

41. Electricity Deregulation

Congress should

- repeal the Federal Power Act of 1935 and abolish the Federal Energy Regulatory Commission (FERC);
- repeal the 1935 Public Utility Holding Company Act (PUHCA) and the 1978 Public Utility Regulatory Policy Act (PURPA);
- privatize federal power marketing authorities, the Tennessee Valley Authority, and all federal power generation facilities;
- eliminate all tax preferences afforded municipal power companies and electricity cooperatives;
- eliminate all federal price subsidies, tax incentives, and regulatory preferences for renewable energy;
- declare that any state or municipal regulation of the generation, transmission, distribution, or retail sale of electricity interferes with interstate trade and is a violation of the U.S. Constitution's Commerce Clause; and
- require open, nondiscriminatory access to all federal public rights-of-way for electricity transmission and distribution services, except when such services present a public safety hazard.

The Dynamic of Deregulation

The deregulation of regulated industries has been one of the main legislative stories of the past 20 years. The trucking, railroad, airline, bus, banking, natural gas, and telecommunications industries have all been—to one degree or another—introduced to the world of economic competition. And now the \$200 billion electricity industry awaits its turn to receive federal regulatory parole.

The potential gains are great. A study by economists Michael Maloney and Robert McCormick of Clemson University estimates that the introduction of market prices would probably cut off-peak electricity prices by 25 percent. But the potential costs are large if the 106th Congress enacts an interest-group compromise rather than true deregulation legislation. Unfortunately, the early debate over whether and how Congress should deregulate the electricity industry has been almost completely about the former. Most of the industry's would-be reformers seek to impose their vision of how the industry ought to be organized; delegate much if not most of the detailed work of deregulation to federal and state regulators; and continue exercising political control over the transmission, distribution, and sale of electricity.

Technological Change Undermines Regulatory Rationale

The traditional rationale for economic regulation of the electric utility industry is the existence of natural monopoly. But the development and use of natural-gas-turbine generating technologies have undermined two economies-of-scale premises that have governed the utility industry for the last 50 years:

- the cost of generating power decreases with plant size, and
- large coal-fired plants are cheaper than those powered by natural gas.

As the result of changes in natural-gas generation technology, however, both conventional, coal-fired, steam-electric generators and natural-gas turbines now have long-run average costs of around 3 to 3.5 cents per kilowatt hour. But optimal coal plants have 600–800 megawatts of production capacity while natural-gas plants need have only 40–150 MW capacity to achieve similar costs. And units with only 3 to 10 MW of capacity are economically viable.

Now that most analysts believe that electricity generation does not possess sufficient economies of scale to result in a natural monopoly, attention is focused on transmission and distribution, the predominant view of which is still that economies of scale are large and therefore warrant regulation. How can the existing regulatory regime adapt to the simultaneous existence of competitive generation and monopolistic transmission and distribution?

The current answer is mandatory open access and “retail wheeling” under which electric utilities turn their private transmission and distribution systems into public highways. An electricity consumer would have the

right to choose the company from which he purchased power, and the existing utility company would be required to deliver that electricity to the consumer at regulated nondiscriminatory rates.

The current debate surrounding electric utility reform presupposes mandatory retail wheeling and emphasizes the economic, social, and political consequences of wheeling: How much of the current social and environmental regulatory regime should survive? What should the timetable be for transition? Do new environmental controls need to be imposed to counterbalance increased emissions that generating lower priced electricity might cause? How much leeway should states have to oversee electricity competition? In the switch to a competitive generation market, some high-cost facilities will not be able to earn enough revenue to cover their initial capital costs. Thus, the market value of such facilities will be much lower than their current book value. Should those economic losses and losses occasioned by uneconomic third-party power contracts (“stranded costs”) be compensated by ratepayers, and if so, how?

Managed competition—retail competition under the continuing watchful eye of regulators and a tightened regulatory grip on the grid—is the starting point for both reformers and their opponents. Congress can and should do better.

Free the Wires

Most people will argue that complete deregulation would be unwise because of their belief that transmission and distribution of electricity are natural monopolies that will charge consumers too much. The skeptics also believe that rate regulation by public service commissions is the appropriate policy remedy for the problem.

Fortunately, the natural-monopoly characteristics of transmission and distribution are overstated. But even to the extent such characteristics exist, the efficiency consequences may not be large, and evidence does not suggest that regulation by commission, which has given us excessively costly nuclear power and cogeneration contracts, has protected consumers in the ways that populist rhetoric suggests.

There are several reasons to believe that the market power of unregulated, vertically integrated utilities would be less than conventional wisdom suggests:

- Competition might well arise from small turbines using natural gas to generate electricity. Electricity transmission owners have nothing

to gain from alienating customers to the point where they switch to the natural-gas alternative.

- Before exclusive franchises were granted by governments, multiple entrepreneurs were quite willing to generate and distribute electricity.
- Competition between utilities still exists in some jurisdictions in the United States, and a recent statistical analysis suggests that such utilities have higher fixed costs but lower operating costs that result in total costs that are 16 percent lower, on average, than those of utilities that do not face competition.
- If economies of scale do not prohibit multiple long-distance transmission companies, the threat of the creation of additional rights-of-way by federal and state governments should be sufficient to induce incumbent electricity transmission companies to price their services competitively.
- Finally, recent statistical evidence suggests that costs are linear with size for vertically integrated utilities, but eventually diseconomies of scale arise that limit firm size. Thus, vertically integrated utilities with large capacities do not have lower costs than do smaller vertically integrated utilities and will not inevitably eliminate their smaller rivals.

The Dangers of Retail Wheeling

Turning the grid into a common carrier while regulating the rates charged to those who ship power is the central mistake of the present reform agenda, not only because such regulation is unnecessary for competition to emerge, but because it may sabotage economic gains that are otherwise within our grasp. With its focus on providing access for generators, retail wheeling implicitly assumes that the current transmission and distribution system is efficient. Yet the electricity industry has been subjected to so many decades of government planning, subsidy, and distortions that reformers are in no position to say with certainty what an efficient transmission and distribution system would look like.

Would an efficient industry be characterized by vertical disintegration or integration, user-owned grids or competing grids, a small number of (relatively unregulated) monopoly providers, a pooling company arrangement (known in the trade as “poolco”), or more widespread self-generation? No one knows without the discovery process unleashed by the spontaneous workings of the market, and mandatory retail wheeling subverts the market.

A central difference between mandatory retail wheeling and a true free market is the allocation of transmission and distribution resources. Under retail wheeling, the allocation of transmission capacity among users is viewed as an engineering rather than an economic problem. Hence, the use of price signals to allocate scarce transmission capacity is suppressed.

But price signals are a very important component of efficient transmission prices. Without them, inappropriate decisions about the relative use of local and distant power will be made. For example, both the British and the Argentine mandatory access systems lack appropriate transmission prices. The result has been high prices (relative to costs) for electricity. The high prices, in turn, have induced entrepreneurs in Argentina to enter the market for generation, resulting in excessive generation capacity relative to the capacity of the transmission system to transport the power. In one area of Argentina, for example, 5,100 MW of generation capacity exist but only 2,600 MW of transmission capacity connect the generators to the major consuming area of Buenos Aires.

What Should Be Done?

Let vertically integrated utilities compete without state-provided protection from competition and allow the market to discover the most efficient forms of industrial organization. True reform should not reinvent regulation but eliminate it.

The entire federal electricity apparatus should be repealed because the market failure rationales for it do not exist. The Federal Power Act, PURPA (a limited version of mandatory access, the main function of which has been to force utilities to purchase power from third parties at nonmarket prices), and the archaic PUHCA (which strictly controls the ownership and management structures of electric utilities) should all go.

Congress should also ensure a level economic playing field by privatizing the federal power marketing authorities, the Tennessee Valley Authority, and all federal power generation facilities; and tax and fiscal preferences granted municipal power companies and electricity cooperatives should be terminated.

All federal price subsidies, tax incentives, and regulatory preferences for renewable energy should also be eliminated. The environmental benefits of renewable energy are dramatically overstated. In fact, every single renewable energy source has drawn legitimate opposition from environmental organizations on various counts. If and when fossil fuels become more

scarce, the electricity industry, without assistance, will turn to more abundant (i.e., cheaper) alternatives.

The price advantage currently enjoyed by fossil fuels cannot be attributed to present or past subsidies. Research suggests that, historically, the actions of government have kept petroleum prices above rather than below an unregulated market price. The only fuel that government has consistently subsidized is nuclear power, but the effect of the subsidies has been to displace some coal and natural-gas production of electricity and raise rather than lower the price of electricity.

The most damaging electricity regulations, however, emanate from state public utility commissions that restrict entry and set rates. Should states have the right to create restrictions on entry (create franchises) in the electric utility market? May the federal government prevent states from harming consumers?

Investor-owned utilities and their trade association argue that the federal government may not prevent states from regulating utilities. But precedent exists for such intervention. Congress deregulated *interstate* trucking in 1980, but state regulation of *intrastate* trucking continued; the main effect was to restrict entry by new firms and raise the price of shipping for consumers. In 1994 Congress prohibited states from regulating motor carriers, except household movers, and no constitutional questions have been raised.

While many legislators are (rightly) reluctant to interfere in state regulatory affairs, the Constitution's Commerce Clause gives Congress the power to remove barriers to interstate trade erected by state lawmakers. Congress should therefore preempt all state or municipal regulations that restrict the generation, transmission, distribution, or retail sale of electricity across state lines.

Suggested Readings

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