

Focus on Technology

Energy Service Companies and Energy Distribution Monopolies: Renewing the Partnership

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One look at the diverse NAESCO membership list rebuts any claim that inherent conflicts divide the energy services and utility industries. Creative partnerships are the Association's stock in trade, and new opportunities abound as utility restructuring unfolds across North America and interest grows in small-scale "distributed resources."

Some see in small scale generation and load reduction technologies a looming assault on grid monopolies and distribution utilities. I contend, on the contrary, that these diverse technologies should be understood fundamentally as grid enhancements rather than grid replacements. Much of their potential economic value lies in reduced congestion, increased reliability, and avoided grid-related capital costs. With the right financial incentives, both energy service companies and grid owners will gain from an expanding, strategically located portfolio of distributed resources. My purpose here is to outline a strategy for securing more of those benefits faster.

Begin by envisioning 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 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-subsidy from other users of the system.

This 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 cost effective throughout its service territory.

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 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, including electric generation. 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 five years or so to ensure that it is functioning as intended and that regulated rates of return appear reasonable.

Of course, today's distribution utilities generally operate under financial incentives very different from those outlined above. Distribution revenues typically are linked directly to 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. This is true for both publicly and privately owned distribution systems, and the result is a fundamental misalignment of interests between customers and owners.

The good news is that no one really planned or mandated any of this, and electric industry restructuring offers numerous opportunities to fix the problem. For example, as the Oregon Public Utilities Commission has demonstrated, state commissions and local utility boards can regulate distribution pricing by substituting multi-year revenue caps for the price caps that predominate today. The new Oregon approach ensures that the recovery of distribution costs is independent of retail electricity throughput over the distribution wires. Uniform charges on all users' dis-

tribution services underwrite incentives for energy efficiency improvements and renewable energy resources. An additional important feature is rigorous service quality standards backed by strong financial incentives. Oregon demonstrates what I hope NAESCO and its many friends will continue demonstrating together: robust and efficient energy distribution monopolies are entirely compatible with vibrant growth in the competitive distributed resources sector. Indeed, we are unlikely to achieve either without both.

Additional Resources

R. Cavanagh & R. Sonstelie, *Energy Distribution Monopolies: A Vision for the Next Century*, *Electricity Journal*, August/September 1998, pp. 13-23.

Public Utility Commission of Oregon, Order No. 98-191 (May 5, 1998).

