

THE ECONOMIC AND POLITICAL REALITIES OF REGULATION: LESSONS FOR THE FUTURE

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1. Introduction

The first electricity price review in the UK provided a moment in regulatory history where what we had learned from the past and what we hoped for the future converged and nearly exploded. It was about 20 years ago and the government, having completed its privatization of the electric distribution companies, had established initial prices and price trajectories. Now it was up to the newly formed regulatory agency to establish prices going forward. The regulator's announced pricing decision appeared tough at first glance – it clawed back profits and required that prices decrease in real terms going forward for five years – but within 24 hours of the announcement the share prices of the utilities began climbing rapidly and there were hostile takeover bids coming from outside the country. Clearly the future looked more profitable – much more – than the regulator had anticipated.

What had gone wrong? Perhaps nothing from the regulator's perspective. It is quite feasible that the regulator was implementing a well-established economic theory that firms will hide their true abilities to be efficient unless allowed to profit from improved performance. But the media and political firestorms that soon followed revealed that regulation has political realities that are intertwined with its economic realities.

I review these realities in this essay to help inform us about the future. There are certain realities that we must not abandon – namely, that high-quality information is critical

for regulatory stability and to constrain political opportunism, that firms respond to economic incentives, that markets reveal reality, that regulatory agencies are important for compensating for weaknesses in the politics of utility services, and that regulators are implicitly asked to serve a leadership role that, if they fulfill it, they do so at their peril. I consider each of these in the following sections.

2. The Economics of Information

The roots of economic regulation of utilities go back centuries, but the most relevant events occurred in the past 150 years. In the initial decades following the development of utility services, political officials sought to control prices and service directly through negotiations because they were concerned that an unchecked, monopoly industry would exercise market power to the serious harm of the community. Sometimes the political negotiators represented cities and at other times legislative bodies. Regardless of the political body involved, the officials faced significant pressures: (1) an incentive to take political advantage of the utilities' sunk costs (once investments had been made) and force prices to non-compensatory levels; and (2) the knowledge that utilities held an information advantage that they could exploit during and after the negotiations.

Regardless of the mode of direct political control: (1) prices became outdated as technology and economic conditions changed, resulting in financial distress and poor service; (2) politicians were out-negotiated by their utility counterparts; and (3) utility services were

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withheld from political opponents or given free (or nearly free) to political friends. Sometimes courts intervened and established prices and service obligations when utility conduct violated principles of common law. But the courts fared no better than the political bodies: Benefits were received only by stakeholders with the resources to pursue legal cases.

The information and opportunism problems led to the formation of regulatory agencies in the early 1900s and to what was called service at cost regulation. The agency served as a source of expertise to diminish the utilities' information advantage. It also served as a buffer between investments, which are made on planning horizons that are several decades long, and politics, which has a planning horizon of no longer than the time to the next election. The service at cost approach to pricing, which utilized utility accounting and operating data, constrained the regulator and politicians from setting prices that were out of line with commercial realities. This is a point that seems to be lost in regulation today: relying on accounting data was not about controlling the utility but about controlling the regulator.

Good, well-understood data were missing from the UK regulator's initial price review. It wasn't that the data were unavailable: rather, the newness of the system and the focus on incentives resulted in poor regulatory data. Reality was known by investors, as the stock market revealed, but was unknown by the regulator.

3. The Economics of Incentives

When service at cost regulation (which became known later as rate of return regulation) was first developed, it was immediately recognized that it diminished incentives for the utility to control costs. This observation led to the development of systems for strengthening the incentives.

Two incentive systems were deliberately used at the start of the agency regulation and remain in use today. One is the use of audits that may allow the regulator to identify inefficiencies if the regulator has high expertise or the utility is unusually sloppy in its decision making. Even if the regulator fails to catch inefficiencies, the possibility of discovery provides the utility with an incentive to avoid wastefulness that could be caught.

The other incentive mechanism was called

the sliding scale, which is now called earnings sharing. This system allowed the utility to keep some portion of its profits over and above what the regulator had estimated were needed to maintain investment levels, if the greater profits were from sales or efficiencies that were greater than what the regulator had anticipated.

More recently the regulators have begun using price cap or revenue cap regulation. Price caps are used when costs are largely driven by volumes of output and revenue caps are used when the reverse is true. In their purest form, the caps limit prices in a way that is independent of the utility's accounting costs. This provides a maximum incentive for efficiency. But in most cases the capping system serves as a formalized regulatory lag (i.e., the situation where the regulator responds to cost changes with price changes after some time delay) by using accounting data to reset prices only at fixed times. This diminishes the efficiency incentive, but has the benefit of constraining the regulator from establishing prices that deviate so far from economic reality that they could cause more harm than the diminished efficiency incentive.

Regulators also use benchmarking to provide information on what utilities are capable of doing. With benchmarking the regulator uses information from other utilities to estimate the possible technical efficiency of the utility being regulated. In essence this forces utilities in separate markets to compete against each other for the regulators' rewards. The weakness of benchmarking is the lack of precise methods for making utilities comparable: each utility has some degree of uniqueness in its situation and, if this is not properly reflected in the benchmarking analyses, the regulator could choose unrealistic expectations that imperil the utility.

The UK regulator understood economic incentives very well and anticipated that the utilities would reveal how efficient they could be if the regulator could commit to not clawing back the efficiency gains for a significant period of time. The regulator was right, but the political and public relations costs were high. I discuss those in a later section. Before doing that, it is important to examine the importance of getting markets right.

4. The Economics of Markets

That markets reveal economic realities wasn't necessarily a problem for regulation in the

UK – the market competition for electricity generation was producing cost savings for customers and the financial markets revealed economic reality on cue – but it was the mixing of regulation and competition that was shown to be problematic.

Telecommunications regulation provides one of the clearest examples of the problems created by trying to regulate prices and service in a competitive market. Mistakes included getting industry boundaries wrong, misidentifying what customers wanted to buy, and establishing uneconomic prices.

Based on a history of aligning market boundaries with political interests – which was sustainable in a monopoly era, but not when markets became open to competition – regulators established service territories, service definitions, jurisdictional boundaries, and prices along lines of local service, long distance service, interstate and intrastate service (in the case of the US), and domestic and international service. Once regulators began to relinquish control of market entry, the system began unraveling. For several years the regulatory system fought back with some success by creating elaborate subsidy systems and placing barriers to competition. But once technology change enabled an end run on the regulations, the game was over. Unregulated mobile services demonstrated that customers did not care about local and long distance distinctions, that they were willing to sacrifice some service quality for convenience, and that prices did not need to align nicely with economics costs as long as customers understood the pricing plans, customers found the predictability adequate, and revenues were high enough to incentivize investment and low enough to limit new entry. Regulators' efforts to unbundle networks to facilitate entry were at best marginally helpful to the launch of competition, but also locked competitors into the incumbents' monopoly-era network structures and technologies. This was eventually overcome by broadband, which proved to be sufficiently disruptive to remove artificial distinctions between voice and data services, and between domestic and international communications.

These lessons are relevant to the evolution of energy regulation in two regards. First they show that gradual deregulation suffers from the illusion of knowledge, which is a psychological anomaly that leads us to believe we know more

than we do. This manifests itself in deregulation in many ways, one of which is that regulators' and stakeholders' views of the future are distorted by their legacies. I believe we see this in the use of simple net metering policies, feed-in tariffs, and subsidies for fuels. The second lesson is that regulators can be overly cautious with the deregulatory process. Markets involve risk and businesses and investors are well adapted to managing that risk. Unfortunately in a regulated market, there are also political risks for regulators and for utilities. These risks have proven to be problematic because the market for political power does not respond well to the appearance of doubt or failure. These barriers to proper deregulation led Alfred Kahn to coin the phrase, "Deregulating the process of deregulation," to explain the importance of letting markets reveal realities that were unknowable prior to deregulation.

5. Political Realities of Regulation

My above descriptions of the economic lessons highlight some of the political realities of utilities and their regulation: (1) the political system takes a short-term view that diminishes incentives for long term investing; (2) government involvement enables rent seeking behavior, especially as technologies change and deregulation proceeds at a slow pace; and (3) energy (and the environment) have political value because they touch the lives of every person, and excite passions.

These political realities are one of the reasons why governments formed utility regulatory agencies with as much independence as the political machinery could tolerate and that is consistent with holding regulators accountable for their decisions, but not accountable for events that are beyond their influence or control. History has shown that this balance is subject to tensions that sometimes throw the system into disequilibrium: regulatory agencies have been dissolved (and then reconstituted), regulators have been pressured out of office (to be replaced by people with no better capabilities and biases), and regulation has been politically micromanaged. It is the regulators themselves that appear best situated for managing these pressures by managing their political capital, getting on the balcony to see the larger political landscape, and disappointing people at a rate at which they can endure. Regulators are in the position of speaking unpopular truths – that changes have costs, that revenues must cover costs, and the like – and must do so in ways

and at a pace that keeps the system sustainable.

6. Conclusion

The first UK price review provided an important moment in regulation. It showed that brilliance and talent – both of which the regulator possessed – are not substitutes for good information. It also showed the power of incentives and the power of markets, both of which reveal unanticipated realities. Perhaps more than anything, the experience demonstrated the importance of a regulator defending the integrity of the process in the presence of political and public pressures. Regulation disappoints. The art of regulation is to disappoint at a rate that the stakeholders can endure. ■