



Australian Energy Market Commission

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Network investment and regulation: Australia's experience of retail pricing reform

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Introduction

I've been asked to discuss Australia's experience in retail pricing reform.

Naturally that means I'd like to spend part of my presentation talking about the emergence of retail competition, which has been a necessary pre-cursor to retail price deregulation in Australia.

And although previous speakers have already spent considerable time discussing network pricing reform – in particular cost reflective distribution tariffs – I feel it would be remiss of me not to touch on Australia's experience in this area, as it is one of the most significant areas of energy market development the Australian Energy Market Commission has progressed in the past 2-3 years.

Australia's National Electricity Market – the NEM – covers six of our eight states and territories on the eastern seaboard and in the south.

That's an area larger than Western Europe and supports around 19 million energy users.

Western Australia and the Northern Territory are not part of NEM as they are not interconnected to the rest of the grid.

The Australian Energy Market Commission is an independent agency, responsible for:

- Making the rules for the National Electricity Market and gas markets.
- Providing advice to all Australian governments – state, territory and federal via COAG EC.
- Reviews on specific energy market issues.

We're one of three energy market institutions – the other two are responsible for regulation and compliance with the rules we make (AER) and operating the market (AEMO).

Reform of Australia's electricity retail market

The reform of Australia's electricity markets over the last 25 years is a useful case study, in part because we have followed a fairly clear and consistent trajectory.

Integral to the reforms we've made in the last 2-3 decades has been our experience of retail pricing reform, which goes back to the early days of the establishment of the NEM in 1991.

The Council of Australian Governments which includes the state governments who have regulatory oversight of energy, and the commonwealth, took the decision to move toward a competitive electricity market in response to a report that found potentially significant increases in Australia's GDP could be realised by reforming the electricity market, along with a number of other utility services.

A common feature of these sectors was that they were dominated by publicly owned enterprises often with a monopoly industry structure.

A central authority was effectively determining how the sector developed.

It owned the regulatory functions.

It owned the capital and labour,

And it owned responsibility for the investment decisions – how much capacity is to be built or procured... based on its own forecasts of the future.

Prices did not reflect efficient costs and investment decisions were centrally directed.

Which meant the cost of getting these investment decisions wrong – usually by procuring too much energy – rested with consumers and tax payers.

Since then, the reform story in our sector has been one of:

- separating policy and regulatory functions from industry;

- industry restructuring with vertical separation of generation and retail from the natural monopoly elements of transmission and distribution; and
- bringing competition to the sector.

And underpinning the reform story, in all three of these areas, is the reallocation of demand and investment risks from consumers to electricity businesses and investors.

Retail price reform is clearly an important part of this transformation. Customer choice in electricity supplier across the NEM, initially for large customers, was a first step in the transition to full retail competition and the deregulation of retail pricing.

Full retail competition is important because it creates competitive pressure in the wholesale electricity market by exposing consumers to the actual cost of electricity, generating a demand response which sends effective price signals to the wholesale market about required investment.

Competition was gradually introduced to the retail sector across the NEM, with Victoria and NSW the first to move in 2002. The other NEM states and territories have since followed and all jurisdictions now allow for competition in retail markets.

The next important step is the deregulation of retail prices.

In 2004 the Council of Australian Government committed to deregulate retail energy prices where effective competition could be demonstrated.

To support that commitment, the Council also asked the AEMC to assess competition in NEM jurisdictions each year to advise whether competition was effective.

The AEMC's competition reviews have proved important in the move toward retail price deregulation, giving jurisdictions evidence on which to base their policy decisions.

- Our 2008 reviews in Victoria and South Australia led to these states becoming the first to deregulate prices, although South Australia did not proceed until 2012.
- Last year, our review of retail competition in New South Wales found competition was effective, paving the way for price deregulation in that state.
- Also last year, we completed our first full NEM-wide retail competition review which advised that retail competition was effective in South East Queensland. Shortly after the review was released, the Queensland Government announced it would deregulate retail prices from July 2015.
- The ACT and Tasmania – our smallest jurisdictions – are yet to deregulate retail prices, along with regional Queensland, and these markets have a little way to go before we would regard competition as being effective for that to take place.

So while there is some unfinished business, the Australian electricity retail sector has matured – at least in the National Electricity Market jurisdictions – and can now be described as a broadly competitive market.

One of the strengths of our retail competition reviews is the broad approach to assessing competition.

We make significant use of consumer research to help inform our findings, including a NEM wide survey of several thousand consumers.

We also draw on evidence from consumer groups, retailers, regulators, ombudsmen and representatives of community groups.

Of course, it is difficult to identify a single objective measure that can capture the dynamic nature of retail energy markets.

We examine a number of different indicators that highlight both the behaviour of retailers and the responses of customers.

And we focus our assessment on whether retail markets in NEM jurisdictions are providing outcomes that are consistent with effective competition.

Specifically, the "competitive market indicators" we use are:

- the level of customer activity in the market;
- barriers to retailers entering, expanding or exiting the market;
- the degree of independent rivalry;
- customer outcomes; and
- retailer outcomes.

The 2014 NEM wide review found that Australian consumers are shopping around and are generally happy with their retailer experience.

In fact they are shopping around for better deals for electricity and gas more often than they are switching insurance companies, or phone and internet providers.

90 per cent of all consumers were aware they could choose their energy company, up to 40 per cent had actively investigated options, and up to 28 per cent had actually switched providers during 2013.

The other regular, yearly, report the COAG Energy Council asked the Commission to prepare is our Residential Electricity Price Trends report, which looks at the key factors driving electricity price movements in each NEM jurisdiction – those being retail prices and wholesale costs, transmission and distribution network costs and environmental policy costs.

Part of the reason retail price deregulation and the establishment of retail competition is so important is that helps ensure price signals flow up and down

the supply chain in a way that generates efficient investment in the energy sector, and efficient energy use.

Prior to the introduction of retail contestability and price deregulation, some residential price structures set by governments benefited from a cross-subsidy from business to household customers and were therefore not always cost reflective.

With the introduction of full retail contestability and price deregulation, retailers now compete for consumers by offering a range of contracts that should reflect the cost of supply and provide signals that lead to efficient decision making.

AEMC research from July 2014 shows that there are anywhere from 8 to 19 unique electricity retail offers available to meet the different needs of consumers across the east coast.

These contracts include different pricing structures depending on how much energy is consumed and the time of day, as well as pay on time discounts and incentives such as reward points and sporting memberships.

With the roll out of smart meters, retailers are also beginning to offer innovative deals such as “free power on Saturdays”.

With the greater prevalence of choice driven by market liberalisation and the emergence of smart meter technology, our recent work has focussed on ensuring that consumers have the awareness and tools to engage in the retail market and choose an offer that best meets their individual needs.

One issue our price trends report highlights is that the wholesale and retail components only make up an average 40 per cent of the cost of supplying electricity to homes and families.

Around 50 per cent is the cost of maintaining and upgrading the regulated transmission and distribution network.

This means network costs are a key driver of retail prices.

Most network prices include a fixed daily charge and a variable consumption charge. The fixed charge is largely the same for all of a retailer’s consumers within a distribution network area, whereas the variable charge can change with a consumer’s level of electricity usage.

The fixed component makes up between 15 and 26 per cent of the total retail price in South Australia, Victoria, New South Wales and Queensland.

Since the fixed charge is paid irrespective of energy consumption, consumers who decrease their usage may not see a comparable decrease in the network component of their retail bill.

The higher the proportion of the total bill relating to the variable charge, the more changes in energy consumption will affect the level of revenue recovered by network businesses.

Hence, under the current pricing structures, when energy consumption declines, networks are likely to recover less revenue.

Given that a high proportion of network prices relate to past investments, any under-recovery due to declining consumption would need to be offset by higher network prices.

Network pricing reform

In order to have cost reflective prices which send efficient price signals up and down the supply chain, we also needed to embrace cost reflective network pricing.

A rule change the Commission made in late November moves the National Electricity Market to cost reflective distribution network tariffs.

Under the price structures that have operated in Australia to date, energy users paid the same network price even if the costs of such usage vary by location and time, regardless of how or when they are using power.

Effectively network prices over-recovered revenue for off-peak use of the network and under-recovered for peak use.

This meant energy users who use most of their energy at off-peak times were paying more than it costs to supply network services to them – while those using energy at peak times were paying less than it costs.

Analysis undertaken for the Commission highlighted a number of perverse outcomes we saw under the old rules.

Example 1: Solar PV

A consumer using an average size north facing solar PV system will save themselves about \$200 a year in network charges compared with a similar consumer without solar.

Because most of the solar energy is generated at non-peak times, it reduces the network's costs by \$80, leaving other consumers to make up the \$120 shortfall through higher charges.

The same consumer could reduce network costs considerably by facing their panels west, generating more energy at peak times when it is most needed.

But under the existing network pricing arrangements, the consumer has no incentive to do so as they benefit more by generating more total energy throughout the day.

Example 2: Air conditioners

A residential consumer using a large 5kW air-conditioner in peak times will cause about \$1,000 a year in additional network costs compared with a similar energy user without an air-conditioner.

But the residential consumer with the air-conditioner paid about an extra \$300 under the most common network prices.

The remaining \$700 is recovered from other consumers, big and small, through higher network charges.

In both examples, many consumers are paying more than it costs to provide services to them.

The same analysis estimated 70-80 per cent of consumers would face lower network charges in the medium term under a cost reflective capacity price.

What this boils down to for residential consumers is lower average network charges of between \$28 and \$145 per year.

Based on Victorian trials, we also found a small business could save up to \$2,118 or 34% of its total annual electricity network charges by using less electricity at peak times for just 20 hours per year when networks are congested

The new arrangements will see more efficient price signals emerge, removing cross subsidisation and giving energy users the information they need to decide what technologies might work best for them to manage usage, and help reduce their energy costs.

The network pricing reforms will work together with greater competition, retail pricing reform and a range of other measures to support an energy market which:

- a) gets risk allocation right – i.e. where risk is allocated to those best placed to manage those risks; and
- b) sends the right price signals up and down the supply chain.

And ultimately this is about creating the right environment for investment to respond to changing patterns of consumer demand and changes in relative prices brought about by innovation, new technologies and the opportunities for improved productivity.

Conclusion

Key to the success we have had in Australia in terms of enduring microeconomic reform in the electricity sector is a new alignment of risk and

investment decision-making and the establishment of a workably competitive industry structure.

A distinguishing feature of the National Electricity Market is the way that risks associated with forecasts of future demand are managed and allocated.

In the National Electricity Market, competing generators make these investment decisions based on their own expectations of future demand.

If they overinvest, prices fall, consumers benefit and only the generators' shareholders bear the risk in the form of lower returns.

Our experience in Australia has taught us that competition and market signals generally lead to better outcomes for consumers than systems that depend on centralised decision-makers.

And if we are relying on price signals to guide investment, production and consumption decisions, we need to make sure that the signals are efficient – that is, broadly cost-reflective and not distorted.

I hope Australia's experience is useful in thinking about issues emerging in other part of the world.

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