

Why aren't electricity prices falling?

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The costs of renewables are falling, oil and gas prices have fallen back, and demand is soft. Why then are electricity prices being pushed up, rather than falling back?

It is a very good question, and it is one I tried to answer in the *Cost of Energy Review*. It is not rocket science to disaggregate the causes of the cost of electricity. The calculation is as follows: wholesale prices + capacity charges + network charges + energy and carbon taxes + suppliers' margins + legacy costs.

Falling costs for the industry

The wholesale costs did rise last year, but that is only part of the story. They will vary, but with more and more zero marginal cost generation coming onto the system, they should be gradually withering away. To the extent that wholesale prices are determined by gas, the fact that Europe (increasingly through LNG) and the global gas market are not just well supplied, but likely to be even better supplied. Australian LNG is joining that from Qatar (no longer needed in the US), Russia and the US. So gas prices should gradually fall too.

The costs of capacity have turned out to be lower than anticipated when the capacity market was set up 5 years ago. Auctions turn out to be very effective at driving down costs, and the required capacity margin is being eroded through the coming of big opportunities in storage and also in an active demand side. Technical progress keeps driving down costs.

Network costs are subject to regulation, and as the *Cost of Energy Review* made clear, Ofgem made some big mistakes when the current price formulae were set.

Supply margins are set out in the *Cost of Energy Review* too. Some of the past numbers are simply stunning. But with an intensification of competition that has already produced lots of casualties, and with the price cap, these should be returning to normal, especially for the customers who have not switched, and were paying the £1.4 billion in excess prices as identified by the Competition and Markets Authority (CMA).

Rising policy costs

A significant obstacle that stands in the way of consumers getting the benefits of falling prices is the legacy costs, resulting from government policy. These are destined to keep on rising for at least half of the next decade and probably longer.

Lobbyists spend lots of money trying to persuade the general public that the subsidised technologies are about to be competing at “grid parity” and that renewables and nuclear will soon be “subsidy free”. Suppose for a moment that this is all true. Suppose that in particular offshore wind is now competitive. What would happen in a normal market is that price would *fall* to the costs of these ever cheaper entrants. We would all be reaping the benefits - now.

But we are not. Why? Because the electricity industry has less and less resemblance to a competitive market. The generator’s customer is the government, not you. All new generation comes with a government backed contract, which you have to pay for. Government has become the central buyer. The prices customers pay have little or no relation to today’s costs. Instead they include a cost pass through of these contract prices from *past* assets and *past* contracts.

We all pay these through the use of system charges, and there is no escape. Nobody can switch from say first generation offshore wind at over £180 mwh. Prices don’t reflect the competitive costs; they reflect past costs. In any other industry, as technology marches on, the prices fall, and the past assets are forced

to adapt to the new prices. If you go out and buy a commodity, you pay the current market price. You are not expected to pay the commodity prices that ruled in the super cycle up to 2014. But in electricity, you are captured and there is no escape.

The price of electricity is therefore heavily dependent on the legacy costs, reflecting governments' past subsidy commitments. It therefore matters a lot whether governments have in fact spend our money wisely in committing us to rising prices as costs are falling.

The sad fact is that governments have not been good at picking winners, and when their choices turn out less good than than imagined, they invent all sorts of extra reasons. Think of offshore wind. Ed Miliband, Chris Huhne and Edward Davey *knew* that the wholesale price of electricity was going to go up, because they *knew* that gas prices in particular were on the rise. Why? Because all of them believed in peak oil, and the linkage between oil and gas prices. It is all there in their speeches and statements, and indeed it found its way into DECC's forecasts.

If you believe this lot, then offshore wind was going to be cost competitive even at prices of over £150 mwh. Add in additional and separate reasons that politicians gave – that spending lots of customers' money on offshore wind would drive down its costs, and hence was an industrial strategy customers should invest in – and then you can be confident that the legacy costs, the subsidies, would in short order turn out to be smart investments, and prices to customers would fall. DECC actually forecast how much customers would be better off for many of its flagship policies. By now you should be getting the benefits. But you are not.

The dense and costly morass of multiple interventions

Making mistakes is not just about the technologies. There are important policy choices too, which you are paying for now, within which the technologies are

nested. In the *Cost of Energy Review*, I pointed out just how complex the policy entanglements are, indeed so complex that nobody in BEIS or the industry has much chance of even being able to list them. They interact, overlap and produce a myriad of unintended consequences. They drive up costs and prices. We all pay for this mass of interventions. There is no escape from the consequences of the way energy policy has been built up, sticking plaster by sticking plaster.

Take some terrible examples, which you the customers are paying for. The first is the chaotic and expensive smart meter programme. Miliband's DECC fell for the lobbying from Centrica and others to put the obligation to fit smart meters into supply and not distribution, and Huhne and Davey pressed on with it. (Almost all other countries rightly chose distribution). The competitive suppliers had the customer interface and they would deliver both the Green Deal and the Smart Meter Programme. The Green Deal has been largely put out of its misery, but the smart meter disaster has just kept rolling and getting worse.

It is pretty obvious that distributors have big advantages over suppliers, when it comes to smart meters. They do not have the obvious conflicts of interest which incentivised some of the suppliers to lobby for control of the programme. Suppliers wanted to cross-sell, and they had no interest in promoting switching. They also did not necessarily have the geographical concentration to make a "street by street" roll out possible (which is one of the obvious ways to hold down costs). The result was that the first generation of smart meters, called SMETS1, goes dumb when you switch supplier. Surprise, surprise! (SSE was still offering me a SMETS1 meter in late 2018!)

If only smart meters were the exception, and other policies had been carefully executed. The Renewable Heat Incentive in Northern Ireland turned out scandalously, and in effect brought down the power sharing government. Then there are the Anaerobic Digesters, with farmers actually growing maize crops (with all their ancillary environmental costs) to feed into them. There are the tax concessions on early generous solar investments and the very generous payments made from early installations of solar generated electricity. Burning

wood pellets imported from the US at DRAX was subsidised more than Hinkley, and without any polluter pays tax on the PM2.5 emissions. The list goes on and on. This is all part of what you are paying for and why your electricity bill keeps going up.

Paying for the legacy and policy costs

Mistakes get made, even if many of them were avoidable. Whatever the political spin at the time, the fact is that all these costs are not going away. They have to be paid for.

In the *Cost of Energy Review*, I suggested that these legacy costs should be put in a legacy bank, so as not to distort the market, to allow prices to fall and hence customers to benefit from the falling costs of renewables and probably gas too. The analogy with banking was deliberate. In theory the government could have made all bank customers pay a levy for the disasters of the past in the run up to the great financial crash in 2007/08. But it probably would not have worked and in any event would have distorted financial markets considerably, and made the subsequent recession a lot worse.

The terms of reference for the *Cost of Energy Review* prohibited me from recommending that these legacy costs should be socialised. But they should be. Government acts ultimately on behalf of the citizens, and pays its bills from taxation and borrowing. Ultimately the unfortunate taxpayer is in the firing line if – and it is an important if – the government wants well-functioning competitive energy markets.

The task would be made easier by the very low cost of debt. Taking the legacy costs into a legacy bank could be facilitated by borrowing the offsetting amount. The legacy costs are in effect a giant Regulated Asset Base (RAB), and since real interest rates are still negative, the costs could be gradually written off. Indeed, with negative real interest rates, from the point of view of UK plc, there are no extra costs, but rather a financing problem. At say a cost of minus 2% real

interest, very gradually the costs could be written off over the next decade. This would be made easier because many of the legacy costs are for time-limited contracts, which expire in the middle of the next decade.

Transforming the electricity market

Imagine if consumers could wake up to not rising bills, but falling ones. Imagine if they could see the new low carbon technologies delivering both a cleaner and a cheaper world for them. Instead of complaining about the ever-greater costs of decarbonisation, they could see the underlying economic reality of an ever easing electricity bill. If you are on the average income of say £28,000, and you are paying well over £1000 pounds out of this for your total energy requirements, of which 20% (and rising) is going on legacy costs, your view of further electricity price increases driven by legacy costs is not going to be very favourable. You might even be tempted to join the equivalent of the “yellow vests” in France.

For those on these sorts of income – the average – it is not surprising that the willingness to worry about climate change is not matched by a willingness to pay.

The *Cost of Energy Review* set out not just an analysis of why electricity bills are so high, and likely to rise on the current policies and approaches, but an alternative and better way of structuring the market to fully harness the benefits of the renewables as they become the new conventionals. This matters for the incentives to build out renewables, storage and demand side, but also because over the next decade coal is going to exit and most of the AGR nuclear reactors are going to close.

The *Cost of Energy Review* proposed that in the new world of more and more zero marginal cost generation, with storage and active demand – turning on its head the old assumptions of passive demand, no storage and a dominant wholesale market – there should be an Equivalent Firm Power auction to include

all the technologies, including renewables. It further proposed that in order to bring into play the full benefits of the new technologies, there should be independent national and regional system operators (an NSO plus RSOs).

The point of this framework is not just that it has the best chance of both reducing costs *and* promoting innovation, but also that it cuts through the morass of multiple interventions that have built up over the last decade and reduces the regulatory burden too. If these framework reforms are made, and if a carbon price is put in place at a level necessary to meet the carbon budgets, then there is no reason why future electricity bills should keep going up. Offering contracts to each technology on a case-by-case basis, hiding the cost of carbon in these contracts, and trying to disguise the legacy costs, will not make the total bills lower. On the contrary, they will make them higher than they need to be – indeed much higher. That is why you are paying some 20% of your bill just on the legacy costs, and why your bill is going up not down.

This unwillingness to face up to the costs of past decisions (and especially past mistakes) and to confront us the customers with a price of carbon not only hits the people on average incomes hard, and those below the average proportionately worse still, but it also risks undermining our willingness to address the great climate change problems.

It is not that the solutions are complicated. On the contrary, all we want from an electricity system is that it provides security of supply, meets the universal service obligation (USO), and at the same time is consistent with the carbon budgets. Instead of adding more sticky plasters, it would be better to go back to these fundamental objectives. To do this, there needs to be an integrated Equivalent Firm Power capacity market, an NSO and RSOs to ensure that the security of supply and USO obligations are met, and a proper carbon price. Creating a legacy bank, securitising the legacy contracts and socialising the costs would transform the outlook for customers. For good measure, recognising the smart meter disaster for what it is, and moving the obligations to distributors asap would be a good idea too. Almost all of this is in the *Cost of Energy Review*.