

THE CONVERSATION

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We know why power prices are up, but what should we do?

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Mr Abbott has learnt the hard way that the electricity industry is complex and that there is more to rising electricity bills than carbon pricing.

Ms Gillard correctly identified rising costs of “poles and wires” as an important factor. But she understated the role of strong networks in facilitating energy flows while reducing the risk of blackouts.



Pretty much everyone agrees with Julia Gillard's assessment of why power prices are up. But there are many views on how to bring them down. Tom Taker

In this discussion of what causes power price rises, it's worth remember the average household electricity bill - while significant - is less than 2.5% of average household

spending.

The relatively small size of household electricity bills and the even smaller effect of carbon pricing should end the “great big new tax” debate. For *most* households, rapid climate change mitigation isn’t an economic issue, though it may be a moral and health one. For those households on low incomes, of course, there is an economic issue, and they deserve the carbon pricing compensation that the government has provided.

But apart from watching the entertaining blood sport of politics, there are more important things to take away from this event.

We know what makes electricity more expensive

As discussed last year, we can identify the important factors that influence retail electricity bills.

Prices in the wholesale “National Electricity Market” (which does not include Western Australia or the Northern Territory) are reset every five minutes. They respond to the changing supply-demand balance, network flow constraints, network losses and the level of competition in the market. Generators now take carbon pricing into account in the offers to sell electricity that they submit to the National Electricity Market and there is evidence that wholesale prices have risen by about \$20/MWh to date. Future carbon pricing may depend on international trends.

Energy retailers buy electricity in the National Electricity Market at a wholesale price. They add a retail margin (which includes costs associated with network losses) before setting the prices they charge consumers. When they set their retail prices they are constrained by competition between retailers for contestable consumers, or by a regulator if a consumer chooses a regulated retail tariff.

Energy retailers also collect regulator-approved network charges for regulated transmission and distribution network (“poles and wires”) businesses from small electricity consumers. These charges are often presented as an additional component of their retail electricity prices.

Energy retailers also charge electricity consumers for the costs imposed by government policies such as renewable energy target schemes, energy efficiency schemes and feed-in tariffs for rooftop PV systems. Again, retailers usually recover these costs by adding it to their retail electricity prices.

Reducing electricity bills helps meet moral obligations

In principle, we can reduce electricity bills by either reducing the quantity of electricity we purchase or by reducing the electricity price that we pay. If we purchase electricity under a time-of-use electricity tariff, we can also reduce our bills by shifting electricity consumption from “peak” to “shoulder” or “off-peak” periods.

More advanced time-based pricing would help us figure out more precisely when to reduce consumption but households would need greater support. Australian governments are exploring such options.

To mitigate climate change, all households should look for ways to reduce their electricity consumption. This could be through more prudent electricity use, by installing more efficient appliances, and by (carefully!) installing insulation or other energy-saving measures. (Of course, renters have fewer options than owners.)

For an economist, an increasing electricity price is a good way to concentrate the mind on finding such bill-reducing opportunities. Governments try to make this happen with policies such as appliance efficiency standards and efficiency labelling, building efficiency standards, education programs and advice. We also need governments to ensure that the price increase is for a valid reason. They can do this by improving network regulation and innovation in network service provision.

To reduce electricity prices, we need to reduce costs in one or more of the previously identified cost categories on the supply side of the electricity industry. This deserves more discussion than simply repeating the mantras of “privatisation” and “competition”, although both still have their place.

Demand for coal-fired power is dropping

In a radical departure from the past, annual electricity consumption is no longer rising in the National Electricity Market, perhaps partly because many households do understand that climate change mitigation is a moral issue.

As a result of low load growth, wholesale electricity prices are not expected to increase in the next few years. Existing generating capacity will be largely sufficient to meet projected electricity demand.

Moreover, the growing penetration of wind and solar PV will tend to suppress wholesale electricity prices and displace black coal, as wind and solar have low operating costs and are part-funded by cash flow through the Renewable Energy Target scheme. Also, under the National Electricity Rules, the output of small PV systems appears as “negative demand”, reducing the load that is supplied through the National Electricity Market.

If householders want to reduce the need for additional investment in electricity networks - knowing the costs will be passed on to them - they can reduce electricity use at times of peak network demand. Generally, this is between 2pm and 8pm on week days and particularly on hot summer days.

Households with rooftop PV have in many cases been granted buy-back rates higher than the regulator-determined value. They have a particular responsibility to minimise consumption on hot summer days to justify that privilege.

Finally, politicians should stop trivialising and dramatising electricity bills and reaching for miracle cures.

Rather, they should continue to collaborate through the Standing Council on Energy and Resources to ensure that we have the lowest cost industry that meets future societal needs, including climate change mitigation.