Taking Charge in a Restructured Electricity Industry

Mary Schoen and Shelley Cohen

The challenge for city officials in Portland, Oregon, was clear. With the electric industry beginning to undergo changes in 1995, officials decided they needed to find ways to take advantage of the evolving electricity market. While Oregon had not yet enacted statewide electricity restructuring legislation, it had opened the gates for utilities to begin offering competitive rates to customers. Recognizing that full industry competition was likely in the next few years, Portland's managers decided to try to capitalize on these changes by modifying the way in which they purchased power. They combined six of the city's largest electricity-use accounts into one large account and negotiated a less expensive contract with Portland General Electric (PGE).

This strategy, called aggregation, can be a powerful leveraging tool for communities. In Portland,

Expert Consultation Available at ICMA Conference

Managers in communities with landfills have the opportunity to schedule a specific time to meet with experts and learn what steps their communities can take to recover landfill methane gas as an energy source during ICMA's 84th Annual Conference in Orlando, Florida, October 25–27.

Staff from the U.S. Environmental Protection Agency's Landfill Methane Outreach Program (LMOP) and technical advisers will provide the on-site assistance. For more information, contact Barbara Yuhas at ICMA, 202/962-3539; e-mail, byuhas@icma.org.

Another opportunity to learn about landfill gas-to-energy is at the Landfill Methane Outreach Program Workshop and Expo scheduled in Chattanooga, Tennessee, December 9–10, 1998. To register, check the Web site www.erg.com/lmop98 or call 781/674-7374.

the final tally is impressive: aggregation will help the city save a projected $850,000 over the five-year contract. In addition, city officials have included a provision requiring that 5 percent of the power offered by PGE come from renewable energy sources. And the savings? A portion will be returned to ratepayers, with the balance going to fund additional renewable energy projects.

The Portland story is just one example of proactive community administrators who have turned the new energy options available under electricity restructuring to their advantage. Despite the new uncertainties that restructuring presents to local governments, more and more forward-thinking local government managers are finding ways to turn these challenges into opportunities. This article outlines some of the actions that managers can take to ensure that their communities minimize costs while maximizing energy options and local energy potential.

The Restructured Industry

The impetus to deregulate and restructure the nation's electric industry initially came from large wholesale and industrial customers that were frustrated by the disparities in electricity rates nationwide. These disparities exist because of the way in which the regulated electric utility industry has been structured. Throughout most of the United States, utilities hold state-approved monopolies in different service areas, giving them control over electricity generation and sales. Restructuring will force these utilities to split their generation, transmission, and retail functions into separate entities and will allow a host of new players, including independent power producers, power marketers, and energy service providers, to enter the market.

Local governments in 12 states (California, Connecticut, Illinois, Maine, Massachusetts, Montana, Nevada, New Hampshire, Oklahoma, Pennsylvania, Rhode Island, and Virginia) are grappling with these issues, as their states have passed legislation allowing some form of competition in their electricity industries. Thirty-six other states are considering similar legislation, as is the federal government. Restructuring legislation varies from state to state. However, the primary goal is the same: to enable market forces, not regulators, to influence utilities' decisions on what investments to make and how best to stay competitive.

New Challenges, New Choices

One of the biggest concerns for local governments is the effect that restructuring will have on their tax bases. In a regulated market, utilities could count on guaranteed profits, from which local governments could count on a steady stream of tax revenues. In a restructured market, some communities may face a decline in these revenue streams. In addition, as existing utilities divest their assets to improve their competitiveness, and as new competitors from outside the localities enter these former monopoly markets, municipal tax revenues could suffer.

How stranded-cost recovery is resolved also may affect local government revenues. Utilities are seeking to recover their stranded costs, which are debts incurred on new investments made under the regulated system, through customer fees or transaction charges during a proposed transition period to competition. If utilities cannot recover these costs, the market value of these investments could drop, hurting local property tax bases. On the other hand, if the customer fees are extremely high, local governments and other customers may actually see their electricity bills increase, not decrease, for several more years.

Bearing all these considerations in mind, how can local governments benefit from restructuring? At first glance, this question may seem difficult to answer. While the introduction of competition is aimed in part at lowering prices for everyone, certain market realities may skew the balance, allowing large customers to benefit at the expense of their smaller counterparts.

Individually, local government facilities, small businesses, and residential consumers represent small energy loads with demands that typically peak at midday, when the cost of power is greatest. This gives them less clout than large industrial customers, who, by virtue of their size and constant energy demands, will be able to negotiate more favorable energy contracts.

Declining revenues and higher energy prices are serious concerns for local governments, but there are opportunities for managers to benefit from their newfound purchasing choices. As illustrated by the Portland example, one remedy is aggregation, which allows small power users to coalesce into one large consumer that is more attractive to energy providers. The first step for many local governments is to aggregate the largest, or in some cases all, government accounts to reduce municipal electricity expenditures. Barnstable County, Massachusetts, took this idea a step further by inviting residential consumers and small businesses to join its aggregation program.

At last count, 13 of the county's 15 communities had joined Barnstable County's Cape Light Compact. The compact currently represents 180,000 potential customers and approximately 300 megawatts of average electricity demand. Well-planned aggregation programs like these help local governments counterbalance lost property tax revenue and other revenue reductions caused by energy restructuring. In many cases, the savings that result from aggregation more than offset such losses.

Using Restructuring to Achieve Community Goals

Local governments also are using aggregation to go beyond simply improving their budgets. Many are looking to incorporate new energy strategies that enhance responsible community planning. For example, localities that own landfills can create benefits for their local

Landfill Gas-to-Energy Projects

While landfills often are viewed as liabilities, the landfill gas these facilities produce can be an important asset for local governments. This is particularly true with a restructured electric industry. Landfill gas is about 50 percent methane, a clean, safe energy source. When captured, methane from landfills can be converted to generate electricity or heat, processed into an alternative vehicle fuel, upgraded and injected into natural gas pipelines, or used in niche applications like heating horticultural greenhouses. All these uses mean more options for managers who are looking for ways to adapt to restructuring changes.

Landfill gas offers other important benefits. Its use can contribute to local economic development, creating jobs associated with the design, construction, and operation of energy recovery systems. Using landfill gas also can benefit the environment. Converting landfill gas to energy offsets the need for nonrenewable resources like coal and oil, and landfill gas-to-energy (LFGTE) projects help fight global climate change because they reduce methane emissions, one of the most potent "greenhouse gases."

Managers also are recognizing that LFGTE projects can help offset the cost of complying with regulations. Landfill New Source Performance Standards and Emissions Guidelines require many landfills to capture and combust landfill gas emissions. LFGTE projects can reduce the costs of installing landfill gas recovery and combustion systems by turning the methane the projects collect into a source of revenue.

While only 150 LFGTE projects are operating today, EPA estimates that as many as 600 of the 6,000 landfills across the United States could cost-effectively turn their methane into an energy resource; if used to generate electricity, the methane could power more than 3 million homes.

Local governments and others interested in finding out more about LFGTE projects can turn to EPA's Landfill Methane Outreach Program (LMOP), a voluntary assistance program, for information and ideas. LMOP works in partnership with communities, landfill owners, utilities, states, the landfill gas industry, tribes, and trade associations to promote the use of landfill gas.

For more information on how your community can benefit from landfill gas use, contact the program manager for your state:

- Shelley Cohen, 202/564-9797; e-mail, cohen.shelley@epa.gov, for the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, and West Virginia.
- Ed Coe, 202/564-8994; e-mail, coe.edmund@epa.gov, for the states of Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin.
- Mary Schoen, 202/564-9058; e-mail, schoen.mary @epa.gov, for the states of Arizona, California, Colorado, Hawaii, Kansas, Louisiana, New Mexico, Nevada, Oklahoma, Texas, and Utah.
- Nabilah Haque, 202/564-9797; e-mail, haque.nabilah@epa.gov, for the states of Alaska, Alabama, Arkansas, Florida, Georgia, Iowa, Idaho, Minnesota, Missouri, Mississippi, Montana, North Dakota, Nebraska, Oregon, South Dakota, Washington, and Wyoming.

economies and the environment by developing their landfills' power potential. Not only would a community realize reductions in local smog and other pollution generated by the landfill, it would enjoy the income that landfill gas-to-energy (LFGTE) projects generate through energy sales and job creation. LFGTE projects also encourage economic development near landfills.

County managers in Sacramento County, California, and the Sacramento Municipal Utility District (SMUD) recently finalized a power purchasing agreement that included a requirement that SMUD buy power generated by the county's LFGTE project. The deal enabled the county to accomplish several key objectives: it found a buyer for the power from the county's LFGTE project, making the project economically viable; it reduced electricity costs for county residents; and it will enable SMUD to provide some 8.3 megawatts of renewable energy, or "green power," to California's electricity grid in December 1998, when the landfill project goes online.

The deal, which is expected to save Sacramento County an estimated $75,000 a year in electricity costs, represents the culmination of an effort by the county to manage the landfill's methane emissions productively by marketing those emissions as a source of green power.

Through aggregation agreements, local government managers also are including green power requirements into the energy portfolios of their electricity providers. As the Portland and Sacramento efforts illustrate, these "green aggregation" initiatives enable local governments to benefit in a number of ways. Through green aggregation, local governments ensure that their budgets are either unaffected or strengthened in a restructured market, even as the localities are advancing the environmental goals favored by their residents.

These contracts can require energy providers to include renewable energy in their power mixes or help develop LFGTE projects at municipal landfills. Promoting landfills as sources of green power also can help public managers address community concerns about existing landfills or siting new ones.

Like their counterparts in Sacramento, city officials in Tucson, Arizona, saw the changing market as an opportunity to develop a landfill gas recovery

ICMA's Utility Restructuring and Competition Consortium

Recognizing the need to combine the strength and resources of multiple stakeholders, ICMA members have set up the Utility Restructuring and Competition Consortium to educate participants on the implications for local governments of utility restructuring and competition.

The consortium brings together a wide array of stakeholders to inform, educate, and serve as a resource to local governments concerned about utility restructuring. The consortium will examine how to strategically plan, manage, and coordinate local government and community resources to thrive in a competitive environment. Here are the consortium's objectives.

- Educate local government about the opportunities and risks of deregulation and competitive markets for selected utilities, including electricity, natural gas, telecommunications, and cable.
- Inform local governments about the strategic and technical management steps and skills required to sustain services and development in a competitive utility market. These strategies and techniques include franchise negotiation, load aggregation, municipalization, and technology convergence.
- Encourage local government revenue generation and cost savings through effective utility services management.
- Protect local government revenue generation and "right-of-way" authority.
- Help local governments that own electric utilities identify strategic opportunities in the areas of pricing strategies, marketing, key consumer retention strategies, and additional service bundling.
- Educate local government and other stakeholders, including utilities, businesses, and consumer groups, about strategic partnerships and alliances to stabilize utility markets.
- Encourage local government involvement in the federal and state policy decision-making processes on utility restructuring.
- Actively engage and inform federal and state policymakers about local government perspectives on utility restructuring and deregulation.
- Encourage energy conservation, efficiency, and environmental protection through utility restructuring.
- Provide member jurisdictions with information, expertise, and guidance on the legal, technical, financial, marketing, and purchasing aspects of utility restructuring.

For more information, contact Kate Hatten at ICMA, 202/962-3674; e-mail, khatten@icma.org.

project. Tucson contracted with a private developer to build an electric generation plant at the landfill, contingent on the developer's negotiating a power-purchase agreement with Tucson Electric Power, an IOU. Once signed, the deal enabled the developer to finance the project fully and still to make a profit. Tucson, meanwhile, paid nothing to have its landfill recovery system developed. Better still, in six to ten years when the developer's capital costs are paid off, the city will share in the revenues generated from sales of the landfill methane.

Similarly, electric restructuring in Connecticut brought opportunities knocking on the town of Groton's door. Groton's wastewater treatment plant has a large power generator on-site that powers the facility and provides backup energy during outages. When Connecticut started moving toward restructuring, the local utility began looking for alternate power sources to diversify its energy mix. Groton's wastewater treatment plant seemed a perfect fit.

The utility negotiated a deal with the town in which the utility agreed to upgrade the plant's generator and connect it to the local grid in exchange for the right to purchase excess electricity. When the agreement has been finalized and the equipment has been installed, Groton will have a new source of revenue, developed and installed at far lower cost than the town had thought possible.

Communities across the country are finding that incorporating renewable energy sources into their energy plans, or using local energy sources like landfill gas, creates jobs and improves environmental conditions. This type of community planning is an example of sustainability in action. Not only do local governments form symbiotic partnerships with power providers but also the community reaps benefits from improved environmental and economic conditions.

Acting Locally, Reaping Global Benefits

Restructuring can present local governments with cutting-edge global environmental opportunities as well. In June 1998, party nations to the international Climate Change Treaty began hammering out the framework for an international greenhouse gas (GHG) emissions trading program designed to encourage emissions reductions. Some businesses already are positioning themselves to get ahead in this potential marketplace. Local governments could do the same.

A New York–based IOU, Niagara Mohawk, recently signed an agreement to sell 10 million metric tons of GHG emissions credits, potentially worth up to $6 million, to the Canadian oil and gas firm Suncor Energy. The agreement will help Suncor achieve its voluntary emission reduction targets while providing Niagara Mohawk with additional funding for new pollution-reduction efforts.

Like businesses, local governments can become players in this potentially

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lucrative emissions-trading market. Municipal landfills are the perfect starting point. LFGTE projects capture the methane gas produced by decomposing garbage and turn it into energy, thereby preventing a potent greenhouse gas from entering the atmosphere. Localities that reduce these emissions may be eligible to earn tradable credits, too.

In Groton, Connecticut, town officials are working with investor-owned Northeast Utilities and with the U.S. Environmental Protection Agency (EPA) on an innovative fuel-cell project that uses methane from Groton's landfill for fuel. Northeast Utilities has signed an agreement to sell GHG emissions reductions generated by the fuel-cell project to the Greenhouse Emissions Management Consortium (GEMCo) of Canada. While Groton is not yet benefiting directly from the sale of the reductions, there is no reason to believe that the town cannot do so in the future.

Public Utilities: Finding Their Place

Utility managers have to be proactive if they hope to capitalize on the opportunities that restructuring presents. Public utilities evolved as local governments searched for a way to offer residents better electricity prices than they were receiving from IOUs. The unprecedented number of acquisitions and mergers that are sweeping the private utility sector, however, are better positioning many IOUs to shop for or produce low-cost power. When competition and customer choice become the market norm, local government utilities may find it increasingly hard to compete with these new market players.

Public utilities do have some advantages over IOUs, however. In a survey conducted in April 1998 by the National Rural Electric Cooperative Association, 80 percent of the respondents currently served by IOUs indicated they would prefer to be customers of public utilities. One-third of respondents said they would even be willing to pay an additional charge for such service. Public utility managers need to find ways to reach this reservoir of customer goodwill.

SMUD, the public utility in Sacramento, is doing just that. Before the wave of restructuring had hit California, SMUD surveyed its customers and discovered that many favored the development and use of renewable power. Now SMUD gets nearly half its electricity from solar, wind, LFGTE, and other renewable power sources. In addition, SMUD has created its own brand of electricity, called Greenergy. Through its reputation for customer service and green power, SMUD is working to differentiate itself from other energy providers in the new market and will soon be competing for customers outside its service area.

Munis Unite!

If including renewable energy dramatically escalates a municipal utility's operating and energy costs, however, even the most environmentally conscious consumer may turn away. Therefore, public utilities must find ways to keep

Power Providers Brace for Possible Problems

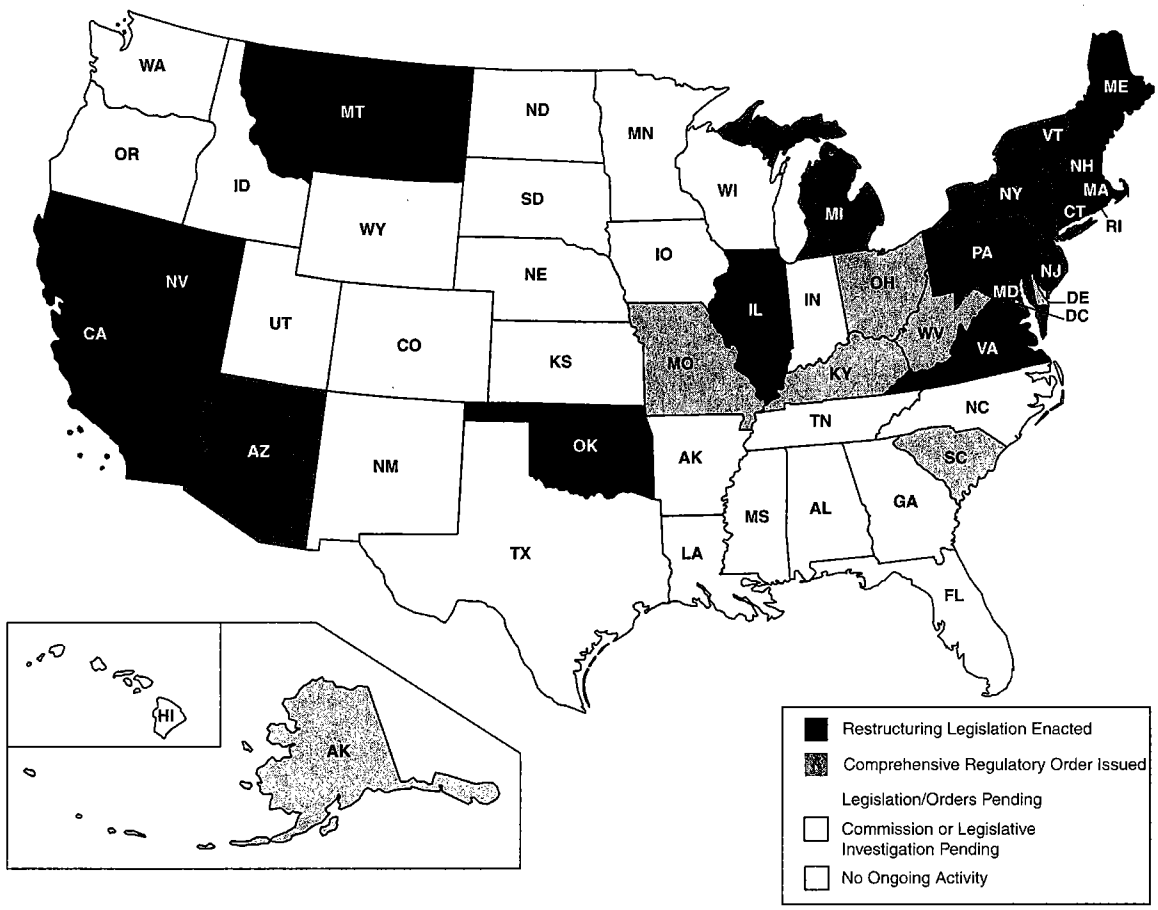
Who are the energy providers and what are their issues? There are three kinds of electric utility providers operating in the regulated utility market. Each faces a number of challenges in a restructured, competitive market. Here is a brief description of each energy provider and one of the main obstacles each faces under restructuring.

Investor-owned utilities (IOUs) are profit-making companies that are owned and operated for the benefit of shareholders. Currently, 212 IOUs produce more than 75 percent of all power distributed in the United States. Under the monopoly-based market structure, IOUs have been guaranteed a certain rate of return on reasonable investments in new power plants, upgrades, and other infrastructure improvements. Utilities believe that because these debts—called stranded costs—were approved by state regulators under the regulated market structure, they should be recoverable in a competitive market. How much of this cost IOUs will be allowed to recover, and by what mechanism, is being resolved on a state-by-state basis.

Public or municipal utilities (munis) are not-for-profit institutions that are owned and operated by local governments. There are currently 1,857 municipal utilities producing 14 percent of the power distributed in the United States at a lower cost than IOUs. Municipal utilities are concerned about how their not-for-profit, public-service position—which entitles them to tax-exempt financing and tax-exempt status—will be affected by competition. IOUs are pushing state regulators and legislators to remove these benefits from municipal utilities and level the playing field in the new, restructured market.

Rural electric cooperatives (co-ops) are not-for-profit, member-owned institutions that generate, transmit, and distribute wholesale power in rural areas historically underserved by IOUs. Some 929 co-ops produce 11 percent of electricity produced in the United States. Co-ops are structured slightly differently from IOUs and munis. Most of these consumer-owned power agencies are small entities that simply do not have the resources to compete. If they lose their larger customers to other power providers, the result will be an increased burden on their existing customers to cover the co-ops' fixed costs, rendering them less competitive.

Status of State Electric Utility Deregulation Activity as of June 1, 1998



these costs down. Through acquisitions and mergers, IOUs pool their financial resources and lower operating costs. Other utilities can do essentially the same thing through cooperative agreements and associations.

To achieve the economies of scale that are available to IOUs, a number of municipal utility associations in the Midwest have teamed up with rural electric cooperatives (co-ops) and local governments in an aggregation plan called the Community Energy Cooperative (CEC). CEC members are developing a joint planning and financing model for new wind power facilities. The CEC also will offer energy-efficiency upgrades to customers to help them reduce their electric bills. In addition, the CEC plans to use tax-exempt financing to reduce the costs of developing renewable energy sources.

A final example is the recent creation of a unifying brand, Touchstone Energy, by rural co-ops. This new brand name will allow cooperatives to conduct national advertising campaigns and increase awareness of, and loyalty to, co-ops.

Holding the Reins

Electric restructuring will surely cause headaches, and head scratching for local government officials as they struggle to develop strategies to minimize their losses and capitalize their gains in the new energy market. But, with a little planning and creative thinking, local governments can find ways to benefit from new opportunities in this changing market.

Electric restructuring may provide an impetus for local governments to find better, more efficient uses for community resources. Why should a locality flare landfill gas if captured methane can be sold to a utility and used by the municipality for fuel? Why have separate energy-purchasing contracts for municipal buildings when, taken together, electric rates can be lowered? Why not use this new purchasing power to push for more than just lower rates? Why not use energy purchasing decisions to build sustainability into the community, making it more attractive to new residents and businesses? By requiring power providers to use more green power, local governments can help grow the fledgling renewables industry. All it takes is the courage and foresight to step out of the current rubric for electric power purchasing.

Change never comes easily, especially in an industry as established as electricity. But, if local government officials can begin to think differently about their role in the restructured electric market, they are sure to find that the positive prospects outweigh the uncertainties. PM

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