

Markets and Monopolies: Redrawing the Lines and Aiming for Innovation

***NGA Learning Lab on New Utility Business
Models & the Electricity Market Structures of
the Future***

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rabagoenergy.com (Sparks Blog)

Where this started . . .

[I]t should be recognized that the best service at the lowest possible price can only be obtained . . . by exclusive control of a given territory being placed in the hands of one undertaking.

[E]xclusive franchises should be coupled with the conditions of public control, requiring all charges for services fixed by public bodies to be based on cost plus a reasonable profit. It will be found that this cost will be reduced in direct proportion to the protection afforded the industry.

The more certain this protection is made, the lower the rate of interest and the lower the total cost of operation will be, and, consequently, the lower the price of the service to public and private users.

Samuel Insull, 1898

Assumptions

- The United States of America is a democratic republic organized around the principles of free market capitalism.
- Monopoly status should only be granted where markets cannot provide services more efficiently, and only to the extent and in those market segments that monopoly is necessary to provide those services.
- Where monopoly status is granted, the regulator must serve as a substitute for competition.
- Things change.

Unbundling and Costing: Telecom Example

- **Texas Subst. Rule sec. 23.91; 18 Tex. Reg. 5723-5741 (Aug. 27, 1993)** – A building block is a “discrete network function, which is useful either as a stand-alone function or in combination with other functions, for which costs can be identified.”
- **Telecommunications Building Blocks Cost Report (July 1993), prepared in response to Oregon PUC Order No. 90-920** – “The smallest level of network functionality that feasibly may be tariffed and offered as a service.”

Consider . . . Meters

- Revenue grade metering can be installed in meters, and chargers, and inverters, and home energy management systems, and . . .
- The meter need not be uniform (and seldom is) – only the data stream
- The data stream need only interact with a utility enterprise bus, in the future with iPaaS (integration Platform as a Service)
- Why isn't metering a competitive service, bundled with demand response, shared solar, leased solar, or other services?

Consider . . . Customer Generation

- Energy generated at or near the point of use
- Significant private investment
- Customer bears insurance and operational risk
- Diversifies the grid; improves resilience
- Localizes investment dollars

Value Based Rates

- Extending the avoided cost “indifference test” to distributed resources
- Because price \neq value; price \neq cost
- Economic efficiency; price signals (up- and down-stream)
- Internalize externalities thru willingness to invest
- Decoupling
 - Incentives from compensation
 - Compensation from consumption
- To “animate” DER markets for Solar, Savings, Storage, Smarts, and Security

The Sharing Economy

“Collaborative Consumption”

- *“Collaborative consumption as a phenomenon is a class of economic arrangements in which participants share access to products or services, rather than having individual ownership.”*
- Collaborative consumption—systems of organized sharing, bartering, lending, trading, renting, gifting, and swapping. Collaborative consumption gives people the benefits of ownership with reduced personal burden and cost and also lower environmental impact—and it’s proving to be a compelling alternative to traditional forms of buying and ownership.

The Sharing Utility

- *“Collaborative consumption as a phenomenon is a class of economic arrangements in which participants share access to products or services, rather than having individual ownership.”*
- www.sepa51.org/submissions/.../Kennebly_Rabago_51st_State.pdf

The Sharing Utility – 5 Principles

1. The full impact of electricity generation, delivery, and use on natural systems must be accounted for.
2. Traditional cost-plus regulation should be largely replaced by value-based pricing of functionally unbundled services, remaining only for those services that continue to meet the definition of natural monopoly.

5 Principles (cont.)

3. Every new regulated system asset has to prove its economic value to society, relative to alternatives, on a full life-cycle cost accounting basis.
4. Electricity pricing should offer customers a broader array of rate choices and reflect the full, location- and time-sensitive long-run marginal cost (LRMC) of utility service. *Price structure need not mimic cost structure.*

5 Principles (cont.)

5. Utilities should provide customers with full and fairly-priced access to solar and DER technologies, and services appropriate to their individual circumstances and their consumer (or “prosumer”) preferences (iPaaS – integration Platform as a Service).

Sharing Utility Already Emerging

- Community and shared solar
- Combined heat and power
- District heating and cooling
- Demand response
- Community Choice Aggregation
- Solar Rooftop Leasing
- Community Storage
- V2G – Vehicle to Grid

A Well-Regulated Sharing Utility:

- Shifts market surplus downstream to customers
 - Systematic localized integrated resource planning
 - Transparent price and value information
- Operates against performance standards
 - Short- & long-term prices
 - Environmental responsibility
 - Customer satisfaction
 - Grid reliability & service quality
 - Minimization of revenue requirement
- Expands 3d party participation
 - Vehicle for innovation
 - Decouple revenue from throughput
 - Leverage private market assets and solutions

Where this ends . . .

There will be a residual monopoly, but it should be constantly challenged by innovation from markets and by regulators acting as a substitute for competition.

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