Energy Distribution Monopolies: A Vision for the Next Century

To some, the "wires business" is an unexciting residual detail of restructuring, or it may even be on the road to obsolescence. By contrast, a prominent environmentalist and a utility executive jointly argue that regulated distribution monopolies can play crucial economic and social roles, particularly as electric, gas, and water operations "converge" under either private or public ownership.

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As the electric industry restructuring, most public and academic attention has focused on its competitive business lines. Left in relative obscurity are activities that remain subject to monopoly regulation, which generally have been lumped together under the disdainful heading of "the wires business" (or at most "the pipes and wires business"). To some, this business is an unexciting residual detail of restructuring; others even claim it soon will be obsolete.

Count us as enthusiasts about the robustness and the social significance of regulated distribution monopolies. This paper begins by sketching a positive vision of that business as we expect it to evolve, centered on the following elements:

- combined electric, gas, and water operations under either private or public ownership;
- full separation from the competitive generation assets of today's integrated utilities;
- the obligation to connect all customers to the grid, but not to cross-subsidize connection costs
distribution functions are separated; indeed, we would add water distribution to the list of gas and electric functions that are strong candidates for convergence. We next demonstrate that restructuring increases, rather than removes, the need for intervention to eliminate market barriers to energy efficiency and renewable energy. Finally, we address claims that a distribution focus is inconsistent with robust earnings opportunities for investor-owned utilities.

We turn then to an exercise in myth destruction. We demonstrate that, for several decades at least, electric and gas grids promise robust benefits that are not vulnerable to large-scale bypass. Technologies often invoked as potential sources of bypass actually should reinforce the economic and reliability advantages of integrated grids. We rebut the contention that keeping electric and gas distribution in separate ownership encourages competition and helps customers: this argument confuses competition among commodity suppliers with the provision of natural-monopoly distribution functions. Customers lose access to significant synergies and economies if the distribution company does not own any of the assets that produce the commodities flowing over its local grids. It is financially indifferent to customers’ total energy commodity use and also to customers’ choices among competing energy commodities. In response to regulatory or legislative direction, it collects modest charges on distribution services to underwrite long-term investments in energy efficiency, renewable

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I. The New Distribution Monopolies

Envision a geographically defined distribution monopoly that operates the local network of electricity, gas, and water lines. Net revenues depend on minimizing the life-cycle cost of reliable grids and on meeting service quality goals. Investments in grid expansion are evaluated against incentives for demand reductions and load-center supply additions, with the least costly options prevailing. New customers pay their own connection costs without cross-subsidies from other users of the system. When it is connecting new customers, the company also offers to install their cable television, data, and telephone lines on a regulated fee-for-service basis, although it does not have other involvement in these businesses.

The distribution company does not own any of the assets that produce the commodities flowing over its local grids. It is financially indifferent to customers’ total energy commodity use and also to customers’ choices among competing energy commodities. In response to regulatory or legislative direction, it collects modest charges on distribution services to underwrite long-term investments in energy efficiency, renewable
energy resources, research and development, and low-income services. The distribution company has the option to compete for roles in administering such investments, but it does not participate directly in the competitive markets through which the funds are converted into customer and societal benefits. It has major new responsibilities in supporting the integration of small-scale "distributed" electric-generation resources, where they are cost-effective, throughout its service territory.

The company aims for the efficient use of assets in delivering energy and water reliably. It achieves the full cost savings from the consolidation of planning, administration, and field operations that typically have eluded independent companies pursuing joint efforts. Regardless of whether the customer or utility owns the meter, billing and meter-reading functions benefit from consolidation. Compared to more specialized monopolies, the company is better able to facilitate advanced metering and information technologies through a common point of contact with customers and through more effective partnering with the telecommunications and information technology industries.

The new distribution company has escaped the ancient utility dilemma of how to use average-cost pricing to underwrite a business marked at least intermittently by increasing marginal costs. Distribution prices are regulated but are not cross-subsidized, and an environmental dividend emerges through the elimination of a significant subsidy to energy- and land-intensive sprawl development. The new company has severed its connection with competitive businesses in which it formerly had an interest, such as operating power plants and delivering energy efficiency services. It has achieved at least compensating gains through expansions of its traditional distribution role and geographical reach. And it has an opportunity to earn performance-based rewards for unleashing grid-enhancing generation and demand-side resources.

Distribution price regulation is incentive based. The goal of the system is to reward managers who minimize life-cycle distribution costs by finding the optimal mix of system expansion, demand reduction incentives, and new load-center supply resources. The company’s profitability is unrelated to consumption of the energy and water commodities that it delivers: on the other hand, adding customers and serving them reliably can yield increased earnings. Regulators revisit the pricing structure every 5 years or so to ensure that it is functioning as intended and that regulated rates of return appear reasonable.

Largely gone are the integrated monopoly utility's social roles as deliverer of efficiency improvements, provider of low-income services, and builder of renewable generation. The new distribution company still collects funds for these "public goods" purposes, but administrative and provider roles are competitively assigned under regulatory supervision. Some distribution companies compete successfully to serve as administrators of the "public goods" investments on the grounds that they are well equipped to maximize participation inexpensively and to maintain effective quality controls. Other distribution companies limit their role to ensuring that all users of the system pay their share of these societal outlays.

We see four principal challenges to this vision, which are outlined below. The first attacks the whole notion of a durable distribution monopoly, at least for electricity. The second questions the incorporation of gas- and water-related monopolies with electricity functions in a single company. Third, some contend that restructured energy markets are eliminating or at least are undermining the barriers that traditionally have justified utility investment in energy efficiency and renewable resources. Finally, skepticism is likely about whether our vision would gener-
ate enough earnings opportunities to make it attractive outside the nonprofit sector. Our rebuttal, on all counts, follows.

II. Myth Destruction

A. Myth #1: Integrated Grids Are or Soon Will Be Vulnerable to Large-Scale Bypass

Grid-bypass myths have been around for decades, but they seem to be growing in popularity. They reflect the belief that a flood of improved and inexpensive small-scale generation technologies soon will induce droves of electricity customers to strike out on their own. Examples include fuel cells, efficient small gas turbines, and photovoltaic arrays. Some contend that these technologies threaten the economic and physical integrity of the grid by offering those now connected an economical and reliable alternative.

We both dispute and reject this vision. We view distributed technologies primarily as grid enhancements, not grid replacements: they rely on the grid itself to deliver much of their value. Most customers choosing such technologies will continue to want support services from the integrated grid, including backup, power quality, and wider market access for both purchases and sales. Without ready and affordable access to these services, most customers would lose any interest in distributed generation. Indeed, without investment and support from a grid partner, distributed technologies could be stalled indefinitely in niche applications.

We do not dispute the declining cost and improving performance of distributed technologies. But enthusiasts should not overlook the sobering evidence on market barriers to analogous investments. If, as section C below indicates, customers routinely impose 2-year payback requirements on energy efficiency improvements, it is unlikely that distributed generation will fare any better. Add all the near-term uncertainties and risks associated with electricity pricing under restructuring.

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and one conclusion seems inescapable: without intervention by highly motivated distribution companies, near-term prospects for distributed generation are clouded. Given the enhancing rather than displacing role of distributed technologies, it is appropriate for grid owners to have a significant role in supporting the integration of these technologies throughout their service territories. As the distribution grid is modernized and automated, its typical topology should shift from a unidirectional tree to an omnidirectional web, facilitating the efficient and graceful handling of power flows both to and from distributed generators.

A natural question then arises: as distributed technologies are adopted, will the distribution system in place at that time be inappropriate? That is, if the grid had been planned assuming widespread adoption of distributed technologies, would it have been built differently? For instance, distribution systems have been built to meet peaking needs, but distributed generation technologies would mitigate system peaks. We believe that, at worst, some grid owners face temporary and limited overcapacity. We expect this transition period to be relatively short. Economic expansion will allow most overbuilt communities to grow into their grids. Further, many other communities have immediate needs for system reinforcement. Distributed technologies will have great value as grid enhancements by providing voltage support and by deferring or avoiding costly system expansions. Indeed, utilities should receive incentives to become highly successful facilitators and integrators of cost-effective distributed resources.

The bypass of gas, electric, and water distribution typically is neither economic nor socially desirable: these are natural monopolies. The only real threats to grids today involve legal artifice rather than technological innovation. Law and regulation should avoid invitations to shift costs by paper redesignations of distribution suppliers, and both legislatures and regulators increasingly are recog-
nizing as much. Planning a distribution system on a long-term basis has clear social value. Many of these benefits will stay on the table if distribution utilities must operate and invest without a secure franchise and reasonable assurances of cost recovery.

This does not mean, of course, that grid owners can ever be insensitive to cost or efficiency considerations. Poor management conceivably could counter the grid advantages that we have identified and could drive some customers at least to what otherwise would be inferior alternative arrangements. That prospect is itself a useful, if not sufficient, antidote for complacency among grid owners; as explained further below, we recommend supplementing it with additional incentives to minimize the life-cycle costs of reliable distribution service.

B. Myth #2: Combining Electric, Gas, and Water Distribution Suppresses Competition

The benefits of combining electric, gas, and water distribution systems far outweigh any potential anticompetitive impacts. The myth that combining these systems would suppress competition originates in a misunderstood history of efforts by integrated gas utilities and integrated electric utilities to provide energy and distribution service to customers.

Unifying the distribution functions will not reduce customers’ ability to make economic choices among energy supply options. The businesses at issue here are limited to pure distribution systems performing strictly transportation and settlement functions. A combination of such companies with properly designed incentives poses no threat to competition analogous to that associated with a merger of vertically integrated utilities. Energy would be obtained from other entities, all of which would compete fiercely for customer loads. Competition for energy supply would be enhanced, not reduced, because the basis of competition would be clearer and more appropriate. The new distribution company would have no incentive to favor one energy form over another: its incentives would be tied to adding (but not cross-subsidizing) customers and to providing reliable service, not to boosting fuel throughput. Margins would be earned by providing economic, efficient hookups, regardless of customers’ fuel choices. The inappropriate incentives often faced by competing vertically integrated utilities would be eliminated.

Customers would benefit from the combination through enhanced and less expensive transportation services. Many efficiencies attend the integration of closely similar skill sets and business orientations of electric, gas, and water distributors, including:

- A single billing function, rather than three;
- A single meter-reading function, rather than three;
- A single administrative support function, rather than three;
- Fully coordinated planning and field operations (e.g., optimal trenching rather than efforts that are disjointed due to differences in each organization’s approach);
- Fewer total planning and field personnel due to consolidation;
- Facilitation of advanced metering and information technologies through a common point of contact with customers and through more effective partnering with the telecommunications and information technology industries;
- Accelerated distribution system enhancements such as distributed generation technologies due to “fuel-blind” orientation.

Absent this combination, separate distributors certainly could undertake various joint efforts, but full synergy requires consolidation. Inevitably, as separate distributors attempt to coordinate operations, organizational impediments emerge, including differences in corporate approaches, company politics, proprietary issues, information barriers, and misaligned incentives (including promotional biases toward particular fuels).

Prospects for these benefits and efficiencies are most obvious in the gas and electric industries. We add water distribution because we expect significant savings from the combination of adminis-
tration and billing functions, joint trenching, and installation of automated meter reading by the combined distributor. To the extent that telephone, data, and cable TV distribution does not prove readily bypassable with wireless technology, providers of these services may look to the combined distributor of gas, electricity, and water to manage and extend their physical delivery facilities as well. Economies of scale and scope can be achieved here without significant anticompetitive effects.

The business orientation for the combined distributor should be that of a delivery entrepreneur following a Federal Express or Southwest Airlines model. The paramount objective is maximizing efficient use of assets in delivering energy and water reliably. Such a business will focus intently on the core competencies of a successful transporter: fierce efficiency, consistent meeting of customer expectations for reliability, optimal use of physical assets, and appropriate pricing. To the extent that this transporter finds other markets in which these competencies fit well (e.g., possibly sewage collection and treatment or the distribution of heated and chilled water), further consolidation may be appropriate.

C. Myth #3: Electric Restructuring Reduces Market Barriers to Cost-Effective Energy Efficiency and Renewable Energy

If the model for distribution is changing, it is matched by an even more dramatic transformation of the energy commodity business. While the vertically integrated utility model featured centralized, long-term planning for energy production and demand management resources, the evolving replacement is in many ways a polar opposite. Without compensatory intervention at the distribution level or some other level, prospects operating under formal rules of "open access," under which transmission owners must operate their systems essentially as common carriers for all market participants.

The result is expansive commodity markets for electricity, featuring auction-based power exchanges with prices that shift at least hourly. Units facing higher environmental standards must find offsetting efficiencies or must lose market share to competitors in less demanding jurisdictions. And an expanding cast of North American buyers in competitive electricity markets ensures escalating pressures to reduce input prices.

For at least the next decade, the most important environmental variable for North American electricity is the fate of more than 300,000 MW of underutilized coal-fired generation. This equipment—equivalent to more than twice the installed capacity of Canada and Mexico combined—now produces more than half of U.S. generation. Many of the units "are allowed to pollute at emission levels 4 to 100 times the rate of levels that must be met by their new competitors." If the competitive advantage associated with these looser standards proved decisive, U.S. coal-fired generation could raise mid-1990s production levels by as much as one-third in response to continental demand growth and access to new markets. The units at which these increases would occur already lead the power generation sector—and indeed the entire economy—in their emissions of sulfur dioxide, nitrogen oxides, carbon dioxide, and mercury. Given a
unwilling to make long-term improvements that would mostly reward subsequent users. And sometimes what looks like apathy about efficiency merely reflects inadequate information or time to evaluate it, as everyone knows who has rushed to replace a broken water heater, furnace, or refrigerator.

For North America as a whole, load coal use at the expense of cleaner gas generation.

Just making customers more aware of electricity costs could yield some consumption reductions, of course, and hopes abound that many marketers will bundle efficiency services with their commodity products. Anecdotal evidence to that effect is starting to emerge from California’s new retail markets. But such efforts still must confront daunting customer payback requirements, which will become even more onerous in the face of declining energy commodity prices.

Electric-industry restructuring can exacerbate market barriers to improved end-use efficiency, by reducing utilities’ incentives to overcome them. The market’s demand for lower commodity costs seems incompatible with utilities’ historic practice of recovering system-wide energy efficiency investments as part of a bundled electricity charge; too many “unbundled” commodity competitors are in the wings (if not already on the stage). Long-term investment in renewable energy and other low-emission technologies is at least equally vulnerable to such commodity-market pressures.

And still further inhibitions emerge from widespread uncertainty about the future and the pace of restructuring itself. Investors understandably want to know the rules that will govern an emerging marketplace before committing scare resources; much of North America cannot tell them nearly enough yet.

These pressures could put an
end to a 20-year success story, in which hundreds of North American utilities built a whole new renewable-energy industry and also proved that they could invest productively in a host of end-use energy efficiency improvements. That record of achievement cuts across the spectrum of utility size and ownership structure. It yielded mass-produced energy savings less costly than equivalent unburned fuel at power plants, even as "annual savings equivalent to 1 percent of system consumption were being achieved by companies that had in no sense tested the limits of their capacity."16 The demise of integrated utility monopolies compels the substitution of new models for undertaking investment of this kind.

The answer lies neither in trying to restore the old monopolies nor in slowing the transition to a restructured industry. Paralysis and uncertainty will yield nothing of value for energy efficiency or renewable energy. We need a swift transition to the new distribution monopoly as well as to the competitive markets outside it.

D. Myth #4: A Focus on Distribution Services is Inconsistent with Growth in Earnings for Utility Owners

Some in the utility sector worry that earnings growth will be difficult or impossible if competitive assets, including generation, leave the distribution system. These skeptics seek to maintain and, in some cases, to increase ownership of such assets in the name of shareholder welfare; public power systems may invoke customers rather than shareholders to make essentially the same point. Why follow the strategy outlined in this article if the result is a smaller enterprise with diminished economic opportunities?

We disclaim emphatically any yearning for Lilliputian ventures. Our vision accommodates and indeed supports substantial consolidation of America's 3,000-odd electric and gas distributors. There is no efficiency rationale for having more energy distribution monopolies than counties in the United States, and the point is reinforced by adding in 60,000 water and wastewater entities.17 Across the nation, distribution revenues for electricity, gas, and water exceed $110 billion annually, compared to about $200 billion for integrated electricity monopolies at their zenith.18

Some may respond that current prices for distribution acquisitions seem very high and perhaps are unsupportable with cost-based regulation. We believe that these high premiums are transitory. Future consolidation based on the true value of the synergies available should feature more modest premiums to book.

Another potential growth area for distributors is the enormous and largely untapped fee-for-service opportunities that will result from unbundling. For functions that are not natural monopolies, of course, appropriate rules must first be in place to permit real competitive choice for customers. In addition, we see abundant opportunities to increase distribution earnings (for either shareholders or customer-owners) by consolidating functions, reducing the lifecycle costs of reliable service, achieving environmental and equity objectives, and helping to expand the service territory's customer base. Particularly attractive should be opportunities to earn performance-based rewards for integrating cost-effective distributed resources, as described above. Consider, by contrast, the modest and diminishing margins now obvious across the emerging generation-commodity markets, and the increasing strains of maintaining competitive and regulated businesses within a common enterprise.

Will growth prospects for distribution businesses be sufficient to attract investors and to motivate the quality of management to produce public benefits and attractive returns? Certainly, levels of business risk will be below those of commodity markets and, arguably, will be below those of vertically
integrated utilities. Given all these considerations, we see continuing opportunities to attract yield-oriented investors, including both traditional retirees and those seeking to balance portfolios.

III. Transition Strategies

Our new distribution monopoly is found nowhere today in North America, although elements are starting to emerge. They are visible in recent precedents at both the state and federal levels; although additional legislation would be helpful in some instances, it is not essential to allow the transition to continue.

Of course, gas and electric distribution services have been offered in combination for decades, and Puget Sound Energy exemplifies regulators’ willingness to expand the list of combination offers. Water is a rare, but by no means unheard of, addition to the service package, as acronyms like LADWP (Los Angeles Department of Water and Power) and EWEB (Eugene Water and Electric Board) attest. The most promising next steps in the integration of water distribution and sewage collection may simply involve electric/gas distributors contracting with the current owners to manage and maintain water systems, with more permanent arrangements evolving as necessary and appropriate over time. This strategy avoids any need to revisit current ownership and to control arrangements for water resources, many of which are politically sensitive.

Monopoly distribution franchises generally remain robust in the face of various legal challenges, creative and otherwise. We expect to see a clear trend toward larger and more diversified franchises as the incumbents continue to divest themselves of competitive electric generation assets, eliminating a possible concern about the use of merger partners’ market power to favor particular power plants. As of April 1998, “51.4 gigawatts (GW), or 9.0 percent of the total of investor-owned electric utility generating capacity, has been available for auction or a sales agreement has been reached . . . [S]elling prices have totaled . . . a premium of 1.7 times book value.”

We anticipate few if any clashes over “mandatory divestiture,” given the manifest popularity and success of voluntary sales.

All these considerations seem applicable equally to public and private systems; certainly nothing in our proposals is incompatible with continued diversity in ownership structure. No one should conclude, however, that nonprofit systems are immune to the need to revise inappropriate pricing and incentive arrangements; public ownership does not make management indifferent to continued linkages between commodity sales and financial health or any less responsive to new incentives addressing reliability and environmental performance. Finally, we see no insuperable barriers in either state or federal law to realizing fully the vision that began this paper. And we note that numerous constructive initiatives are now pending, including:

- The Federal Energy Regulatory Commission’s strong stand in support of states’ rights to maintain nonbypassable distribution cost recovery mechanisms;
- The Clinton Administration’s recent endorsement of $3 billion annually in matching funds to promote the dedication of distribution charges to energy-efficiency improvements, renewable energy development, and low-income services;
- Northwest and Northeast utilities’ decisions to pool part of their energy efficiency investments in regional alliances, which are working on a coordinated basis to transform entire markets in mass-produced equipment; and
- California’s invitation to distribution companies and others to compete for the right to administer about $1 billion in public-purpose investment funding, all of it raised from modest nonbypassable charges on distribution services.

Yet we also acknowledge at least one formidable and pervasive
obstacle: at this writing, every one of the thousands of distribution companies across North America operates under financial incentives very different from those recommended in this article. Today’s incentives almost universally reflect the direct linkage of distribution cost recovery with commodity throughput over the wires and pipes. System managers face immediate financial losses whenever that throughput declines in response to improved end-use efficiencies, fuel substitutions, or installations of distributed generation on the customer’s side of the meter. Not only does the distribution manager see no reward for optimizing integration of such resources, but, typically, the societal benefits come packaged with a reduced recovery of distribution costs. This is true for both public and private power systems. In sum, society’s and distribution owners’ incentives are misaligned throughout an industry that, in combined economic and environmental terms, remains America’s most important.

The good news is that no one really planned or mandated any of this. Few North American regulators have yet had occasion even to consider how they should price stand-alone distribution services. New policies need not overcome deep-seated ideological or statutory constraints. The misalignment that we have identified here is one of many anomalies that temporarily afflict a rapidly restructuring sector, and the restructuring process itself will afford numerous remedial opportunities.

An early and promising indicator is the “alternative form of regulation” that the Oregon Public Utilities Commission adopted in May 1998 for PacifiCorp’s in-state operations. This innovative system is based on a proposal joined by the utility and other stakeholders; it was tailored specifically for distribution functions, and it combines the following key elements:

- Price regulation based on multiyear revenue caps rather than price caps, which are designed explicitly to ensure that the recovery of distribution costs is independent of retail electricity throughput over the distribution wires;
- Nonbypassable charges on all users’ distribution services to underwrite investment in energy efficiency improvements and renewable energy resources, and
- Objective service quality standards backed by strong financial incentives.

This proceeding was one of the first to focus squarely on long-term incentives for a utility distribution business. While the Oregon Commission would be the first to say that it did not find the only conceivable or appropriate solutions, we take heart from the capacity of key parties to find common ground and the willingness of the regulators to experiment with new approaches. Price regulation in the years ahead should be judged by its capacity to support innovation, efficiency, and least-cost distribution solutions, to ensure that new users of the system pay their own way, and to cut residual linkages between revenues and commodity sales.

As restructuring continues to transform electric and gas industries, distribution functions increasingly will demand separate regulatory consideration and treatment. Confounding those who delight in writing about “stranded regulators,” the current generation of state and local utility regulators is at the threshold of its most exciting and productive period. If they and others rise to that challenge, the “pipes and wires” business will emerge with numerous new opportunities to deliver both customer and environmental value. In our experience, the two often are indistinguishable—which helps explain why we remain determined to realize both together.

Endnotes:
1. It is important to note here that pure single-fuel distribution companies may still have significant incentives to promote one fuel over another. Such incentives can be eliminated by combining electric, gas, and water distribution.
2. Manifestations of such inappropriate incentives, like uneconomic bypass,
would be eliminated as well, enhancing the competitive environment.

3. Regardless of who owns the meter, billing and meter reading are naturally consolidated with the continued distribution activities of field operations and customer service.

4. Distributors who do not face biased incentives promoting one fuel over another will be better able to evaluate distributed generation technologies solely on the merits of their value to the distribution grid.

5. For a comprehensive state-by-state status report, see http://www.eia.doe.gov/cneaf/electricity/chgs_str/tab5rev2.html. At this writing, the transition to retail access is well underway in California, Nevada, Arizona, Montana, Oklahoma, Illinois, Michigan, Virginia, Pennsylvania, New York, New Jersey, and all six New England states.

6. A. Cohen, Unfinished Business: Cleaning Up the Nation’s Power Plant Fleet, Clean Power J., Summer 1997, at 1 [http://www.cleanpower.org]. Cohen goes on to explain that “[t]his anomaly stems from the ‘old source’ exemption granted to existing fossil fuel plants in the original Clean Air Act, in 1970 and again in 1977, on the theory that these older plants would be retired within 20 to 30 years.”

7. This is among the findings of the Environmental Impact Statement prepared in conjunction with Federal Energy Regulatory Commission (FERC) Order 888. Federal Energy Regulatory Commission, Final Environmental Impact Statement: Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities (RM95-6-000, April 1996). FERC’s view, however, is that coal will fail to achieve this level of penetration as a result of aggressive competition from gas-fired units.

8. Energy Information Administration, Monthly Energy Rev. (March 1998), at 95, notes that coal units increased their generation by 8.2 percent over the 2-year period, compared with an overall generation increase of 5.2 percent. Over the same period, natural gas generation dropped by about 7.5 percent.


13. NARUC, note 10 above, at II-10.

14. Some commercial customers reportedly are buying electricity commodities packaged with the promise of efficiency services, but we have seen no assessments of the nature or performance of the efficiency measures involved.


18. “Water and wastewater revenues exceed $50 billion in the USA,” according to Hyman, note 17 above, at 5. Edison Electric Institute sources indicate that distribution revenues account for an estimated 21 percent of total electric revenues, which implies more than $40 billion industry-wide. Communication with Edison Electric Institute (EEI) State Competitive and Regulatory Issues Department.


20. See FERC Order No. 888, 61 Federal Register 21540, 21626 (May 10, 1996): [W]e believe that states have authority over the service of delivering electric energy to end users ... through their jurisdiction over retail delivery services, states have authority not only to assess stranded costs but also to assess charges for stranded benefits, such as low-income assistance and demand-side management. Because their authority is over services, not just the facilities, states can assign stranded costs and benefits based on usage (kWh), demand (kW), or any combination or method they find appropriate.


22. These groups are incorporated, respectively, as the Northwest Energy Efficiency Alliance [www.wnealliance.com] and the Northeast Energy Efficiency Partnerships [www.nueep.org].
