From Vertically Integrated Monopolies to Effectively Competitive Markets: Lessons in Regulatory Humility

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Overview

For nearly four decades, U.S. policymakers have been testing the value of competition in the historically monopoly sectors of electricity, natural gas and telecommunications. We have learned one lesson well: Authorizing competition does not ensure effective competition. For markets to work, regulators have to work. And we are still working.

This presentation describes U.S. regulators' struggles in three areas:

Market Structure and Market Power: After a Century of Education, Why Are We Still Learning?

Pricing: Can We Resolve the Tensions Among Cost Recovery, Economic Efficiency and Societal Equity?

Corporate Structure, Mergers and Acquisitions: The Incumbents Have a Vision—But Do Regulators?

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I. Market Structure and Market Power: After a Century of Education, Why Are We Still Learning?

In the area of market structure and market power, we can illustrate our progress and our struggles with two examples, at two ends of the production chain: bulk generation, and the new retail services that fall under the umbrella of "smart grid" and "microgrid."

A. Bulk power competition: Three breakthroughs and some backlashes

1. Generation "competition": The breakthrough on market power measurement

Some people say "generation is competitive." This imprecision produces deception, a result of market motivation superseding economic literacy. Competitiveness applies to a market. A market has a geographic component, a product component, and, absent storage, a temporal component. "Generation" is not a market. "Generating capacity within Maryland's eastern shore on an August afternoon" is a market. A company can own generating units constituting 1 percent of the generating capacity in the PJM region (Ohio to Virginia), suggesting no market power. But due to locational luck (generation site but surrounding transmission constraints), those same generating units could constitute 90 percent of the capacity available to Maryland's eastern shore on a summer afternoon, thus suggesting high market power.

Further, "market share" (high or low) does not readily translate into "market influence" (high or low). The reason lies in the distinction between "market share" and "pivotality." Both are necessary to measure competitiveness. Consider these contrasting situations.

> A company can have a small market share (say, 1 percent), yet in certain time periods be "pivotal." A pivotal supplier is an indispensable supplier—its available supply is necessary to fill the demand at the time. If the total capacity in a market is 100 MW and demand is 95 MW, then any supplier with more than 5 MW of capacity (a mere 5 percent of the total) is indispensable, because if it withdraws, then demand is not served (and blackouts result). The threat to withdraw, if credible, earns a supracompetitive price.
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> At the other end of the market-share spectrum, a company can have a high market share (say, 75 percent), but if there are potential entrants poised at the perimeter, their entry threat can discipline even a monopolist. So market share does not mean market influence. Facts matter.

For 30 years, our Federal Energy Regulatory Commission has struggled to find ways to identify market power objectively and predictably. We have stumbled through such concepts as "third wheel away," "hub and spokes," HHI indices and other efforts, landing on what now seems to be the best answer: a two-screen approach, requiring applicants for pricing freedom to conduct a ***pivotal supplier*** screen and a ***market share*** screen.

> "The ***pivotal supplier screen*** looks at "whether the market demand can be met absent the applicant during peak times....If demand cannot be met without some contribution of supply by the applicant, the applicant is pivotal. In markets with very little demand elasticity, a pivotal supplier could extract significant monopoly rents during peak periods because customers have few, if any, alternatives."[2]
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> "The ***wholesale market share*** analysis measures for each of the four seasons whether an applicant has a dominant position in the market based on the number of megawatts of uncommitted capacity owned or controlled by the applicant as compared to the uncommitted capacity of the entire relevant market." A share of 20 percent or more in the relevant market for any season results in a rebuttable presumption of market power; however, the supplier can present historical evidence to show that he satisfies FERC's generation market power concerns. If a supplier fails the screen, he can present evidence to rebut the presumption in the form of the Delivered Price Test (DPT)."[3]

With these two tests, FERC ensures that a freely pricing seller can exercise market power neither ***unilaterally*** nor in ***coordination*** with others.

2. Transforming transmission: From islands to networks

It has taken decades, but after a century of balkanized transmission, where trading boundaries were controlled by vertically integrated utilities, the United States is finally nearing the nirvana of independently controlled regional transmission networks.

a. FERC Order No. 888 (1996)

In 1996, our Federal Energy Regulatory Commission ordered all investor-owned utilities to file transmission tariffs, providing for "network service," "point-to-point" service and "ancillary" services (the latter consisting mostly of generation services—frequency-keeping, reserves, imbalance services, voltage support—all necessary to keep the transmission system stable. For statutory authority, FERC relied not on the case-by-case approach of amended Section 211, but instead the prohibition against "undue preference or advantage" in the Federal Power Act of 1935.

b. FERC Order No. 2000 (1999)

This order authorizes (it did not mandate) the formation of a "regional transmission organization," created when transmission owners contractually transfer control of their transmission systems to an independent entity, the RTO. The RTO is both (a) the legal provider

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[2] 107 FERC para. 61,018 at para. 72 (2004).

[3] Id. at paras. 100-105.

of transmission for its region, and (b) the administrator of day-ahead and real-time markets for energy and ancillary services. Some RTOs also run capacity markets. An RTO provides these services under terms and conditions set forth in its FERC-jurisdictional tariffs.[4]

Order No. 2000 prescribes an RTO's four "minimum characteristics" and eight "required functions." The four "minimum characteristics" are independence, scope and regional configuration, operational authority and control of short-term reliability. The eight "required functions" are tariff administration and design, congestion management, parallel path flow, ancillary services, "open access same time information service" (requiring that all market players receive the same information about transmission availability at the same time), market monitoring, planning and expansion, and interregional coordination.

c. FERC Order No. 1000 (2012)

Order 1000 imposes on all transmission providers (not only regional transmission organizations) the following obligations:

i. They must "participate in a regional transmission planning process that produces a regional transmission plan and complies with existing Order No. 890 transmission planning principles." (P68)

ii. "[A] transmission planning region is one in which public utility transmission providers, in consultation with stakeholders and affected states, have agreed to participate in for purposes of regional transmission planning and development of a single regional transmission plan...." (P68)

iii. Transmission providers must have in place "processes that provide all stakeholders the opportunity to provide input into what they believe are transmission needs driven by Public Policy Requirements, rather than the public utility transmission provider planning only for its own needs or the needs of its native load customers." (P203)

iv. Transmission providers "have an affirmative obligation ... [to] evaluate alternatives that may meet the needs of the region more efficiently or cost-effectively [than transmission solutions]." (P80)

v. In the regional processes there must be "comparable consideration of transmission and non-transmission alternatives.... [T]ransmission providers are required to identify how they will evaluate and select from competing solutions and resources such that all types of resources are considered on a comparable basis." (P155)

[4] *Regional Transmission Organizations*, Order No. 2000, 89 FERC para. 61,285 (Dec. 20, 1999).

vi. Transmission providers must conduct the evaluations "in consultation with stakeholders...." (P148)

vii. New entrants to the transmission market must have an equal opportunity to compete against incumbents to build regional transmission projects. Incumbents no longer will have a "right of first refusal.

Underlying these obligations are two distinct FERC goals, each linked to the statutory requirements that the rates and charges for transmission be "just and reasonable," and that transmission providers not "make or grant any undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage...."

> ***The first goal is to ensure that the transmission planning process," "plans," and ultimately transmission projects accommodate "public policy requirements" mandates enacted by the state or federal government***. The goal focuses transmission providers on designing projects cost-effectively to support policies that the public requires, rather than only on projects that support the pecuniary business objectives of transmission owners. This goal ensures that transmission providers do not unlawfully discriminate against market players who need transmission for purposes that might conflict with the transmission provider's private priorities.
>
> ***The second goal is to ensure that any transmission project for which a transmission provider seeks cost recovery be the survivor of objective, head-to-head comparisons with non-transmission alternatives***. This goal prevents transmission charges that are not "just and reasonable" because transmission project proponents ignored less-costly alternatives.

Order 1000 has been attacked by many parties; the case is pending in the U.S. Court of Appeals for the District of Columbia Circuit.

3. Demand response: Disciplining generation prices

"Demand response" means a "reduction in the consumption of electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments designed to induce lower consumption of electric energy." 18 CFR 35.28(b)(4) (2010). FERC has ordered regional transmission organizations to give demand response bids access and pricing treatment comparable to that given generators, including receiving compensation equal to the locational marginal price applicable at the place and time that demand response is bid (provided the demand response offer satisfies FERC's "cost-effectiveness" test).[5]

[5] *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 134 FERC para. 61,187 (March 15, 2011).

FERC has stated that unless demand response can compete in organized wholesale generation markets, the prices produced by those markets will not satisfy the statutory "just and reasonable" standard. Yet FERC also has allowed states to block entry by demand response aggregators from their states. It is difficult to reconcile these two positions.

4. Backlash: State-subsidized bidding—Permissible hedging or exercise of monopsony power?

a. FERC's concern

"[S]ome market participants might have an incentive to depress market clearing prices by offering supply at less than a competitive level." *PJM Interconnection*, 135 FERC 61,022 (Apr. 12, 2011).

"A capacity market will not be able to produce the needed investment to serve load and reliability if a subset of suppliers is allowed to bid noncompetitively to suppress market clearing prices...The lower prices that would result [without a minimum offer price rule] would undermine the market's ability to attract needed investment over time. Although capacity prices might be lower in the short run, in the long run, such a strategy will not attract sufficient private investment to maintain reliability. The MOPR does not punish load, but maintains a role for private investment so that investment risk will not be shifted to captive customers over time."[6]

b. PJM's solution

Offers in the PJM capacity market should reflect "the competitive, cost-based, fixed, net cost of new entry were the resource to rely solely on revenues from PJM-administered markets."[7] Generation that is screened out will not count toward a load-serving entity's capacity obligation.

c. New England's solution

(1) Independent Market Monitor (IMM) will establish Offer Review Trigger Prices for a menu of generation and demand resource types.

(2) Any offer at or above the relevant Offer Review Trigger Price is deemed competitive.

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[6] *PJM Interconnection, L.L.C.*, 128 FERC 61,157, at P 90-91 (2009).

[7] OATT Attachment DD § 5.14(h)(5), revised as proposed by PJM in its compliance filing in Docket No. ER11-2875-003 (December 19, 2011).

(3) For generators, the Offer Review Trigger Price is calculated as a real levelized annuity that recovers all invested capital and an appropriate return, assuming that the output of the project is under contract, and therefore there is no merchant risk.

(4) "While all offers below the relevant Offer Review Trigger Price will be reviewed, the IMM will mitigate only those offers that are below the Offer Review Trigger Price due to the inclusion of out-of-market revenues or which are supported by a regulated rate, charge or other cost recovery mechanism."

(5) "Out-of-market revenues are any form of support (direct or indirect) that is not broadly available through the market to any Market Participant developing a project of the same type."

(6) "An example of an out-of-market revenue source would be a distribution ratepayer-backed power purchase agreement approved by a State regulatory authority, whereby the benefits of the contract are only available to that specific resource. On the other hand, revenues from the sale of RECs are considered to be in-market, because they are generally available to resources of the same physical type and are tradable."[8]

As with PJM, generation that is screened out will not count toward a load-serving entity's capacity obligation.

d. Comments

The U.S. Court of Appeals for the Third Circuit recently upheld FERC's minimum offer price rule. The Court rejected state objections that FERC has constrained state decisions on power supply mix. Yet there is intense discomfort.

i. States face a risk of their residents having to must pay twice: once to the capacity market and again for their own LSEs' supply that was not given capacity credit because it did not clear the market.

ii. The question for a state is whether the benefits of having their utility in an RTO is worth the cost. A state commission (if it has state law authority) can order its utility to leave the RTO (although the utility's departure is subject to its FERC-jurisdictional contract with the RTO).

[8] *Internal Market Monitoring Unit Presentation to NEPOOL Markets Committee, Market Power Mitigation in the Forward Capacity Market*, 5th Presentation (October 24, 2011) (IMM Markets Committee Presentation), attached as Exhibit NSC-3.

iii. The question for FERC is whether it can make adjustments to its view of market distortion to accommodate state power mix preferences.

iv. While FERC's market-distortion theory is sound in theory, the reality is that the organized wholesale market already is distorted because winning bids, whether gas-based or nuclear-based, do not reflect their real costs. Both fuel sources are heavily subsidized by longstanding federal policies, and both have pollution costs not reflected in their prices. It is in part to address those very distortions that some states seek to vary their supply mixes.

v. There is irony, therefore, in seeing state power mix decisions as distorting market prices, when those prices are already distorted by federal policies. The problem is that it is unclear whether FERC has legal authority to impute to gas-based or nuclear-based bids the "externality" costs caused by these sources. In other words, this federal–state problem is solvable as a matter of logic, but current statutes do not provide a clear path.

B. Smart grid and microgrid: Will competitors and customers be empowered or confined? Will incumbent utilities be saved from the "death spiral"?

1. Competitors and consumers: Empowered or confined?

Concerns about vertical monopolies usually focus on the big physical bottlenecks—pipelines, transmission, distribution systems, central exchanges and the "local loop." As technology creates more opportunities for entry into new product markets, analysts are identifying new forms of bottleneck monopolies.

A prominent example is the so-called "smart grid." The phrase has numerous definitions. The German scholars Johann Kranz and Arnold Picot see the smart grid as

> "a communications layer's virtual overlay on the existing power grid. This overlay allows all actors and components within the electricity value chain to exchange information, thereby facilitating supply and demand's coordination. This overlay closes the communication gap between consumers' premises and the rest of the network, but requires the deployment of an [advanced metering] infrastructure."[9]

The authors identify three bottlenecks critical to new entrants: the last mile, meter data, and interoperability. Their description of the bottlenecks, and the necessary regulatory actions to

[9] Johann Kranz and Arnold Picot, *Toward an End-to-End Smart Grid: Overcoming Bottlenecks to Facilitate Competition and Innovation in Smart Grids* (National Regulatory Research Institute, 2011), available at available at http://www.energycollection.us/Energy-Regulators/Toward-End-End.pdf.

open those bottlenecks, excerpted here, is a model of the type of essential facilities analysis regulators will need to apply to new technology in regulated industries.

Last mile: The "last mile" of infrastructure, and the associated data, are essential for competition but not economically duplicable by competitors:

> "End-to-end communication requires initially developing the missing communications link between consumers' premises and the rest of the energy network (the last mile) by deploying an Advanced Metering Infrastructure (AMI), along with smart meters.... The last mile infrastructure cannot be substituted or replicated within a reasonable time and cost frame. Moreover, together with the meter data, the infrastructure provides an essential input allowing efficient downstream markets, i.e. complementary services, products, and applications, to emerge."

Their recommended solution is nondiscriminatory access:

> "Regulatory intervention, in the form of open (or mandated) access, is needed to secure transparent and non-discriminatory third party access to a smart grid's last mile infrastructure.... If the entry does work out, the transitory entry assistance can be gradually withdrawn to increase the entrants' economic and strategic incentives to invest in their own infrastructure."

Meter data: Non-duplicable bottlenecks can consist not only of tangible assets like poles and wires, but also "intangible" assets like—

> "intellectual property rights, such as proprietary standards, protocols, or interfaces.... The data retrieved from smart meters can also be regarded as essential inputs for authorized actors. The data aids them in improving grid management and monitoring, streamlining business processes, and enabling innovative energy efficiency measures and value-added services."

These conditions create the recipe for actions by incumbent utilities to block competitors, who

> "can deter entry by raising rivals' costs through practices such as exclusive dealing, refusals to deal, tying, or defining of proprietary protocols and standards to artificially increase rivals' transactions and consumers' switching costs....They could also define incompatible data formats or interfaces for each distribution area, or they could intentionally delay data access and provision."

Their recommended solution is data access:

> " ...[T]o enable an efficient applications market in a future smart grid requires that all authorized parties are guaranteed equal access to an (online) data platform to recall data in (1) as close to real time as possible, (2) a standardized and

> machine-readable format, and (3) the same granularity in which it is collected (European Regulators Group for Electricity and Gas 2007)."[10]
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> . . .
>
> "Furthermore, consumers should have access to this data and determine the respective parties' data access rights if the information needs go beyond essential data for billing, or essential technical information."

Another structural solution is to place data access questions within the control of an independent platform or party:

> "Several regulatory agencies have recommended establishing an independent data platform accessible to third parties, or have already established such a platform. Others have suggested that the function of data collection, management, and access should be completely decoupled by establishing an independent and neutral data service provider ... Moreover, an independent single platform provider may be able to provide the data more cost-effectively, due to economies of scale. This provider can also perform tasks such as meter registration and consumer switching."

Interoperability: New entrants need to connect to and communicate with the distribution system's components:

> "Data's seamless exchange requires open and nonproprietary standards and communication protocols that allow each component and actor within the smart grid to communicate end-to-end. ... [P]rotocols and standards can resemble essential inputs (Renda 2004, Renda 2010 ... . Open systems benefit modular innovation, the number of potential market entrants, and market dynamics....[Incumbent utilities] may use protocols and standards as strategic weapons to build closed systems in which they safeguard interface information."[11]

Their recommended solution is open standards:

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[10] *Citing Smart Metering with a Focus on Electricity Regulation*, available at: http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Customers/2007/E07-RMF-04-03_SmartMetering_2007-10-31_0.pdf.

[11] Citing Renda, A., "Catch Me if You Can! The Microsoft Saga and the Sorrows of Old Antitrust," *Erasmus Law and Economics Review* 1, no. 1, pp. 1-22; and Renda, A., "Competition-Regulation Interface in Telecommunications: What's Left of the Essential Facility Doctrine," *Telecommunications Policy* 34, no. 1-2, pp. 23-35.

> "Data's seamless exchange requires open and nonproprietary standards and communication protocols that allow each component and actor within the smart grid to communicate end-to-end. As mentioned before, protocols and standards can resemble essential inputs (Renda 2004, Renda 2010). ... . Open systems benefit modular innovation, the number of potential market entrants, and market dynamics...."

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One possible solution to the bottleneck problem: In the U.S., the Maine Commission is investigating whether to appoint a "smart grid coordinator." See ME. REV. STAT. tit. 35-A § 3143(5) (2009) (requiring Commission to investigate on petition). The coordinator would have the exclusive responsibility, within the incumbent utility's service territory, to "manage[] access to smart grid functions and associated infrastructure, technology and applications within the service territory of a transmission and distribution utility." Id. § 3143(1)(B). The coordinator's franchise would be exclusive: "[T]he commission may authorize no more than one smart grid coordinator within each transmission and distribution utility service territory." Id. § 3143(5)

2. Incumbent utilities: Will they be fairly compensated?

A traditional utility has a state law obligation to serve. That obligation includes the obligation to invest in the infrastructure necessary to serve: generation, transmission, distribution lines, substations, poles, and wholesale supply contracts. The utility expects that its obligation to serve will be matched by its customers' obligation to pay. So when a state allows customers to supply themselves, whether through solar paneling or microgridding, the incumbent utility faces two possible disappointments:

> The utility might not recover the investment it made in the existing infrastructure, i.e., assets built for these customers in the pre-microgrid era. This is known as the sunk cost problem, sometimes called the "stranded investment" problem. It arises if (a) unrecovered book cost associated with assets built or acquired to serve obligatory captive load, exceeds (b) the market value of those assets.

> The utility might forego future profits from new infrastructure: the new infrastructure it won't be building because these customers will be creating their own infrastructure. This foregoing of profit happens to any business whose former customers substitute self-supply for purchases. It happens to bakeries when people bake their own bread and groceries when people grow their own tomatoes.

These two disappointments are often conflated into the single term "stranded investment." Some utilities use phrases more eye-catching, like "disruptive challenge" and

"existential threat."[12] The conflation of sunk cost and future profits is inaccurate, because the concepts differ in their legal and practical treatment. The case law is sensitive to stranded investment, because utilities have a reasonable expectation of recovering prudent costs incurred to fulfill their public service obligations.[13] But the case law, and economic common sense, is indifferent to foregone profit, because it is not the usual job of government regulation to maintain a company's profits when its customers have found better alternatives.

In short, while supporting the individualism implicit in smart grid and microgrids, we must also protect the commons. In the electric industry, the commons is the central infrastructure: the infrastructure that incumbent utilities built for us, long before we had time-of-day pricing, demand aggregators, and rooftop solar; and the future infrastructure we'll still need even when every neighborhood has its own microgrid. We have plenty of work to do, to identify who benefits from that infrastructure, and who provides benefits to the infrastructure (such as the savers, self-generators and microgridders who help us avoid future costs). We need not waste time contesting the principle that beneficiaries of past and future investment must pay for that investment.

II. Pricing: Can We Resolve the Tensions Among Cost Recovery, Economic Efficiency and Societal Equity?

Regulators are recognizing that the public has been disserved by two historical assumptions: (a) The chief purpose of regulated retail prices is revenue recovery, not economic efficiency; and (b) regulators regulate sellers, not buyers. The emerging solutions, for retail rates, seek to correct both errors.

A. Replacing average pricing with hourly pricing

In particular combinations of season, time of day and location, demand can exceed supply due to transmission or generation shortages, leading to high scarcity prices. Because retail utilities are able to recover wholesale price increases from their captive customers, they lack incentives—absent regulatory pressures—to bargain prices down.

Meanwhile, state-set retail rates per kWh are usually based on average annual costs, rather than actual hourly costs. This approach masks the actual wholesale hourly costs, causing

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[12] Peter Kind, *Disruptive Challenges: Financial Implications and Strategic Responses to a Changing Retail Electric Business* (Edison Electric Institute 2013).

[13] The Fifth Amendment to the U.S. Constitution states, in part: "... [N]or shall private property be taken for public use, without just compensation." Courts have said that an unconstitutional "taking" occurs when the government interferes with "legitimate, investment-backed expectations." *Penn Central Transportation Co. v. City of New York*, 438 U.S. 104, 124 (1978). Some have argued that when a utility makes an obligatory investment in its infrastructure, it has a legitimate, constitutionally protected expectation of recovering its costs.

customers to demand and buy more than they would if they faced an hourly price reflecting hourly cost.

While some regulators defend average rates as "protecting consumers from volatility," their effect is to (a) reduce protection, because only when they receive their monthly bill do customers learn how much their consumption cost them; and (b) cause consumption to be higher than necessary, especially during high-cost peak periods, therefore raising costs and rates for all consumers.

B. Removing fixed costs from the per-kWh charge, for recovery independent of usage

In the U.S., most state commissions design rates to recover fixed costs through the variable charge (i.e., the per-kWh charge for consumption). This practice creates unnecessary tension between two inarguable goals: reducing energy conservation and ensuring the utility's financial well-being. Recognizing the conflict, some states have introduced "decoupling": specifically, decoupling profitability from sales volume.

In theory, the concept is sensible: If we want the utility to stand ready to serve we must give it relative assurance that the costs of standing ready will be recoverable. In practice, the solution has outdone itself, protecting not only the utility's financial well-being but also its monopoly status. This problem occurs because we sometimes confuse sunk costs with future fixed costs.

Sunk costs, if prudent, deserve recovery. A traditional utility has an obligation to serve all demand, present and future. Energy efficiency programs can reduce demand, to a level unforeseen by the utility's prior prudent projections. If the utility has incurred costs to meet those projections, we must allow recovery of the prudent sunk costs.

But as noted above, in regard to smart grids and microgrids, a right to recover past fixed costs does not mean a right to recover future fixed costs. In the U.S., we have sometimes committed the error of "compensating" the utility not only for its sunk cost but also for its future profit opportunity. The utility has no right to remain large; if demand for its product shrinks, so must it shrink.

Some commissions have responded to the utility's shrinkage concern by appointing the utility the energy conservation czar. It is asking for trouble to have a company whose historic culture consists of "build and sell" add a division whose mission is "don't build and don't sell." The wiser jurisdictions—specifically our states of Hawaii, Vermont, Oregon and Maine—have done it differently. Recognizing that energy efficiency is a distinct product with its own economies of scale, they have used a competitive process to award independent companies the exclusive franchise to run energy efficiency programs. Since these entities are judged based on results rather than costs, their incentive is to design the best programs, then find the best subcontractors to administer those programs.

III. Corporate Structure, Mergers and Acquisitions: The Incumbents Have a Vision—Why Don't Regulators?

A. Two vastly different companies: Why?

Madison Gas & Electric serves the Madison, Wisconsin area. It is the sole utility subsidiary of the publicly traded holding company MGE Energy. MGE's utility business represents nearly 99 percent of the holding company's assets, liabilities, revenues, expenses and operations. For 2011, only 1 percent of the holding company's revenues were "unregulated revenues"—and those revenues reflected services performed for energy customers in and around Madison.

Baltimore Gas & Electric serves the Baltimore, Maryland area. It is one of more than 20 subsidiaries owned by the publicly traded holding company Exelon Corporation, which merged in 2012 with BGE's holding company, Constellation Energy Group. Two of those subsidiaries are utilities serving in Illinois and Pennsylvania. Exelon's other affiliates do one or more of the following: invest in fossil, nuclear, solar and wind generation; sell in wholesale and retail competitive markets in some or all of the Mid-Atlantic, Midwest, and South and West (14 states total); and/or conduct energy trading. Whereas MGE contributes nearly 99 percent of its holding company's revenues, BGE contributes only about 12 percent of Exelon's revenues.

BG&E once looked like MG&E: an electric utility corporation with generation, transmission and distribution assets, nearly all of whose business was serving a modestly sized service territory and whose shareholders intended to invest in only that business. BGE looks different today because of two factors: its business choices, and its regulators' responses to those choices.

B. For utility mergers, what is the right policy?

The objective answer is this: No one knows, and few people think about it. Over a century, we have tried varied approaches, from permissiveness to prohibitions and back again: from the free-wheeling acquisitions of the 1920s to the 1935 decision, in the Public Utility Holding Company Act, to confine every gas and electric holding company to a "single integrated public-utility system," to the repeal of that requirement in 2005; from the AT&T Bell System's rise to monopoly between the 1900s and the 1930s to the 1984 breakup of the Bell System required by Judge Greene's Modification of Final Judgment, to today's horizontal and vertical re-combinations allowed by the Telecommunications Act of 1996.

There is today no coherent national policy on utility mergers, no common vision for how a community's dependence on the local utility monopoly should square with investors' and executives' wish to leverage that monopoly to create larger corporate families. With the 1996 and 2005 statutes noted above, there is no longer a legal limit on acquisitions, divestitures, and the mixing of utility and non-utility businesses in the electricity, gas or telecommunications

industries. Regulatory policy on corporate structure is a case-by-case affair, with decisions emanating from FERC, FCC and affected state commissions in reaction to utility holding company proposals, and only the rare decision reflecting a long-term vision for the relationship between corporate structure and community.

Nor is there a coherent conversation on the subject. When I urge utility commissions to create a merger policy, I get one of two responses: "We have no merger pending, so we don't care about it," or "We have a merger pending, so we can't talk about it." That doesn't leave a lot of alternatives. A better approach comes from a wise commission chairman: "The old maxim of 'buy low, sell high' when applied to policy work would read 'Invest in policy development in quiet times when its value is low in order to have it available in active times when its value is high.'"

Readers of a certain age will remember Art Buchwald's 1981 column describing America's corporate landscape seven years into the future:

> "[B]y this time every company west of the Mississippi will have merged into one giant corporation known as Samson Securities. Every company east of the Mississippi will have merged under an umbrella corporation known as the Delilah Co. It was inevitable that one day the chairman of the board of Samson and the president of Delilah would meet and discuss merging their two companies. They were excited about the prospects: 'If we could get together,' the president of Delilah said, 'we would be able to finance your projects and you would be able to finance ours.' 'Exactly what I was thinking," the chairman of Samson said. 'Our only chance of survival in this country is to diversify; and if we merged, we wouldn't have to worry about unfair competition. . . . [I]t certainly will make everyone's life less complicated.'"

A century of experience tells us that corporate structure affects utility performance. Will the risks of non-utility businesses affect the cost of capital to the utility businesses? Will assets financed with utility-customer dollars distort competition by subsidizing the holding company's entry into non-utility businesses? Will those non-utility businesses distract utility management from its obligation not only to deliver essential services at reasonable cost but also to innovate, to solve problems like climate change and terrorism risk? Will the utility be the loser in internal conflicts over scarce capital?

Big does not mean bad. Some combinations can be positive. The key is to have criteria that distinguish proposals that promote the public interest from those undermine it. Rather than react to the opportunistic efforts of merger promoters, policymakers can position themselves with ready answers to three basic questions:

a. What constitutes excellence in utility performance?

b. To achieve that excellence, without distraction or internal conflict, (a) what business activities should exist within the utility's corporate family; and (b) what types of owners should our utilities have?

c. What policies on mergers, acquisitions, and reorganizations will most surely guide our utilities, and those who finance them, toward our vision?

In the United States, these questions remain unaddressed.