



WHY ELECTRICITY PRICES CONTINUE TO SHOCK PEOPLE

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'One day regulators will have to step in and call the madness to a halt.' There's no subject more likely to stir people up than rising electricity bills. With prices roughly doubling since 2007, that's hardly surprising. But why have prices risen so fast? And will they keep rising?

It has suited various business lobbies and Coalition politicians - federal and state - to leave people with the impression the main reason is the carbon tax and the renewable energy target, which requires that 20 per cent of Australia's electricity come from renewable energy sources by 2020.

In truth, the price rises started well before these measures took effect and they explain only a small part of the increase. Which suggests the politicians will suffer yet another loss of credibility when eventually (and stupidly) the carbon tax is abolished and the renewables target is dropped, as seems on the cards, but power prices don't seem to fall by much.

The more important reasons were given by Professor Ross Garnaut, of the University of Melbourne, in a recent speech. Here's my version of his explanation. One part of the reason is that more people have been using renewable energy and this reduced their demand for conventional electricity from the grid, which is produced mainly by coal-fired generators, of course.

Apart from all the wind turbines, governments - federal and state, Coalition and Labor - have offered incentives to people to incur the significant expense of installing rooftop solar power systems. The most generous of these incentive schemes have been abandoned but, at the same time, the cost of photovoltaic systems has been falling rapidly, partly because of advances in technology, partly because more purchasers mean greater economies of scale.

The most important economic characteristic of renewable energy is that once you've incurred the high "fixed cost" of installing a system, the "variable cost" of using the system to produce more energy is negligible. Sunshine is free. So once you've got a system, you use it. A second important part of the reason for rising power prices is that many businesses and households have reacted to the rising price by being more economical - less wasteful - in their use of electricity. Another factor (one many economists tend to ignore) is that all the talk about the need to reduce emissions of carbon dioxide to stop climate change, and all the talk about how much power we waste, has made more firms and householders waste-conscious. Some people are being careful in their use of electricity as a self-interested response to its rising price, while others - including businesses - are doing it from a sense of duty to society.

By now, I trust, a big red light is flashing in your head. If people are using less power from the grid because more of them are collecting their own and more are reducing their wastage of electricity, doesn't that mean demand for conventional power is falling? Indeed it does. According to figures from the Grattan Institute, since late 2009 electricity demand in eastern Australia has fallen by about 7 per cent. But hang on, is this guy saying the price of electricity has gone up because demand for it has gone down? Isn't it supposed to be the other way round? Isn't a fall in demand supposed to lead to a fall in the price?

Well, assuming no change in supply, yes it is. So you're right to be to be puzzled. The relationship I've described between price and demand is, as an economist would say, "perverse". But why? Because, as Garnaut explains, we've stuffed up the deregulation of the electricity market. (Moral: as we're being reminded by the plan to "deregulate" university fees, if you deregulate or privatise without knowing what you're doing you can make things worse rather than better.)

Before the reform process began, each state had its own, government-owned electricity monopoly, with little trade between the states. From the late 1980s it was decided to break the integrated state monopolies into their component parts - generation, transmission, distribution and retailing - and form one big eastern Australian electricity market with as much competition and as little monopoly as possible.

The power stations were separated into individual businesses - some of which were privatised, particularly in Victoria - and made to compete in a highly sophisticated "national" wholesale market for electricity. Garnaut says this has worked well, with competition keeping the wholesale price low in response to the reduced demand. But transmission (high-voltage power lines) and distribution (local poles and wires to the premises) are natural monopolies. That is, it's not economic to have more than one network. So whether these businesses are publicly or privately owned, the prices they charge have to be regulated to prevent them overcharging.

Trouble is, Garnaut says, we've done this by fixing the maximum rate of return the businesses are allowed to earn on the capital they have invested. Economists have known for 60 years that this always causes problems because it's so hard to pick the right rate of return. If it's too low it leads to underinvestment in the physical network, causing blackouts. If it's too high, however, it leads to overinvestment in the network at the expense of business and household customers.

But as well, when monopoly businesses that are guaranteed a certain rate of return suffer a loss of demand, the regulator has to allow them to restore their profitability by raising their prices. Another red light flashing? Surely if you keep responding to a fall in demand by raising prices, this will lead to a further fall in demand (particularly as the cost of renewable energy keeps falling) and the whole thing will keep going round and round and getting worse and worse. Just so. People in the know call it a "death spiral".

One day soon the regulators of the regulators - aka federal and state governments - will have to step in and call the madness to a halt. Until then, prices will keep rising.

<http://www.smh.com.au/business/why-electricity-prices-continue-to-shock-people-20140613-3a2va.html>