were skeptical. Among other things, they noted that experiences elsewhere have shown that:

- Demand-side management has been pushed to the side while other countries have gone to retail competition;

- Open competition has brought an initial bias toward large, central generation and away from renewable;
- Research and development and related innovations have suffered.

It was argued that externalities exist in the energy market, and the marketplace, with a fairly short-term focus, does not always fairly distribute or even acknowledge all the costs it imposes. A synthesis of the day's discussion pointed to the continued funding of demand-side management, although it may be smaller in scope and more sharply focused than in the past.

Direction of the PUC's draft plan: The draft plan addresses several aspects of energy policy and the environment. First, all retail providers of generation would be required to supply some of their product from renewable sources. They could satisfy this obligation with tradable credits.

The PUC argues that this requirement limits the risk that the use of renewable resources to generate electricity would substantially diminish or fail to develop in a competitive market.

Second, conservation and load management programs would be funded through the rates of the transmission and distribution companies. This requirement would apply until it appears likely the market will provide sufficiently for them on its own--something not likely to happen in the near term given market barriers such as inadequate information, lack of access to capital, and the short payback periods customers typically require. Third, with the deregulation of generation as of January 2000, the PUC no longer would review the construction of generating facilities or oversee utilities' long-term energy supply planning.

Conclusions

The conference's proceedings and the release of the PUC's draft plan three weeks later point to three overarching conclusions:

- The forces propelling Maine toward retail competition in the electric utility industry are structural and will not pass. Retail competition will arrive on the scene in one form or another, with or without the shaping influence of the government.
- Retail competition will be introduced in Maine within three to five years. There is little reason to accelerate its arrival before then, and good reason to allow lessons from other states to sink in and needed regional institutional mechanisms to take form.
- There probably will not be short-term financial benefits from retail competition for most consumers. Rather, restructuring must be sold on the basis that most consumers can at least be held relatively harmless in the short run while anticipating genuine, long-term economic benefits. Those might start with the state's largest job providers (who also are among the largest energy users) and in time spread, according to the marketplace, to the rest of us.

As important as the restructuring of the electrical utility industry is to Maine's energy future, it should not be thought of as the cornerstone of the state's energy policy. The cornerstones are

lower energy prices and long-term energy security, both prerequisites to economic growth. Restructuring is one means to these ends but should not be confused with the ends themselves.

In fact, to the extent competition is the vehicle for lower prices and choice--the antidote to dependence on any given source of energy--is the vehicle for long-term security, restructuring of the electrical utility industry may be no more or less important than the widespread introduction of natural gas to Maine, or the continuing march to efficient energy generation techniques, including renewable technologies and self-generation. Effective retail competition means choice in the broadest sense: the choice of many energy sources, not just choice of fuel companies.

Nor is electrical industry restructuring an unconditional part of the state's future energy policy. As the PUC's draft report indicates, it will come with caveats for the protection of air quality, continued attention to conservation, continued investment in renewable energy sources, and with a safety net for low-income consumers.

But these conditions and caveats simply will shape the inevitable transition to retail competition in the electrical utility markets. For some time, at least, public policy as well as the utilities themselves will be learning to be agile and adaptive to the market forces to come.

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