

Incumbency vs. Diversity, Monopoly vs. Merits: Who Should Provide the New Distribution Platforms?

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After a century of choicelessness, of buying a uniform product from a single supplier, electricity consumers now have ways to lower their costs, raise their comfort and reduce their environmental impact. New companies are offering thermostat controls, time-of-use pricing, and renewable energy packages. Solar panels allow consumers to self-supply; storage and neighborhood-level microgrids are not far off. Aggregators of demand response are competing to pay consumers for using less, out of savings gleaned from displacing higher-cost generation. (Demand response hit a snag when the D.C. Circuit struck FERC's Order 745 in May, but my essay "D.C. Circuit Kills Demand Response Compensation: Now What?" described ways to save the idea.) Today's technologies can democratize demand, allowing consumers to custom-design their own services, while diversifying supply, as consumers pick providers based on merit.

The bump on this technological path is our current market structure. The poles-and-wires distribution system remains controlled by traditional utilities, protected by state law from displacement by new entrants. While they vary in their openness to the new technologies, they are united in their resistance to new competitors. Citing "existential threats" and "death spirals," one camp resists innovation as a way to preserve the status quo; the other embraces innovation as a way to expand their government-protected roles. Because no monopoly willingly cedes control, no utility is hoping regulators answer the distribution system's most pressing new question: How do we find and attract the best players?

What are the New Roles, and Who Can Perform Them Best?

In the early 1990s, the telecommunications industry talked about POTS and PANS—"plain old telephone service" and "pretty amazing new stuff." For today's electricity distribution systems, POTS is the poles-and-wires job: hooking up new customers; maintaining and replacing poles, wires and substations; keeping everyone connected, raising the capital to finance it all and proposing rates to pay for it all. While it is worth debating whether to have competition for the right to perform that traditional monopoly role (see the essay "Competition for the Monopoly: Why So Rare?"), let's focus on the new roles needed to stimulate and accommodate the new retail technologies. There are at least four. None necessarily fits within the traditional utility's wingspan.

Research and development: While some R&D funds come from private capital, plenty come from the public: taxpayers fund federal grants, and retail ratepayers pay for projects approved by their state commissions. The U.S. Department of Energy offered billions in "smart grid" and "clean coal grants" to incumbent utilities. With this advantage, utilities then persuaded state commissions to make captive ratepayers cover the remaining costs of the utilities' smart

grid and coal plant proposals; no one investigated whether non-utility entrants could use the funds more effectively. Instead of channeling public money to incumbent utilities automatically, find those entities with the best ideas, the most relevant experience and most open-minded management cultures. The question is not whether taxpayers and ratepayers should contribute to R&D; they should. The question is who should get this money: new entrants who prove themselves the most deserving; or incumbent utilities, just because they are "there."

Planning: The purpose of a new distribution infrastructure is to connect customers with resources—resources selected based on merit. For merits to prevail, the infrastructure planning role must go to the right entity. We must first identify the skills, experience and culture necessary to that role, then find the entity best exemplifying those features. Maybe that entity will be the incumbent utility, maybe not. We won't know unless we look. One state legislature already skipped this obvious step. Instead of requiring the commission to find the best performer, the South Carolina Legislature invited the incumbent utilities to take charge of the entire planning process—to develop a "distributed energy resource program." The program would establish "specific goals," the "planned action[s]," their timing, and their benefits and costs. It would include "proposed customer programs and changes in tariffs" and address any barriers to deployment. On commission approval, the utility would carry out the plan and recover its reasonable costs. The law does allow any interested party to petition to amend the plan at any time. But it allows no one but the utility to frame the plan and carry it out. Because no rational utility will invite competitors to displace itself, this law deprives the public of a chance to find the best performers.

Traffic control: Electric capacity and energy will come from multiple new sources—large-scale and distributed generation (both conventional and renewable, all operating on varying and variable schedules), along with storage, energy efficiency and demand response. Coordinating operations will require new knowledge and skills—and independence. Air traffic controllers know much about conventional craft but less about drones. They'll need to learn, or bring in others who know more. And air traffic controllers don't own any airplane companies. For electric distribution, we need to think along those lines.

Policymakers in Maine are doing so. The Maine Public Utility Commission is testing the idea of a "smart grid coordinator." Under the Maine Statutes (title 35-A, sec. 3143), the smart grid coordinator must be an entity other than the incumbent utility. In a recent pilot program, the Commission's appointee, GridSolar, attracted storage, energy efficiency, local generation and other measures, in an effort to avoid certain higher-cost transmission upgrades within Central Maine Power's service territory. In its report, GridSolar said its independent activities ranged from "defining NTA [nontransmission] alternatives and performance standards, to soliciting and managing competitive bidding, negotiations and contracting, to developing and implementing secure communications and operation protocols to enable the NTA resource to receive, act upon and confirm actions related to dispatch orders from the T&D [transmission and distribution] utilities, to measurement and verification of the performance, to providing payment and settlement services."

GridSolar did not assess whether CMP could have carried out these activities to replicate GridSolar's results, or how the implementation costs compared to the savings. The point for

now is that the list of activities requires a combination of skills, independence and culture that do not necessarily reside in any incumbent utility. The pilot is worth replicating elsewhere, not only to assess inputs and outputs, but also to develop a regulatory mindset that is open, objective and curious.

Competitive participation: Some utilities are proposing not only to manage the new infrastructure but to competitively supply services within it. But just as air traffic controllers don't own airline companies, utilities should not be competing on the same turf they plan, own, operate and control. As we know from 40 years' experience in telecommunications, gas and wholesale electricity, this dual role undermines neutrality. No rational business pursues policies that reduce its market share.

That's one reason for keeping incumbent monopolies out of newly competitive markets. But even if we could ensure a utility's neutrality as market administrator, it will have unearned advantages as a market competitor. Name recognition, brand loyalty, customer inertia, knowledge of the customer base, long-term contracts that tie up customers before new entrants arrive, access to lower cost capital due to a captive customer base—these are all classic barriers to entry by newcomers. The incumbents have these competitive advantages not because of innate skill but because of their government-protected status. Born on third base, incumbents can win without being the best. A distorted market not only disadvantages those who compete; it discourages many from competing in the first place. Without these competitors, without benchmarks to judge performance, we will have a less efficient, less customer-responsive industry.

Yet some commissions are already inviting their utilities to compete in the new markets. They say incumbents should have "new revenue-earning opportunities" to offset the market share they will lose to new entrants. Unless we "give the utilities something," goes the refrain, they will resist the future. But rewarding resistance only invites more resistance. Regulation's role is not to help a utility achieve its business goals; it is to compensate the utility justly for its obligatory services. "Financially healthy" need not mean "financially happy."

Are Incumbents Entitled to Automatic Reappointment?

The new distribution roles require new forms of expertise, new types of employees and new types of executives. Corporate culture and governance, even board membership, need to reflect the new priorities of democratizing demand and diversifying supply. To our incumbent utilities, having presided over a century of reliable generation, transmission and distribution, we owe appreciation (along with the just and reasonable rates everyone pays for service). We do not owe them automatic appointments to the new roles. Instead, a contest for leadership will not only identify the best performers; it will spur the incumbents to sharpen their abilities and readiness, even if they remain solely poles-and-wires companies. And they will be less likely to insist on extra "incentives," because the risk of losing the job will be incentive aplenty.

When Pope Julius II wanted the Sistine Chapel's ceiling painted, he didn't hire the house painter. He went for the best. Somewhere out there is a Michelangelo of distribution system design and operation. It might be the local utility. We won't know unless we look.

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This essay has argued that new roles deserve new actors. At the least, incumbent utilities should have to audition. Next month's essay will describe ways for commissions to design the auditions.