

# **Technology Favors Decentralization; Will Traditional Monopolies Give Way? Principles and Opportunities for Military Planners**

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## **Overview**

For most of the last century, public utility service was provided by monopoly utilities under government-granted franchises. These franchises had seven common features:

1. The utility had an exclusive right, granted by state or local government, to provide specified services within specified territories.
2. In return for this right, the utility consented to continuous regulation.
3. That regulation established an obligation to serve all customers, without undue discrimination.
4. Service must be consistent with quality of service standards established by the regulator.
5. To acquire land needed for physical infrastructure, most states granted the utility the governmental power of eminent domain—to take private property for utility needs (but paying the owner “just compensation”).
6. To protect the utility from lawsuits arising from inevitable errors, most states insulated the utility from liability for ordinary negligence.
7. The utility had a right to charge rates set by the regulator. Those rates were calculated to cover reasonable expenses and to provide the utility a reasonable opportunity to earn a fair return on equity investment.

Until the 1980s, most electric utilities were vertically integrated: owning the generation, transmission, and distribution facilities; and controlling the retail customer relationship. Much has changed. We have independent generators, transmission provided by independent entities, and regional markets for generation (from varied fuel sources), transmission, “ancillary services,” and demand management. The newest frontier to put pressure on the vertical integration model is at

distribution and at retail. Technology now allows for consumers, and groups of consumers, to make individual choices about how to consume, what to consume, and from whom to buy. This potential for empowering consumers is leading to struggles among consumers, utilities, and their potential competitors. This presentation offers a foundation for understanding those struggles, by addressing three questions:

*How exclusive are exclusive service territories?*

*Economics: Will change bring benefits?*

*Law: What are the rights and responsibilities of the affected parties?*

The presentation concludes by arguing that legal gradations in exclusivity provide many options for policymakers and consumers.

## **I. How Exclusive Are Exclusive Service Territories?**

An exclusive retail franchise arises when the state (a) defines a geographic area, (b) prohibits retail competition within that area, and (c) appoints a company to be the sole seller of services mandated by the state. While the term “exclusive” sounds absolute, it is in fact a theme with variations.

The historical reason for this approach, some say, is that electric utility service was a “natural monopoly”: The larger the company, the lower the per-unit costs. Express, permanent exclusivity is no longer the regulator's only choice, because natural monopoly is not the only factual possibility. Consider four possibilities.

### **A. What if an incumbent offers inadequate service, or fails to offer a service that a non-incumbent is willing and able to provide?**

1. *What facts might support a finding of inadequate service?* In a 1985 case in Maine, Saco River Communications proposed to offer Maine citizens discounted intrastate long-distance telephone service, purchased wholesale from other telephone companies. Saco's customers would have to dial extra numbers and sometimes wait for a line, but would pay less than they paid the incumbent. The incumbent utility opposed the request.
  - a. The Commission applied a three-part test: (1) Is there a “public need” for the proposed service? (2) Does the applicant have the necessary technical ability? (3) Does the applicant have adequate financial resources? Answering all questions affirmatively, the Commission granted the request. On appeal, the Maine Supreme Judicial Court focused on “public need”:

“[I]nsofar as inadequacy of existing service may be a factor relevant to the granting of a certificate of public convenience and necessity, the finding of a public need for an additional type of service not being currently provided is in itself a finding that the existing service is inadequate.”

...

“[W]e believe it fair to assume that the public always desires (and, therefore, there is a public need for) comparable service at lower costs.”

*Standish Tel. Co. v. Pub. Util. Commn.*, 499 A.2d 458, 459-64 (Me. 1985).

- b. The Standish Court found that the Commission need not give the incumbent a chance to head off the new entry by curing the inadequacy, i.e., offering the very service proposed by the new entrant. *Id.* at 464. In contrast, Wisconsin gives the incumbent a chance to cure: A public utility may serve another utility's customers (by extending a line to them), only if “the service rendered or to be rendered by the other public utility ... is inadequate *and is not likely to be made adequate*, or that the rates charged for service are unreasonable and *are not likely to be made reasonable*.” WIS. STAT. § 196.495(1m)(b) (1997) (emphasis added).

2. *Should there be an opportunity to cure if inadequacy's cause is management's indifference?* An old Kentucky case seems to say no:

“[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.”

*Kentucky Utilities Company v. Public Service Commission*, Ky., 252 S.W.2d 885, 890 (Ky. Ct. App).

3. These cases show that in determining whether to authorize new entry into an exclusive service territory, four variables are at play:
  - a. Is the incumbent's service inadequate?

- b. Is inadequacy merely poor service, or does it include failure to provide a service offered by a prospective new entrant?
  - c. Does the incumbent have a chance to cure?
  - d. Is poor service reflective of (a) inadequate facilities that the incumbent can cure; or (b) indifferent or poor management, indicating that the incumbent is unable or unwilling to serve?
4. How a regulator uses these variables can (1) make the incumbent more or less accountable for its performance, and (2) make entry more attractive to newcomers. An incumbent facing multiple risks of entry, with no opportunity to cure, will be more likely to keep its facilities reliable, manage actively rather than indifferently, determine its customers' needs and hire the outside help necessary to service those needs, than a utility enjoying a statutory grant of exclusivity without exception.

**B. What if some customers are able to serve themselves, alone or in groups, more economically and effectively than the incumbent can serve them?**

Large electric customers—automotive and chemical plants, for example, or military bases—can serve themselves by building, owning and operating their own generating units and distribution systems. Because self-generation actions breach the exclusive franchise wall, they are usually regulated by the state. The type of regulation reflects the regulator's judgment about self-generation's benefits and risks. Here are two contrasting examples.

1. *Benefits*

- a. Self-generation can give the customer (a) back-up power during utility outages, (b) peak-demand power for high-demand periods when the utility lacks enough capacity to serve its remaining load, (c) economic power when the self-generator's cost is less than the utility's rate, (d) pollution reduction when the self-generator's emissions are less than the utility's, and (e) power quality enhancement where the customer's special equipment requires uninterrupted flow.
- b. Focusing on these benefits, California offers incentives for self-generation. Responding to capacity shortages in peak periods, the Legislature required the Commission to “adopt energy conservation, demand-side management and other initiatives in

order to reduce demand for electricity and reduce load during peak demand periods.” CAL. PUB. UTIL. CODE § 379.5(b) (2012). The initiatives include “[d]ifferential incentives for renewable or super clean distributed generation resources pursuant to Section 379.6.” Section 379.6, in turn, authorizes the Commission to collect funds from ratepayers to provide to self-generators, so as to “improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs.” For details on California's Self-Generation Incentive Program, see <http://www.cpuc.ca.gov/PUC/energy/DistGen/sgip/aboutsgip.htm> (last visited Dec. 29, 2011).

## 2. *Risks*

- a. When a self-generating customer reduces its purchases from the utility, it no longer pays for its pro rata share of fixed costs incurred historically by the utility to have sufficient capacity available. Those costs then are absorbed by the utility's shareholders, or its non-self-generating customers. As the Massachusetts Department of Public Utilities explained, “To a large extent,” a utility's “common costs ... operate as a closed system.... [I]f self-generating customers consume fewer kilowatt & T-hours from the electric company, transition costs are shifted from self-generating customers to non-self-generating customers.” Letter from the Department to the Legislature at 2 (July 1, 2011), available at <http://www.env.state.ma.us/dpu/docs/electric/11-11/91311dpuordb.pdf> (last visited June 25, 2012).
- b. If a prospective self-generator shifts costs, its actions can result in uneconomic bypass: where the self-generating customer's total incremental cost (the one-time cost of building the plant, plus the operating costs) is (a) less than the total rate it pays the utility (thus making it a positive move for the customer; but (b) greater than the utility's marginal costs (the cost of producing one more unit of energy). Uneconomic bypass wastes society's resources by increasing “the total industry costs of providing a given level of service.”<sup>1</sup> Uneconomic bypass can result if self-generation creates new capacity that idles efficient existing capacity.

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<sup>1</sup> J. GREGORY SIDAK, DANIEL F. SPULBER, *Deregulatory Takings and the Regulatory Contract* 30 (1998).

- c. Regulators can prevent cost-shifting and uneconomic bypass by requiring the self-generator to bear the costs it otherwise would leave behind. This requirement causes the customer to rethink its math: On departure, its total cost will be its new construction and its own operating costs, plus its share of the utility's fixed costs. Only if this total is less than the utility's incremental cost (as reflected in its rate to the customer) will the self-generation be economical *for both the customer and the utility*. Sometimes called an “exit charge,” this type of charge aims to align the customer's interest with the utility's interest. Massachusetts law allows the Department to assess all self-generating customers an amount equal to what they would have paid had they stayed; the fee is triggered if “self-generation decreases an electric company's gross revenues by 10 percent.” Massachusetts Department Letter, *supra* at 2.2
3. *Is the self-provider a “public utility” under state law?* This is an old question with modern applications: Neighborhoods and industrial parks are considering “micro-grids” to self-provide electric service and gas-buying cooperatives to provide gas service. When do these efforts make the main actor a “public utility” subject to state regulation? The Maine Commission used the following criteria:
    - a. The size of the undertaking.
    - b. Whether the enterprise is operated for profit (which “may indicate that the primary purpose of the utility service is to confer benefits on the system's users rather than provide economic benefits to the owners”).
    - c. Whether the system is owned by the users (in which case, “this class of users is distinct from the public”).
    - d. Whether the terms of the service are under the control of its users (“such as when an association of homeowners together own the utility system serving their home,” so that “there may be little need for traditional regulation”).
    - e. The manner in which the service is offered to prospective users (so that, if service is “offered to any prospective user ... where [the

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<sup>2</sup> The authority for the exit charge is MASS. GEN. LAWS ch. 164, § 1G(g) (2012).

provider] is physically capable of providing service,” then service is not restricted to a particular class”).

- f. Limitation of service to organization members or other readily identifiable individuals.
- g. Whether membership in the group is mandatory.

**C. What if, within the range of monopoly services historically provided by the incumbent, there is one service better provided by a specialty company?**

1. The incumbent utility might lack the necessary expertise for, or commitment to, the activity. The state commissions of Hawaii, Vermont, Oregon and Maine each have appointed non-utility entities to provide energy efficiency services formerly provided by the utility. And the Maine Commission is investigating whether to appoint a “smart grid coordinator.” 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.” ME. REV. STAT. tit. 35-A § 3143(5) (2009) § 3143(5).
2. These situations anticipate multiple franchisees in the same service territory, each having an exclusive right and obligation to provide defined services.
3. For an excellent analysis of rationales for shifting grid coordination responsibility from the incumbent utility to an independent entity, see 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 [http://www.nrri.org/pubs/telecommunications/NRRI\\_End\\_to\\_End\\_Smart\\_Grid\\_june1112.pdf](http://www.nrri.org/pubs/telecommunications/NRRI_End_to_End_Smart_Grid_june1112.pdf).

**D. What if the state—or the customers—dissatisfied with the incumbent's performance, wants to replace it with a new monopoly, and wants to use competition to find the best new provider?**

“[T]he public has an obvious interest in competition, ‘even though that competition be an elimination bout.’” *Hecht v. Pro-Football, Inc.* 570 F.2d 982, 991 (D.C. Cir. 1977) quoting *Union Leader Corp. v. Newspapers of New England, Inc.*, 284 F.2d 582, 584 n.4 (1st Cir. 1960).

1. Franchise competition is competition for “the right to serve all of the customers in a given territory, usually for a specific period of time....” *Groton v. Connecticut Light and Power Co.*, 662 F.2d 921, 930 (2d Cir. 1981). Retail franchise competition provides consumers “with their most meaningful opportunity to compare alternate price, quality and service. Indeed, at the retail service level, it is this very potential that provides an incentive for [wholesale competitors] to control costs and improve their performance in the areas that they serve.” *Massena v. Niagara Mohawk Power Corp.*, No. 79-CV-163, 1980 U.S. Dist. LEXIS 9382, at \*28 (N.D. N.Y. 1980).
2. Consider a municipally owned power system located within an investor-owned utility's boundaries. The two entities “compete, at least theoretically and on a long term basis, for service areas. If plaintiffs [municipalities] were to become unable to serve their customers profitably, Penn Power [the investor-owned utility] would logically be in the best position to assume plaintiffs' present service.” *Borough of Ellwood City v. Pennsylvania Power Co.*, 462 F.Supp. 1343, 1346 (W.D. Pa. 1979).
3. Franchise competition produced a leading case on anticompetitive behavior. Otter Tail was the incumbent utility serving residents of towns in Minnesota, North Dakota and South Dakota. Hoping to perpetuate its monopoly, Otter Tail sought to prevent towns from establishing their own power systems once Otter Tail's franchises expired. So the utility (a) refused to sell the towns wholesale power or transmit to them wholesale power produced by third parties, and (b) used litigation tactics to impede the towns' efforts. The U.S. District Court found that Otter Tail was attempting to “monopolize,” and had monopolized, the retail distribution of electricity, in violation of Section 2 of the Sherman Antitrust Act. The U.S. Supreme Court upheld the lower court. *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973).

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To address these questions, regulatory authorities and practitioners must consider a set of economic questions and legal questions.



## II. Economic Questions: Will Change Bring Benefits?

- A. For each candidate product or service, will competition be physically feasible? Economically efficient?
- B. Will customers benefit, in terms of prices, quality or innovation?
- C. How will that benefit compare to potential losses in economies of scale and scope?
- D. Will investors risk their dollars on the new competitors?
- E. These are the non-legal questions, requiring the expertise of engineers, economists, accountants, financial analysts, technologists, marketing specialists, investors, consumers and the incumbent utilities themselves.

## III. Legal Questions: What Are the Rights and Responsibilities of the Affected Parties?

Once policymakers identify the products and services appropriate for competition, they face three main legal decisions.

- A. **How do we authorize competition?** We must modify each of the original seven features of the traditional utility: exclusive franchise, consent to regulation, obligation to serve, quality of service, eminent domain, limited liability, and right to charge just and reasonable rates.
- B. **How do we make competitive effective?** Authorizing competition does not ensure effective competition; it makes entry legal, but it does not necessarily make entry feasible. For example:
  - 1. Does the utility have unearned advantages that will discourage new competitors from entering the market?
  - 2. Does the incumbent control physical facilities that are essential to the newcomer's entry?
  - 3. Are there non-physical entry barriers, like customer loyalty, inertia and inexperience, that favor the incumbent?

**C. What are the incumbent utility's legal rights?**

1. The Fifth Amendment to the U.S. Constitution states, in part: "... [N]or shall private property be taken for public use, without just compensation." How does this language apply to utility shareholders?
2. When the government authorizes competition in a historically monopoly market, it disappoints utility shareholders. Their company's market position, and the associated profit expectations, are no longer secure. Has the government taken private property without "just compensation"?
3. A utility's obligation to serve includes the obligation to invest in the infrastructure necessary to serve: generation, transmission, pipelines, switching equipment, wires, poles and pumping stations. The investors expect that the utility's obligation to serve will be matched by the customers' obligation to pay. That obligation to pay—the necessary result of an exclusive franchise structure—assures the incumbent stable revenue flow that covers expenses, debt, recovery of the shareholders' investment and a return on that investment.
4. When government allows customers to try new suppliers, the utility's revenue flow is stable no longer. The incumbent then faces two possible disappointments: It might not recover its prior investment (what economists call "sunk costs), and it will no longer earn the relatively secure profit associated with the monopoly service. These two disappointments are often conflated into the single term "stranded investment." The conflation is inaccurate, because the concepts differ in their legal and practical treatment. The distinction is between sunk costs and future profits.
5. The *sunk cost problem* 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 sunk cost problem arises from five factors, acting in combination:
  - a. The production of electricity is capital intensive.
  - b. Load growth is incremental, while major infrastructure additions are lumpy.
  - c. Under traditional ratemaking, the investment cost of infrastructure capital additions is allocated to ratepayers over the plant's useful life.

- d. The government introduces competition before all of a facility's costs have been recovered.
  - e. The utility then will be able to recover its unrecovered book costs only if it can find buyers for the infrastructure (or its output), and only if the market prices paid by those buyers produce revenues that equal or exceed the unrecovered book value.
- 6. The *future profits* problem is this: A utility that loses its exclusive franchise forgoes the profit flow that came with it. Even if the departing customers pay off the past, there is no profit future.
  - 7. **Question:** Are disappointments over sunk cost recovery and future profit prevented by the Constitution? Should these disappointments be prevented by legislation?

#### **IV. Conclusions: Gradations in Exclusivity Give Us Options for Accountability**

- A. Policymakers have multiple ways to invite a non-incumbent into the incumbent's service territory. Each option is an opportunity to align industry performance with the public's needs. The range of options includes:
  - 1. Rely, exclusively and permanently, on a single franchisee (with the possibility of revoking the incumbent's franchise due to poor service).
  - 2. Maintain the incumbent's right to serve, but authorize entry by non-incumbents to provide useful services not provided by the incumbent.
  - 3. Authorize self-service and private provision to a self-contained group, assisted with ratepayer dollars or conditioned on exit fees.
  - 4. Allow fringe-area competition, such as by authorizing adjacent utilities to compete for unserved new load located within specified distance from service territory boundaries. (Wisconsin)
  - 5. Grant exclusive franchises to non-incumbents for specified services, such as energy efficiency or smart grid coordination. (Hawaii, Vermont, Oregon, Maine)
  - 6. Rely exclusively on a single franchisee, but state a term of years followed by a competition for the right to be the new franchisee. (Nevada)

7. Interpret the statute as providing no promise of exclusivity.
  8. Combinations of the foregoing.
- B. Each of these decisions involves tradeoffs: between stability and predictability on the one hand, and innovation and competitive pressure on the other. If the purpose of regulation is performance, regulators must ask: What combination of these approaches most likely assures the desired performance?
- C. The “central, continuing responsibility of legislatures and regulatory commissions [is] finding the best possible mix of inevitably imperfect regulation and inevitably imperfect competition.” A. KAHN, *The Economics of Regulation: Principles and Institutions*, Vol. I, Introduction at xxxvii; Volume II at 114 (1970; 1988 edition). We can expand this statement to include continuously re-examining the role of exclusivity and its variations, by asking these questions:
1. When the commission identifies the possibility of new services, should the incumbent have the first shot at providing new services, or should the commission invite competitors?
  2. Should the commission wait for the incumbent or others to propose new services, or should the commission itself continuously identify new service needs and call for applications?
  3. Which leads to better performance: A context in which the utility is at no risk of losing business opportunities by failing to offer new services? Or one in which any applicant that shows “need,” defined as a new service not presently provided, can enter to provide that service?
- D. My recommendation: Given the chronic differential in expertise and resources between a utility and its regulators, regulators can literally use all the help they can get. This view argues for the commission opening the door to new entrants offering new services, rather than relying exclusively on the incumbent.
- E. This approach does not mean we necessarily lose the static efficiency associated with economies of scale; the Commission can and should take those into account to avoid splintering service components among multiple sellers. These many legal options remind us that the pressure to perform—or lose status, revenues and profits—can be a useful tool in achieving regulation's goal: excellent performance at reasonable cost.