

C O M M E N T A R Y

Recent stories from California of power blackouts, utility bankruptcies, and skyrocketing rates have left many wondering whether Maine is going to suffer a similar fate. After all, like California, Maine has deregulated its electricity supply—an idea that sounded good to many, but which now has some questioning whether consumers will be made better off or worse. To address these issues, we asked six analysts to comment on electricity deregulation in Maine. Some address whether Maine is destined to follow in California's footsteps. Others question whether regional decisionmaking entities, such as the New England Power Pool and the Independent System Operator of New England, sufficiently represent the public interest. Still others address whether there is a future role for public conservation programs. Together, they suggest we will not befall the fate of California, but they also suggest that electricity deregulation in Maine may bring its own troubles if we're not attentive and forward-thinking today. 🐉

Does the California Energy Crisis Spell Trouble for Maine?

By David Flannigan

The California energy crisis has drawn attention to a subject that average consumers have, until now, largely ignored: deregulation of electricity. While a handful of states, including Maine, have freed consumers to shop for their electricity, most people have continued taking service from their traditional supplier—and rightfully so. Staying with their local utility has typically meant stable—if not declining—electric rates, although, of course, we must expect some price volatility as fuel prices fluctuate.

However, in California, the first state to deregulate its electricity supplies, it appears that something has gone terribly wrong. Every day brings new stories of power blackouts, skyrocketing rates, and utilities on the verge of bankruptcy. Now

there is talk that the nation's economy may begin to suffer if the California situation isn't brought under control.

If electric deregulation can have such disastrous consequences in California, what does that mean for Maine? Will our lights stay on? Will our bills go through the roof? For a number of reasons, I believe the prospects for Maine can be very different. Before examining exactly why that is, it may be useful to briefly retrace our steps in opting to deregulate in the first place.

Deregulation in Maine, as in other states, has its roots in two experiences:

First, beginning with the airline industry some twenty-five years ago, our country (like many around the world) has been actively pursuing the elimination of price and service regulation from all regulated industries. Originally fueled by the belief that

market competition could provide lower prices and more service options than government regulation, the deregulation movement has gathered steam as actual

experience has confirmed that belief. To date, in every deregulated industry, prices have come down and service options have increased, often dramatically. True, there have been trade-offs (e.g., congested airports, less service in remote areas, bothersome calls from telemarketers), but on balance, deregulation has been seen as positive for air travel, phone service, freight rates, and other deregulated markets.

In fact, electricity is the last of the heavily regulated markets to undergo deregulation. We held off because of concerns that electricity was too complicated a service to deregulate without affecting reliability. Unlike other goods and services, electricity must be produced and consumed simultaneously; it requires an extraordinarily high degree of coordination in production and to maintain reliability.



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It was only when electric deregulation was tried and found workable in other countries such as England that California and other states started down the deregulation path with their own electric utilities.

The second experience contributing to the interest in deregulating electricity in Maine was the unhappy history of escalating supply costs over the 1980s and early 1990s. With the support of state regulators, Maine's utilities invested in the Seabrook nuclear plant, which experienced huge cost overruns. Still, even as the utilities were extricating themselves from that problem, the state was embarking on its own policy of encouraging—with generous subsidies—the building of cogeneration and renewable energy plants. These and related developments produced a doubling of electricity costs by the early 1990s.

With this history, deregulation received a warm welcome in Maine when it was first proposed in 1995. While it took a few years before the details of comprehensive electricity deregulation could be worked out and agreed to in the legislature, the concept enjoyed broad support from the beginning.

So, why is Maine unlikely to go the way of California? Several factors seem to put us in a better position. First, Maine draws its power from a region that has a much better balance of supply and demand than California. Growth in

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demand has been slower, and growth in supply has been faster. As to the latter, some new power plants have already come on line (such as the Duke Energy plant in Veazie), and others are scheduled to be completed soon (the Westbrook Calpine plant, for example).

Second, Maine regulations have taken care to encourage the signing of long-term power supply contracts to ensure stable rates for the bulk of Maine consumers. In California, by contrast, utilities have purchased most of their electricity on the more volatile spot market.

Third, Maine sits in a region of relatively small states and power-rich Canadian provinces. There is a regional history of cooperation to ensure reliable electricity supplies, which may be less pronounced than in the Pacific West.

All of this is not to say that Maine is guaranteed immunity from the kinds of problems that California is experiencing. Maine must remain vigilant to ensure that power flows freely in the region, that new generation and transmission is sited and built when needed, and that remaining market rules are fair to consumers and producers alike.

But to maximize our chances of avoiding the kind of disaster California has experienced, I believe Maine should carefully compare the provisions of its law and regulation to California's to make certain we have addressed the problems they have encountered. Some areas of concern worthy of further evaluation include:

- 1) Whether we have or can create adequate safeguards against gaming by generators withholding output from the marketplace until prices are driven up;
- 2) Whether we can create incentives to encourage the development of new transmission to make our grid more robust and our markets more available;
- 3) Whether we can improve the efficiency of the regional grid by replacing the current bureaucratic Independent System Operator with a new organization based on a private-sector model;
- 4) Whether the state government can incorporate the expertise and incentives of the private sector into its future purchasing decisions for "standard offer" energy supplies for the vast majority of Maine consumers;
- 5) Whether Maine has done all it can to eliminate unnecessary regulatory costs in the marketing of competitive energy supplies so as to encourage the development of vigorous markets; and
- 6) Whether we have made adequate arrangements to safeguard the needs of low-income electricity consumers in the event of sharp price increases and established economically rational programs for demand-side management.

Maine has already taken dramatic steps toward restructuring its electricity markets. To realize the greatest benefit from this revolution, we should carefully study the California example, avoid com-

placency, and consider measures to further improve on our new system. With continued sound leadership, I believe Maine's electricity outlook should be positive in the long run. 🐉

COMMENTARY

Are We Going to Meet the Same Fate as California?

By Gordon L. Weil

Are we going to meet the same fate as California? No, not if we continue to stick to current policies. California made several errors in developing the restructured electric market. We avoided most of them in Maine.

To "sell" industry restructuring, many states, including California, thought that showing a decrease in electric rates just when they introduced competition was important. At the same time, they ignored underlying factors, which were pushing prices upward, with or without the beginning of a competitive power supply market.

Maine legislators and regulators took a more modest and realistic approach. Traditionally, regulators had set prices in an attempt to approximate the effects of competition. Now, actual

competition would set prices, at least that part caused by the cost of power itself (separate from the cost of wires, high-cost generation mandated by the state and mistaken generation decisions like Seabrook, which continued to be regulated). Maine did not try to "sell" restructuring by promising lower prices, just better ones—prices set by the operation of the open market rather than by regulators attempting to simulate the market.

In fact, prices did go up all over the United States for reasons that have little or nothing to do with restructuring. For example, OPEC raised oil prices from artificially low levels of about \$12 a barrel to more than \$34 a barrel. Naturally, the supply of gas could not keep up with the demand imposed by a burgeoning economy; thus, costs more than doubled.

Demand rose steadily in California, but no new generation or transmission was put in place to serve it. In New England, much new generation has been planned or added, although the need for new transmission is beginning to become pressing. While we are far from the California situation, the need for new transmission could begin to give us a taste of their problems.



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To "sell" industry restructuring, many states, including California, thought that showing a decrease in electric rates just when they introduced competition was important.

California made two more big errors. First, the traditional electric utilities remained responsible for serving most customers and their rates continue to be fully regulated. At the same time, they were forced to sell most of their own generation. Thus, if costs of power supply from others went up, as they did, the utilities could not pass these higher costs on to customers. When costs rose to the point that they topped what utilities could charge, disaster struck.

Second, the utilities were not only required to make most of their power

supply purchases in the short-term market run by the California power exchange, but to pay short-term market prices. They could not make long-term power supply arrangements at fixed prices, so-called bilateral arrangements.

As a result, the major utilities faced a price squeeze, paying more for their supply than they could collect from their customers; thus, they faced bankruptcy. Some critics charge that they syphoned funds from utility operations to their other businesses, which did not help.

By contrast, only a small portion of New England's power supply is obtained in the short-term market, with most deals being longer-term bilaterals, many with fixed prices. In Maine, utilities simply pass along the cost of power supply, which is obtained through competitive bidding. Furthermore, as prices rose, the Maine Public Utilities Commission (PUC)

had far more flexibility (and foresight) than its California counterpart in dealing with them.

Maine's favorable comparison with California should not lead to the conclusion that all is well here. It is not. Both the New England Independent System Operator (ISO) and Maine authorities have created an excessively complex system, one that deters the entry of numerous marketers and discourages the very competitors we wanted to flock to serve us.

New transmission cannot be built because—after almost five years of trying to apply reasonable congestion management rules, most a matter of deciding who pays for relieving bottlenecks—New England cannot agree. The hourly power market is so complicated and unreliable in sending price signals, generators have called for drastic reform. In Maine, everything from the way the PUC purchases standard-offer power to the requirement for a renewables component stifle competition.

In New England, we need a better decisionmaking apparatus than a hopelessly inefficient New England Power Pool and an ISO, which is responsible and responsive to nobody. In Maine, we need to better understand how the market actually works and that it is not, for example, like telephone service.

To be sure, because it is unlikely that Maine will abandon its superior, if flawed, system in favor of what has been done in California, it is equally unlikely that we will suffer the same fate. Our system is still more firmly grounded than the California dream, which turned out to be a nightmare. 🐉

COMMENTARY

Who Oversees the Wholesale Electricity Market and Why You Should Care

By Stephen L. Diamond

At 2 p.m. on May 8, 2000, the price of one megawatt hour of electricity purchased in the spot market serving the six New England states hit the unprecedented level of \$6,000. The same amount of electricity cost \$30.62 exactly a week earlier and \$46.77 exactly a week later.

What made May 8 such a boon for sellers and such a bust for buyers? According to the Independent System Operator of New England (ISO-NE), the entity responsible for keeping New England's lights on and overseeing our spot market for electricity, two factors contributed to producing an unusually high level of demand relative to the available supply. The first was "record-breaking temperatures that resulted in extremely high loads." The second was that "several large generators were late in returning from spring maintenance."

With high temperatures of seventy-seven degrees in Portland and seventy-five degrees in Bangor, Maine was indeed warmer than usual for early May, but not of a magnitude that would cause widespread cranking up of air conditioners. However, there was substantially more perspiration in Hartford, Connecticut, which hit ninety-three degrees with high humidity. On the supply side, although ISO-NE has not disclosed which generators were late in returning from maintenance, I do know that none were located here. Thus, while Maine experienced a comfortable day with no delayed returns from maintenance, Bangor Hydro Electric, in order to serve its standard-offer customers, paid \$6,000 per megawatt hour from 2 p.m. to 6 p.m. in the spot market for the power it needed. This forced the Public Utilities Commission to raise its standard-offer prices.

May 8 did have a silver lining for buyers (the lining for the sellers was at least gold and perhaps even platinum) in that we did not lose power. In contrast with California, blackouts do not seem to be in our foreseeable future, except perhaps as extremely rare events, a prediction that I hope does not link me with Irving Fisher, the Yale economist who reassured the country in mid-September 1929 that stocks had reached a "permanent high plateau."

According to ISO-NE, the New England margin of generating capacity over peak demand seems relative-



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ly comfortable and is projected to grow as significant additional capacity is added in the next few years, particularly in 2002 and 2003. There is an emerging concern that, with virtually all of the new capacity natural gas fired, our natural gas pipelines might ultimately prove inadequate. This could lead to electricity shortages, but there are already signs that steps are being taken to deal with this. Thus, May 8 is not a signal that we will run out of electricity. The more relevant question is whether we will run out of money to pay for the electricity, which raises the issue of the health of our competitive markets.

Maine devoted considerable time to the design of its retail market, a process that continues as we consider how to structure standard-offer service so as not to block the path of competitive suppliers. However, if heat and humidity in Hartford can drive up our prices, the message of May 8 is that we need to focus far more attention on the regional wholesale market. The reality is that New England is a single electricity market, as power can, for the most part, be freely sold throughout the region. Put differently, just as great cooking cannot overcome spoiled food, if the regional wholesale price is high, no amount of competition in the in-state retail market will bring it down. Thus, we have a major stake in ensuring that we have a truly competitive wholesale market.

Whether we can accomplish this when state officials have no legal authority over the wholesale market, as it is deemed to involve interstate commerce, is problematic. The challenge is enhanced by the absence of regional government or, alternatively, effective regional institutions through which state governments have a tradition of acting in concert. In short, there is a serious question about the abili-

ty of state officials to guarantee the benefits of competition to those Maine consumers who have lost the protection of price-setting regulation.

While the wholesale market is under the ultimate control of the Federal Energy Regulatory Commission (FERC), that agency has not, except with respect to a few pet issues, taken a particularly proactive role in overseeing the development of the market, notwithstanding the fact that it is still in the formative stages. That effectively leaves much of the control in the hands of two institutions probably unfamiliar to most Mainers: the New England Power Pool (NEPOOL), which makes the market rules; and ISO-NE, which administers them. NEPOOL is essentially a self-regulatory organization comprising New England "market participants," which includes generators, transmission owners, marketers, public power entities (principally in Connecticut, Massachusetts, and Vermont), and end users. While consumers are part of the process, the consumer voice in NEPOOL is overwhelmingly that of large industrial users, with minimal direct representation of the mass of small customers—homeowners, renters, and small businesses.

ISO-NE is a non-profit corporation with a self-perpetuating board; its powers and duties are set forth in a contract with NEPOOL. Although it was designed with an emphasis on its independence, as reflected by the "I" in its name, its budget is set by NEPOOL.

Except for their powers of persuasion, state policymakers have no control over the governance of the wholesale market.

Except for their powers of persuasion, state policymakers have no control over the governance of the wholesale market. Not only does that call into question our ability to deliver on our promise

of competition, but it also can limit the effectiveness of our policy choices at the local level.

For example, consider the price at which standard-offer or default service is set. It is now taken as axiomatic that California made a serious mistake in fixing its retail prices in a way that allows them to fall below the wholesale prices at which the utilities secure the power, thereby amassing a debt the people of California will eventually have to pay off—either in their taxes or their rates. Maine has avoided this pitfall by setting its standard-offer prices to reflect the cost of the power obtained in the market.

With our March 1, 2001 standard-offer prices, we are now beginning to experience the pain that can accompany market-based prices. The consolation should be that in a competitive market, high prices ultimately lead to low prices in that they cause customers to reduce demand and generators to add capacity. However, a problem with a regional wholesale market and separate state retail markets is the possibility of policies that do not pull in the same direction. Unless there is genuine market-based pricing in other states, Maine's high prices and resulting conservation may not sufficiently reduce demand in the regional market to appreciably lower wholesale prices. Thus,

we run the risk that our consumers may experience high prices without the usual benefit, namely, reduced demand sufficient to bring prices down.

My point, then, is that all roads lead to the regional market. It was recently reported that the president of the California Public Utilities Commission expressed the sentiment that they thought they had deregulated the sale of electricity, only to discover they had federalized it. From a New England perspective, it may be that with FERC's largely laissez-faire approach, we have essentially regionalized it.

One might object to the above notion on the theory that restructuring means no regulation at any level. The reality is different. In eliminating price regulation, we took on the responsibility to ensure our consumers a healthy competitive market free from gaming by sellers. This is no small task, as the possibilities for gaming are substantial in a market for a necessity that cannot be stored in large quantities, that is delivered over a single grid, and for which demand is largely inelastic. However, it is a task that must be ably and aggressively performed; indeed, the one unforgivable sin would be to subject our consumers to an uncompetitive electricity market without the protection of price regulation.

The issue for policymakers, then, is whether we have the appropriate institutions governing the regional market. Should this authority be vested in a self-regulatory "stakeholders" group and an independent, non-profit corporation? Do they sufficiently represent the public interest, as well as the specific interests of "small" consumers? Does the fact that they must answer to a federal agency, even if it is one that puts a high premium on self-regulation, ensure sufficient public accountability?

I shall be content in this commentary to raise the questions without answering them, merely adding the observation that FERC has made clear that it believes the New England market is too small and that we should eventually become part of a larger Northeast market. If FERC's vision of the future comes to pass and control of the market on which we ultimately depend moves further from Maine, the question of who should be in charge is likely to become even more important. To avoid the California finger pointing, we should not wait for a crisis to answer it. 🐸

COMMENTARY

California and Conservation: Lessons for the Present

By Stephen G. Ward

The ongoing debacle in California is, in my opinion, a product of shortsightedness in three major areas. First, California's utilities and regulators have failed to provide for sufficient new generating capacity to keep up with high levels of demand. Unlike Maine, where 1,500 kilowatts of new supply have been added over the past two years, California has seen no major new power plant construction in a decade. Second, on an annual basis since 1999, California's rate of sales growth for electricity has reached 18%, with very problematic results for the orderly use of the

transmission system. Levels of growth such as these necessitate a literal doubling of all existing generation capacity in less than five years—an entirely unfeasible undertaking. Finally, in a decision that, in retrospect, resembles legislative malpractice, the California legislature prohibited their utilities from buying standard-offer power under long-term, fixed-price contracts with suppliers, thus consigning standard-offer customers to the volatility of the wholesale spot market for electricity. With no long-term firm supply prices available due to this prohibition, customers would have been entirely at the mercy of the spot market were it not for Public Utilities Commission (PUC)-approved price caps.



Since 1986, Stephen Ward has served as Maine's public advocate. From 1995-2000, he was actively involved in the effort to restructure Maine's electric industry and, today, serves as president of the National Association of State Utility Consumer Advocates. With a small staff of three lawyers and one economist, Maine's Public Advocate Office maintains a website (<http://janus.state.me.us/meopa>): regularly publishes newsletters comparing competitive offerings in Maine's deregulated markets for in-state, long-distance service and electric supply; and maintains close contact with the forty-three other utility consumer advocate offices in states across the country.

Maine's market does not suffer from these ills. In contrast to California, Maine is an example of a state where the majority of residential customers actually receive measurable benefits from the electric restructuring that took place in March 2000. In that month, rates for the residential customers of the state's largest utility went from 12.99¢ to 11.93¢, the latter including a standard-offer supply price of 4.09¢. Additionally, because the 4.09¢ price was locked in by contract for two years (to February 28, 2002), residential customers in Central Maine Power's territory have been exposed to none of the upward shift in wholesale power prices triggered this fall by higher natural gas prices. As a result, Central Maine Power's residential customers have a very affordable electric price, locked in at 11.93¢ through February 2002, during a time when wholesale power prices have ranged from 4.5¢ to 6.5¢. This fixed contract arrangement represents substantial savings, especially when compared with the fuel clause regime that once passed wholesale increases directly on to customers. Compared with today's supply cost at 6.5¢ per kilowatt-hour, this savings corresponds to \$18.00 each month for a typical residential customer in Central Maine Power's territory. Compared with today's wholesale price, customers in Maine Public Service's territory also have received measurable savings.

The case of Bangor Hydro's prices for its small customers before and after the

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transition to retail choice is more complicated. As of March 1, 2000 residential rates on average went down 2.5% due to reflection of the proceeds from the sale of the Bangor Hydro's assets to Pennsylvania Power and Light Energy Group. However, these savings were entirely eroded by increases in the costs of the standard-offer supply service that the PUC approved during 2000, so that today, residential power from Bangor Hydro has the unhappy distinction of being the most expensive in the

state (at 16.71 cents per kilowatt-hour today compared with 14.22 cents per kilowatt-hour in March 2000). For a typical residential customer using 750 kilowatts per month, this increase over the past year comes to \$18.70 more per month. Due to Bangor Hydro's merger with a much larger and better financed Canadian utility—Emera, a parent company of Nova Scotia Power—there is some hope that these high-power costs will decline over the coming decade. In the meantime the rationale for energy efficiency and conservation investments is, if anything, strengthened for Bangor Hydro's customers.

Savings of the type enjoyed by Central Maine Power's and Maine Public Service's customers have not come at the expense of competitive activity in Maine. As of January 31, 69% of Central Maine Power's industrial customers and 68% of

Maine Public Service's industrial customers had contracted for their own electricity supply. In fact, at an estimated 30% overall, Maine has the highest percentage of electric load under competitive contract of any state in the country. Currently, thirty-five providers are licensed to provide supply, aggregation or brokering services for electricity in Maine with more firms being added to the PUC's list each month. Hence, with the significant exception of Bangor Hydro's customers, most other small and large customers in Maine have benefited from customer choice as a result of electric restructuring.

Despite this promising start in Maine, there are two sobering realities now confronting us. The first is an area of similarity with the California situation: an inefficient wholesale power market whose operations can too often be successfully "gamed" by generators and power marketers. Large players appear to have maximized their grasp of particular markets in particular hours. Generally, it is clear that wholesale markets continue to be immature, volatile and unpredictable in most parts of the country and in New England.

Still, it would be a mistake to look for silver bullets like enhanced incentives for generator construction or streamlined environmental permitting. That is because around the next corner looms distributed generation with its potential for stranding significant new investments in power plants. Rather than a smorgasbord of incentives for new generators, the better idea is to support and strengthen demand bidding and load response programs now underway in regional wholesale markets. Coupled with demand-reduction strategies that lower wholesale market-clearing prices and therefore benefit all consumers of electricity, there is a major need for a

renewed commitment to conservation measures that benefit retail customers. The kilowatt-hour that a customer never uses due to conservation is the cheapest kilowatt-hour available.

Because conservation investment has dramatically slackened in recent years, a renewed commitment is necessary. The federal government's funding of low-income weatherization in Maine has slumped from nearly \$9.5 million in 1994 to \$4.5 million in 1999. Central Maine Power's funding of ratepayer-based conservation initiatives has dropped from more than \$25 million in 1990 to about \$15 million today, all but \$1,850,000 of which is already committed in 2001 to long-term contracts with Power Partners programs at industrial locations. Funding for new initiatives is exceedingly scarce in Maine today, in contrast to Massachusetts, Connecticut, Vermont and Rhode Island—all of which have approved ratepayer-funded conservation programs at levels ranging from 2.1 to 3 mills per kilowatt-hour. Maine law provides for a maximum funding level of 1.5 mills per kilowatt-hour (\$.0015), but the sad fact is that actual PUC-approved budgets are much lower. It's time to get past the short-sighted focus on supply and generator development issues and remember how successful a national strategy conservation was in trimming demand for energy generally, and electricity in particular, in the 1980s and early 1990s. 🐟

COMMENTARY

Demand Side Management in Today's Electricity Market

By Kenneth Gordon

In the 1980s, Maine regulators—along with their counterparts elsewhere—developed a wide variety of so-called Demand Side Management (DSM) programs that were paid for through overall utility rates. The programs promoted high-efficiency appliances and lighting, better construction and insulation of buildings and, on the industrial side, such features as high-efficiency electric motors. On another front, programs addressed capacity savings by shifting demand to off-peak hours. Further, interruptible power service and peak pricing provided additional options to utilities and to their larger customers.

Often underlying support for such programs was the perception that there was “market failure” in the DSM services sector, limiting the efficiency potential of DSM, as well as cutting off the environmental benefits that were thought likely to flow from its deployment. While there were a handful of successful programs, more often there was failure or ambiguity (and high costs affecting rates). Moreover, for most customers, most of the time, prices were set at regulated levels that did not necessarily reflect the value of energy and capacity in the marketplace. Under these circumstances, it is hard to conclude

that the market for DSM had failed—indeed, it is at least as fair to say that the DSM market was never really tried.

By the early 1990s, in Maine and many other parts of the country, the attention of policymakers was shifting to other approaches, such as introducing competition in the generation and marketing of electric power as a means of lowering costs, and reliance on markets to coordinate behavior on both the supply and the demand side. For the first time it was possible that there would be a market-based price for electricity.

During the mid-1990s the basic policy direction in much of the electric utility industry,

including Maine's, shifted from command-and-control regulation to reliance on wholesale and retail competition—even allowing residential electricity customers to shop for services themselves. Under competition, it was expected that suppliers would become more efficient as they competed for business and that



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prices would be lower than under regulation. Just as important, it was expected that confronting customers with the true price of electricity would lead them to conserve when prices rose and expand use when prices fell. In

short, electricity would become more like other goods people buy, and regulators could step back from detailed rate regulation and their extensive involvement in supply planning, conservation and similar utility-operated programs aimed at limiting demand. Under the new framework, managing the “demand side,” in response to price, could become the job of consumers.

Under competition, the range of opportunity for DSM is substantial, but to fully realize its potential, it must be carefully dovetailed with specific customer circumstances. Good solutions are likely to be situation-specific and even idiosyncratic; real needs must still be met. In the words of DSM guru Arthur Rosenfeld, the best conservation “doesn’t affect how you live.” Only the customer can judge whether that is true, and which tradeoffs are acceptable.

Examples of how to reduce power consumption and/or costs abound. For instance, consumers can switch from an older refrigerator to a newer energy-efficient refrigerator. For air-conditioning savings, a white roof can be installed in place of a dark roof. Additional water heater insulation can reduce costs. How cost-effective such expenditures are—and therefore how likely the consumer is to make them—depends, in large part, on

—why are state-sponsored DSM programs being reconsidered . . . even as we turn toward market mechanisms to guide energy use and production in electricity?

the expected price for electricity.

The same is true for commercial and industrial customers. Indeed, in this sector there is likely to be an even wider range of technical options. Many

may be able to improve industrial or similar processes, revise lighting and the like. The use of time-of-day pricing and load-sensitive meters can reveal to the customer the cost and price of power as it is being used. Rescheduling production (or other non-time sensitive operations) may be profitable, even if some cost is incurred by doing so. Entering into interruptible contracts in exchange for lower prices is one longstanding example. Scheduling off-peak hours for energy-intensive operations—such as wood grinding at a paper mill—is another method that has been used in Maine to save both capacity and energy while benefiting customers. Recently, as a result of the current California shortages, an aluminum producer ceased production in order to resell the low-cost power it had under contract into the much higher-priced marketplace. It was only willing to do so because it recognized the opportunity cost—that is, the price—of the power it would normally have used itself.

In light of this—and with due regard to a history of regulatory-driven DSM programs that can, at best, be described as checkered—why are state-sponsored DSM programs being reconsidered in California (and possibly elsewhere) even as we turn toward market mechanisms to guide energy use and production in electricity? One

reason is simply a failure to learn the lessons of history. Ironically, the high prices that led policymakers toward markets and competition came in no small part from the excesses of a command-and-control world that included detailed, prescriptive DSM programs. A second factor is probably simple opportunism. The current crisis is likely perceived as an opening to reincarnate them for those who never were reconciled to the decline of the earlier programs, whether for environmental or other reasons.

In my view, a more fundamental reason is rooted in the larger problem of how the public views price in regard to regulated utilities. When there is excess demand, price could be raised to choke off the excess—or perhaps demand could be directly reduced without having to raise prices. Avoiding a price increase will often be the more politically popular approach. Intertwined with this is the problem of unrealized and unrealistic expectations from restructuring and generation deregulation. Careful advocates of electric competition predicted that as the industry became more efficient over time as a result of competition, prices—on average—would be lower than they would be under traditional regulation. Less careful advocates predicted—and perhaps most listeners heard—simply “lower prices.” Their dismay at higher prices is understandable, even though fixing prices at low levels is ultimately highly counterproductive. The seemingly sudden arrival of sharply higher wholesale electric prices in California has been met with dismay and anger, recriminations and blame shifting. Most discouragingly, there has been a political reluctance to allow wholesale prices to rise to market-clearing levels (the cry for FERC price caps), or, just as importantly, to allow

COMMENTARY

Is There a Role for Further Intervention in the Markets to Encourage Conservation?

By Jim Connors

As Maine and most of New England work to introduce competition into retail electricity markets, new issues and concerns arise over the assurance of adequate supplies of electricity, the impacts of uncontrolled price spikes, and general worry over system reliability. The California experience is seen as a warning of how badly things might go in Maine.

Conservation programs can help to exacerbate some of the factors that contribute to supply shortages, price volatility, and the reliability of the Transmission and Distribution (T&D) system. The conservation of electricity use, and improvements in the efficient use of electricity, serve to reduce the need for generation and transportation capacity. They contribute to reduced consumption and lower bills for end-use consumers. A reduced demand for electricity has the effect of increasing the available supply at any given moment, thus reducing demand-induced price increases, which can be especially significant during hours of peak use. Lower peaking prices translates into lower average prices for all customers over annual time spans and purchase contract periods.

higher wholesale prices to be passed along to retail customers, where the demand and supply response might begin to alleviate the shortage by encouraging conservation and other forms of reduced consumption. Of course, it is true that California's utility companies themselves agreed to the price freeze that now has them in such dire financial straits, but San Diego Gas and Electric, which was freed of that constraint by the terms of its agreement, was recapped by the legislature after it had raised prices. Small wonder that the newly found customer interest in conservation evaporated forthwith.

Policymakers must go back to the basics. One cannot expect responses by producers on the supply side and by customers on the demand side; indeed, without freely adjusting prices that reflect the underlying reality of supply and demand, one cannot expect to see an operating market at all. Moreover, producers and customers alike base their behavior not on momentary prices when making significant investments in energy conservation or other forms of DSM. Rather, they look to what might be called the "permanent" price. However, if policymakers always intervene when there is a move up in price, doubts will be raised about whether there really is a need to reduce usage—or add to supplies—and the shortages will persist.

Centrally planned DSM—or pleading for temporary reductions in consumption—may meet politicians' immediate needs by providing temporary relief as people "pitch in" to meet the crisis, but they are highly unlikely to address the root causes of the problem. Only when the critical role of price is recognized will the shortages be addressed in the short- and intermediate-terms—and will DSM find its proper role over the long-term. 🐉

Overall, energy conservation and improved efficiency will help to alleviate the potential for a "California experience" in Maine.

In restructuring the electric utility industry in Maine, the legislature authorized the development of a modest conservation program funded by a systems benefit charge applied to all electricity sales in the state. These conservation funds are collected in rates by the T&D utility, which are to be used for programs specified in a statewide program plan prepared by the State Planning Office and approved by the Public Utilities Commission. Although the planning process is not completed, it is clear that opportunities for cost-effective investments in efficiency measures are much greater than the amount of funds being collected for the conservation program.

Public intervention in energy-efficient markets is warranted when there is a market failure—that is, when the competitive market fails to yield desired or acceptable results from a public policy or societal point of view. A good example of this can be seen in energy-efficiency markets when consumers do not make investments in cost-effective efficiency improvements in the face of obvious benefits to themselves and to the system as a whole.

In Maine and the region, competitive markets at the retail or wholesale level have yet to fully materialize. In a truly competitive market consumers will "see" real-time price signals in the cost of their electricity use, and perhaps be more

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motivated to invest in energy conservation. It is still early in the development of competitive electricity markets in the northeast, so it is uncertain how active the marketplace will be in responding to opportunities for investments in energy efficiency. Public interventions to encourage and support conservation activities are perhaps more critical in the initial stages of market development as a way to bridge to a more active private sector role. In the meantime, market interventions in the form of public conservation programs will help to stimulate activity in energy-efficiency investments, and eventually lead to a transformation of energy usage to a higher level of efficiency.

Is there a role for further intervention in the markets to encourage conservation? In Maine, as new conservation programs take effect, the benefits of improved energy efficiency and energy savings will help to dampen price spikes and contribute to systems reliability. Furthermore, improvements in individual energy efficiency and the wise use of electricity are demand-side responses that consumers have at their command to moderate the impacts of supply shortages and price increases. The more conservation measures put in place by consumers, the greater the effect will be on factors influencing electricity supply and demand; such measures will help buffer Maine from any future energy crisis. 🐟

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