



Even CATO libertarians say energy deregulation does not work

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In an Op-Ed that was published in the Wall Street Journal [last month](#) (and is available in full to non-subscribers on [CATO's website](#)) two CATO economists specialised in deregulation and energy markets provide a breath of fresh air in the debates on energy.

Their point is to criticize the poorly thought out deregulation in various US States over the past 15 years, and they explain clearly how energy markets work (something which is rare enough in the mainstream media), and what the consequences of various bits of deregulation are on market behavior and thus on electricity prices.

Also discussed on [European Tribune](#)

As a first point, they take the time to explain one of the most basic consequences of electricity deregulation: marginal pricing:

Under the old regulatory regime, electricity generators received their costs plus an allowed return on capital. If generators' costs differed, they received differing revenues. Prices were then established by a "weighted average" of all producer costs. Under deregulation, however, generators receive revenues based on the price charged by the most expensive generator whose output is necessary to meet demand in each hour.

While some may find such pricing to be odd, it is found in all commodity markets. Potatoes, for example, sell at the same price even though the cost of production varies across farmers. The supermarket does not price potatoes based on the "weighted average" of their acquisition costs, and producers do not sell at cost plus a modest mark-up. They sell at what the market will bear, and the market will bear the highest cost source of potatoes necessary to meet consumer demand.

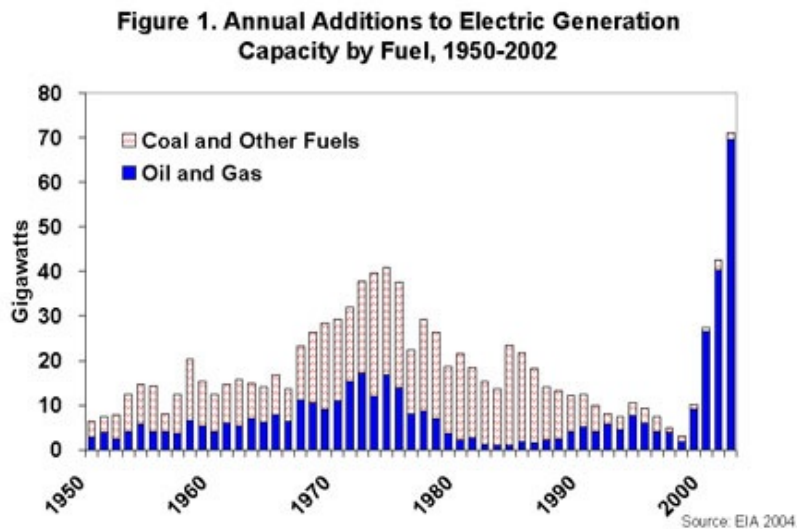
Thus, in a regulatory regime, rising natural gas prices affect electricity prices only according to the percentage of electricity generated by natural gas (about 18.7% of supply nationwide in 2005). But in deregulated markets, all generators get revenues based on the price charged by the most expensive (often natural gas) plant in operation.

Does this mean that consumers are always worse off under market (marginal-cost) prices rather than regulated (weighted average) prices? Well, **regulation certainly delivers lower prices than the market during shortages. But regulation delivers higher prices during times of relative abundance.**

Their description is absolutely correct, and so is their conclusion, which is a fundamental insight about deregulation and abundance.

They also provide the logic behind deregulation: in the 90s, natural gas was very cheap and abundant, and thus spot prices (a proxy for marginal price in a mostly regulated market) were lower than prices charged by the traditional generators. Massive investment in what were then highly competitive gas-fired plants led to a huge increase in gas-fired power generation capacity, and in low market prices, thus in a push for users to get access to those cheaper prices.

Deregulation took place, as Van Doren and Taylor point out, but in an imperfect manner, as end-user (retail) prices were kept regulated - and high. The goal then was to protect the old style generators, which had relatively high production costs *and not the consumers*. The gas-power plant investors were happy, because, with their low marginal costs, they benefitted from such regulated tariffs even more than the "old style" utilities. This led to the "gas bubble" - massive investment in gas-fired plants:



It's hard to say if there is a direct link between that boom and the subsequent increase in gas prices, but increase they did:



Which means that suddenly the situation was reversed: marginal costs went through the roof, and

regulated prices were suddenly insufficient to cover the production costs of the gas-based generators. This (together with market rigging by some players) caused the California crisis and the belated realisation that deregulated markets did not push prices only down - something that Van Doren and Taylor note explicitly: "free market reformers promised rate reductions they had no business promising."

Their conclusion is worth flagging again:

regulation certainly delivers lower prices than the market during shortages. But regulation delivers higher prices during times of relative abundance.

The two authors are consistent, at least, and their logic is to say that high prices lead to high profits for some actors and thus eventually to entry of new players to balance the market back, in a classic boom-and-bust scenario.

They consider that the temporary price spikes in that regime are acceptable to consumers in that they get lower prices on average. While this certainly neglects the political price to be paid for headlines blasting electricity prices occasionally 10 or 100 times higher than usual, it also forgets to underline what these price peaks are about: they are necessary, at times when supply is insufficient, to cause demand destruction, i.e. people giving up using electricity because they can no longer afford it, even for a short while. Electricity being the vital good that we know, this explains why the peaks are so high, but it also means that markets balance because some - mostly poor - people "choose" to give up electricity for a while because they won't pay that price and cannot afford it. Balance is created by denial of service to some, via prices.

Thus the authors are certainly libertarian, in accepting that electricity be allocated, at times of insufficient supply, in accordance with ability or willingness to pay rather than any other criteria, such as social or medical needs (oh sure, they'll usually accept that special cases can be made to protect the most vulnerable people - the old, the sick, etc... but won't acknowledge that their preferred method of allocation specifically targets these, in practice).

And, of course, their underlying assumption is that we'll always come back eventually to periods of abundance. There is no physical or practical limit to the boom-and-bust cycle. Resources will be mobilized because it's profitable to do so, and will be used up to the level that balances the market. Depletion does not exist in their world - it has no price, anyway.

But if you're trying to find ways to organise your power sector for the next 30 years, and are told that one mechanism delivers lower prices in times of abundance (of generation capacity, thus of coal and gas), and another lower prices in times of more constrained supply (by, say, depletion, or worries about carbon emissions, or worries about security of supply of the fuels used), what should be your preference?

That question is implicitly asked in that article. They also implicitly answer it by ignoring such risks. I obviously take a different view.

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But that gets us to a second, even more interesting point made by the two authors. That deregulation was further hampered, in the US, by the regulators' bizarre passion for unbundling:

In sum, allowing markets to dictate electricity prices is a good thing for consumers, even if they are sometimes higher than under regulation. Unfortunately — and here is the fly

in the ointment — price deregulation has been accompanied by rules encouraging the legal separation of generation from transmission and the purchase of wholesale power through organized spot markets.

This was published a few days before the EU Commission made its big announcements about the necessity of unbundling, and how it was the real step that would deliver more competitive energy markets in Europe, and here we had CATO, hard core libertarians, writing black and white that it's a stupid idea that is actually detrimental to deregulation!

And they provide several (of course valid) arguments:

First, vertical integration is an efficient response to the so-called "holdup" problem. Investors in generating plants worry that, because the assets are costly, dedicated and immobile, they can be "held up" by transmission line owners. Investors in transmission lines fear being held up by generators. Vertical integration ends the fight.

Second, transmission and generation are substitutes for one another — and the right amount of investment in either is an economic, not an engineering, puzzle. Efficient investment in both may not be possible through decentralized arrangements (prices and contracts) between separately owned assets. In contrast, an organization that owns both generation and transmission assets is more likely to invest optimally in both.

Third and finally, vertical integration minimizes risk in the real-time operation of the system. The better coordinated are generation and transmission, the less chance there is of cascading blackouts and other problems. Coordination is far easier when there is one actor rather than hundreds.

These considerations largely explain why 10 of the 11 published studies on this issue conclude that vertical integration is the most efficient corporate organizational form for electricity providers. Unfortunately, the debate about utility restructuring has almost completely ignored those studies — assuming rather that vertical integration serves no useful purpose other than facilitating the market power of incumbent electricity providers.

Coordination, coherence of investment in complementary sub-sectors of the industry, security of operation - vertical integration has a lot of real world advantages that are being forgotten - or seen as "unfair" competitive advantage for the industrial giants of the sector that have so far managed all aspects of the electricity infrastructure.

And the CATO economists drive their criticism further:

Interestingly enough, the deregulators are trying to create a world that would probably never arise in a totally free electricity market. In a world of deregulated vertically integrated firms, **both producers and consumers would almost certainly resist spot market relationships.**

During gluts, firms would not recover the cost of capital; and during shortages, electricity consumers would be vulnerable to economic extortion, as competitive entry and rivalry can't happen overnight. Both firms and consumers would likely prefer long-term contracts, an arrangement that meets consumers' interest in price protection and firms' interest in cost recovery.

Accordingly, the equilibrium relationship between firms and consumers in a totally unregulated world might resemble that of the old regulatory regime, albeit an equilibrium achieved through contract. The only (unanswerable) question is how different the specifics of such hypothetical contracts would be from current regulatory practices.

As most participants in the industry know, most players, producers and consumers, small and large, crave stability and consistency. The industry is complex enough to manage as it is without having to worry on a constant basis about access to the grid, or access to fuels, or availability of the end product - thus long term contracts are the rule. End consumers want the certainty that they will have power when they turn the switch, and understandable (i.e. simple) prices. Producers want to be sure that prices over the long term will be sufficient to cover the investments they have to make upfront. They also want to ensure that they are able to respond to demand variations in a effective way, with the requisite technical coordination between producers and network managers on an ongoing and trustful basis.

Which means, as the CATO writers conclude, that in a really, really free market, players would end up with something that would *look amazingly similar* to a fully regulated market, based on long term contracts and smoothed out price formulas.

So why bother with deregulation? To be sure that the choice they make is actually that one? As they point out, deregulation has been botched, incoherent and/or inconsistent every single time it has been tried, for various reasons. The time spent to get to a perfect "free market" has actual costs in real life, and it is worth asking if they are worth paying.

Re-regulate. Even CATO points that way.



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