

Distribution 2001
Transmission and Distribution

***COMPLETING THE
NATIONAL ELECTRICITY MARKET***

12 November 2001 Brisbane

Rod Shogren
Commissioner
Australian Competition and Consumer Commission

This morning I would like to take the opportunity to discuss a number of challenges facing the National Electricity Market (NEM). I am pleased that there has been some momentum building in discussions about these remaining challenges. Of course, these issues have been around for a long time, such as transmission network pricing, but matters such as full retail contestability and demand side responsiveness are being re-examined in the light of the current performance of an electricity market in transition. Finally, the governance of the NEM is also a topic attracting attention. This is not just about the role of market institutions, but also what role governments should play in the development and operation of the NEM. I will be setting out my personal view of the urgent need for some concerted thinking on the part of NEM jurisdictions.

In order to understand why these issues have arisen, it is important to remember the initial aims and objectives of the electricity market reforms and why the NEM was created in the first place.

NEM creation

The development of the NEM has been well documented. It is enough to say that there was an expectation that the reform of the industry and the creation of a national market would deliver substantial benefits through more efficient use of existing plant and infrastructure, as well as better pricing/quality outcomes. Studies support the view that the reforms have delivered significant benefits.

Currently the NEM is at the forefront of competitive electricity market reform internationally. Thus far we have done a good job in avoiding any major set-backs as have occurred in other markets. But just because the NEM has been established and is operating effectively does not mean the reform task is finished.

What needs to be done to complete the NEM?

I would argue that, while we have successfully created a market, it is predominantly a supply-side market. That is, most of the activity in the market relates to the interaction of generation in the pool and contract markets. There is very little in the way of an active demand side, nor

is the regulated sector of the market, the wires businesses, necessarily influenced by what is happening in the wholesale market.

Full retail competition

Demand side participation and full retail contestability are the next steps towards creating a fully functioning market. FRC has been on the agenda of the NEM for a while now. All NEM States have lowered the threshold for competition so that only the small business and household sectors remain to be opened to competition. Both New South Wales and Victoria propose to move to FRC for these customers from the beginning of next year. In its purest form, FRC will see retailers competing to supply electricity to all consumers in the NEM, not being restricted by location or access to infrastructure.

Introducing FRC is a way to deliver price signals to the market and incentives to provide efficient consumption decisions. Such signals will indicate to retailers what services consumers want, as well as what consumers are willing to pay. That is, FRC will give consumers a chance to respond to changes in the market, opting for the best value in electricity supply. This will allow consumers to choose a retailer and also give the retailer the incentive to supply electricity more efficiently, ie at lower cost.

Currently consumers have little incentive to shift their demand for electricity into off-peak hours, which is when excess capacity is the greatest and the spot price is, generally, the lowest. Consumers are charged the same price in the retail market whether they consume during peak or off-peak times, so they will often choose to use electrical appliances when it is most convenient, that is, peak times.

If the retail price of electricity were allowed to reflect demand and supply for electricity, many consumers would achieve gains by making efficient consumption decisions. Some more efficient decisions would include the use of off-peak water heaters and using washing machines, clothes dryers and dishwashers during off-peak times. Such management on the demand side will reduce the demand for electricity in peak times which will help avoid tight supply situations.

However, it is important to note that consumers will not have to monitor electricity prices minute-by-minute – that would be ridiculous – or forgo the use of appliances when they need them. No-one wants a system when you can only run your air conditioning when it's not too hot, because if it is hot the power price will be high.

Rather, we will see systems emerge where consumers can delegate some of their decisions about their power usage to their retailer with full knowledge of the implications of their decision and the impact on their bills. Nor will power bills become more volatile.

FRC may not prevent the need for new generation, network investment and prudent interconnection, but it will ensure the current NEM resources operate closer to capacity before investment in further resources is made.

I realise that the step to full competition does entail a degree of faith on the part of governments that markets will deliver better outcomes for consumers. In the case of Queensland this has been an issue and the Government has decided that it will not be pursuing FRC. However, I would invite the Queensland Government to reconsider its position. FRC provides the potential for delivering significant benefits in terms of the overall use of resources in the electricity sector. Further, protection for consumers, if it is felt to be needed, can be provided in ways consistent with opening the market to full competition. For instance, direct subsidies can be provided – although I note that this has already been considered and rejected by the Government due to the cost associated with it. Of course, costs don't go away just because they are concealed. Alternatively, a general safety-net tariff could be established for small customers.

To my mind, preventing competition is a very crude way – indeed, a counter-intuitive way – of protecting consumers.

Network pricing

As well as continuing the expansion of the NEM, there is also opportunity to consider improvements to existing parts of the NEM. The proposals to integrate network services into the energy market have generated a great deal of discussion. The generation sector of the market has, I believe, been successfully reformed, with competition leading to significant

increases in productivity and efficiency. If retail competition continues to be introduced in stages, as it becomes more prevalent it will become a driving factor in achieving further benefits from the reforms. But the integration of the regulation of transmission and distribution networks into this deregulated market setting remains unresolved, and is detracting from the benefits the reforms have so far achieved. This is a significant issue and although transmission is only 10 per cent of the final cost of delivered energy, it does not follow that pricing signals in transmission do not matter.

In most other markets, the cost of transport is an important factor influencing not only price but also decisions on where to source product and what markets to serve. In these markets, transportation costs are directly determined by distance travelled, amount of capacity needed and market conditions - scarce capacity resulting in higher charges and surplus capacity leading to lower costs. Similarly, in electricity transmission, pricing signals can directly influence decisions on where new power plants and loads may be sited. It can also influence decisions on whether new investment in transmission is justified compared with demand side and supply side alternatives.

Energy-only market

This is actually part of a bigger set of issues. The NEM design is based on an energy-only model whereby participants are rewarded according to the trade of energy in the spot market and, obviously, the interplay of the spot price with contracts that underpin the majority of the financial transactions in the market place. In this design, the behaviour of the spot market is critical in terms of the signals it provides for the use of resources and the need for future investment.

Two issues arise from this. The first is how the use and pricing of other services fits with a market dominated by a commodity trading model. It makes no sense to have a network pricing methodology that is indifferent to the operation of the spot market and the pricing signals created in that market.

Providing transmission networks with incentives to operate in a fully integrated manner with the market will enable efficient outcomes to be achieved. Providing transmission networks with these incentives will help in preventing price spikes similar to those seen earlier this

year. Under current regulation it is profit maximising for transmission networks to carry out network maintenance and other work when the cost of labour is cheaper, which may well be during peak demand times. This is because networks have capped revenues and there is no extra incentive to increase revenue rather than minimise cost. Any such work taking place can restrict capacity and have the effect of reducing supply, hence creating price spikes in the spot market. Such events show that the decisions currently made by transmission networks are not necessarily made with consideration for the market as a whole. Recent experience with the market for frequency control ancillary services has again highlighted this issue.

Secondly, there has been some discussion about the operation of the spot market. Often you will hear proposals for price caps, controls on generator bidding or suggestions for fast tracking interconnection. While any or all of these may have their place, very few commentators have thought about how they fit with an energy-only market. Indeed, if you restrict the bidding of generators or cap market prices then presumably you need other mechanisms to compensate generators, such as capacity payments. Consequently, these issues are often more complex than they appear at first glance, and unfortunately many commentators don't give them much more than that. Some believe that we need to revisit the market design and embrace an alternative such as a net pool or bilateral contract market. I don't.

NEM Governance

The governance arrangements of the NEM have failed to quickly resolve the integration of energy markets with network services, largely because the issue has become political in nature.

As you will have gathered, the ACCC is attracted to the economic efficiency objectives of introducing pricing into transmission that reflects the usage of existing transmission capacity and draws network investment decisions closer to investment decisions in the energy market. I acknowledge there are contrary views that networks should be viewed as passive participants and, therefore, any pricing should reflect equity rather than economic efficiency objectives. For example, nodal pricing provided an economically efficient means of pricing transmission usage. However, nodal pricing would highlight variable energy costs between different regions, which some governments seem to fear.

Code change process

In this context there is perhaps an unresolvable tension between balancing the political concerns with the objective of developing an efficient market. Furthermore, it has not been possible to proceed with changes to network pricing in any coherent, integrated fashion, as the reviews of network pricing have resulted in a number of separate recommendations for incremental changes to the Code. The first set of Code changes submitted to the ACCC were those arising from the Transmission and Distribution Pricing Review. The second set of changes came from the review of Network and Distributed Resources, and another set of changes will be submitted to us upon completion of the Review of the Integration of Energy Markets and Network Services (RIEMNS).

The ACCC's role

Faced with considering each set of Code changes separately, and while we have firm and considered views about the future direction of the market and what are the current and emerging issues for resolution, it must be remembered that the Commission does not have regulatory powers at large in respect of the electricity market. Nor does anyone else. Consequently, while we have indicated many times in the past that we favour moving towards nodal pricing, we cannot impose it; rather we seek to encourage debate. In the light of this background it is not surprising that the Code change process has failed to deliver a suitable solution, or even direction regarding the integration of network service with energy markets. In some respects the experience with network pricing illustrates one of the institutional design deficiencies in the NEM – the lack of a national regulatory approach. Indeed, the current decentralised approach to decision making guarantees a Balkanised or Gulag approach to NEM development - one that promotes differences rather than commonality.

Governments' role

Since the start of the NEM many questions have been asked about governments' role in the policy development and decision-making processes. The NEM governments have two interests in the NEM:

- an interest in the assets which they own as government business enterprises; and
- interests in providing constituents with a secure and reliable electricity supply at reasonable prices.

The conflicting nature of these interests has been the origin of many of the questions of governance.

First, in dealing with immediate problems, governments are likely to make decisions that protect their constituents from negative short-term impacts but which compromise the ability of the market to deliver long-term benefits. Problems in the market – the lack of a comfortable margin between supply and demand in some regions – are manifestly the result, not of deficiencies in the market rules, but of impediments to interconnection and lack of demand-side response. Band-aid responses are likely to inhibit the development of the long-term solutions.

Secondly, it is hard to be confident that policy makers will make decisions in the overall interests of the market, of competition, and thus of end-users, where they continue to have vested interests in the market as owners of generation and retail businesses. Consequently, I believe State/Territory jurisdictions should set the overall objectives of the NEM, but then leave the market development role to an arms-length process of regulation and market operation.

The concerns about the ability of the policy makers to make decisions for the greater good of the market have been illustrated by two cases of intervention. The Victorian Government intervened in the electricity market in February last year to soften the impact of what would have been a period of involuntary load shedding. While mandatory restrictions did achieve their purpose, their implementation significantly distorted price signals not only in the Victorian region, but also in the other NEM regions. The effect of this price distortion has been to raise concerns that market participants in the future may be discouraged from hedging themselves against the occurrence of future sustained periods of high prices, for example through investment in peak generation and demand side management. This summer should give us an indication of whether these concerns will be proven or not.

Another example of government intervention is in NSW where the NSW Treasury has established the Electricity Tariff Equalisation Fund (ETEF) to replace the NSW Vesting Contracts. The fund is a transitional arrangement to assist the gradual introduction of full retail contestability. It is designed to protect retailers supplying franchise customers from volatile pool prices. While the Commission supports the need to provide protection to retailers supplying customers under a regulated tariff, it is concerned that such a fund may have unintended effects, including a significant deterrence to competitive entry and behaviour, although NSW has assured us that this is not the case.

The current debate and future Code changes with regard to RIEMNS further illustrate the conflict of interest governments can have as market policy makers. It has been expected that a likely outcome of the review will be that NECA applies for Code changes that increase the number of regions in the NEM. This move will be an attempt to further integrate energy market prices with network congestion costs, a move that will sharpen the price signals faced by all sectors of the market when they are making investment decisions. However, some State/Territory governments remain opposed to the idea of increasing the number of regions. With such opposition the changes may not eventuate, preventing locational signals from reaching market participants.

As the Californian case demonstrated, if governments' involvement in development of the NEM actually stifles market development, partial deregulation is likely to be the worst of all worlds. Thus the potential ramifications are great. For this reason I believe that the role of jurisdictions should be one of reviewing the outcomes of the NEM and determining its broader objectives and structure, rather than involvement in the ongoing development and operation of the market.

I have said that on previous occasions so let me now try to be more specific.

A vision for the electricity industry

In my view, what the electricity industry now needs is a clear idea of future directions. You have probably gathered what, in broad terms, I think those future directions should be. In short, they amount to completion of the market. The most urgent need is greater demand-side

responsiveness. That is because the extreme inelasticity of demand is what simultaneously makes wholesale prices so volatile and creates the circumstances for generators to wield strong market power at times of tight supply and demand. The second market completion imperative is getting price signals to drive decisions about network augmentation, generation and load location, and interconnection, and what is more to have all those investment decisions made in an integrated, consistent manner. How should that integration be provided? By price signals, not by central planning. Networks (which as natural monopolies would of course be regulated) would respond to price signals in their operating and investment decisions in much the same way that generators already do and more and more users will do.

Now that vision is seen as threatening by some, particularly governments, because turning energy security and reliability as well as pricing over to the market is a huge loss of control for politicians who will be held responsible when things go wrong. No-one should expect them to look on that prospect with equanimity. But if the market is well-working there will be nothing for politicians to fear, any more than they now lose sleep about whether the supermarkets will have bread and milk on the shelves tomorrow morning.

So what is needed is a comprehensive plan for how we get to a fully developed, well-working market.

Governments will ultimately need to commit themselves to that objective, but they can only be expected to do so once they are convinced it really is achievable - once they are happy with the plan. That needs a lot more developmental work.

The catch in this is that the developmental work can only be done if governments commission it. My call, therefore, is for NEM Ministers to set in train the work required to map out the completion of the electricity market. Ministers may, for the present, be sceptical about whether the plan can be brought to fruition. They can certainly withhold support for implementing the plan until it is convincing. But we need them to give the go ahead to the planning itself.

Conclusion

The coming years are critical times for the national energy market as questions arise on its operation and governance. So far deregulation has delivered considerable benefits to users, industry and the economy; benefits that will only increase as the reform process proceeds. While I believe that it is premature to make wholesale changes to the market arrangements, I look forward to the independent inquiry into energy markets examining the operation of the electricity market, so that we can have a stock-take of what we have learnt from our experiences so far.

Perhaps the review can be the mechanism for taking forward to governments a vision of how a fully fleshed-out electricity market can work, and what needs to be done to get to that point.