AUSTRALIAN ENERGY REGULATOR

AER perspective on energy market developments

AER Chairman's Address
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Introduction

Good morning, and thank you to Perry and the AFR team for the opportunity to discuss the regulator's perspective on the outlook for the national electricity market.

From the AER's perspective, there are three key areas on which we will be focussing. First a continued focus on developing the economic regulation of energy networks that genuinely support efficient and necessary investment for the long term interests of consumers. Second, helping consumers be engaged and empowered to make well-informed choices in the competitive energy market and have confidence that they are appropriately protected by the new National Energy Retail Law. Third, the facilitation of truly competitive energy markets, at both the wholesale and retail levels.

Common among these issues is the recognition that it is necessary to continue to adapt regulatory approaches to respond to changes in the dynamics of the electricity and gas sectors. Relatively cheap and reliable energy has been an important factor in Australia's economic performance from the mid-1990s. To a large degree, this has been driven by continuing microeconomic reform and development of robust energy markets.

However, there are now significant pressures coming to bear on the energy sector that have not been faced over the period since the mid-1990s. In upstream markets, the relative price of inputs are coming under pressure from the potential for export parity pricing for gas and the impact of carbon reduction policies. In the network sector, peak demand is continuing to grow, while average energy consumption which drives prices is falling. At the same time, the electricity assets that were installed in the 50s, 60s and 70s are now reaching the end of their lives and require replacing. This leaves a large investment task to be funded over a smaller amount of consumption, leading to significant network price increases.

It is a storm that is culminating in very real cost pressures, in a sector that should deliver one of Australia's comparative advantages. To constrain these pressures will

require genuinely competitive wholesale markets, efficient networks and well informed consumers actively participating in competitive retail markets.

The good news is that there are processes in place taking up these challenges and maintaining the necessary reforms.

Facilitating competitive markets

Australia's energy market reforms of the past 15 years have been internationally recognised as a major success, delivering significant investment and continued high reliability.

In the electricity sector, the creation of the National Electricity Market in 1998 enabled states with excess capacity to efficiently share reserves with states like Queensland and South Australia who joined the market with very tight supply and demand balances. Since then, both South Australia and Queensland have had very strong growth in generation capacity, with capacity expanding by over 30 per cent over the last 20 years.

Significant investment in generation, at the right time and of the right type, has been the hallmark of the NEM to date. Into the future, the robust design of the energy market puts it in a good position to respond to the transition from carbon intensive production.

While it has taken a little bit longer to develop transparency in gas markets, trading hubs have now been created in Sydney, Brisbane and Adelaide, joining the Victorian market that has been trading for some time. While data errors have led to some price instability on occasions, the short term trading market enhances transparency and flexibility for a commodity that was, until recently, traded mainly under opaque long term contracts.

We are seeing significant changes in the way the gas industry works, particularly around transmission and storage. We now have a network of pipelines from Tasmania to Queensland, creating basin-on-basin competition that was a dream only a decade ago—and with only a few of the key transmission pipelines remaining regulated.

There are entirely new and rapidly changing market dynamics, driven by the growth in coal seam gas, the related LNG export projects from Gladstone, and continuing

growth in gas-fired generation. These developments are increasing the need for flexible supply arrangements including short- and longer-term storage options, and the ability to shift gas between regions. Even the gas industry experts have changed their views within a short space of time as to which direction the net-flow of gas will be on certain pipelines in 2 or 3 years, and may well change again as conditions develop. We will hear more on that today. In my view, competition and open markets are the key to ensuring adaptation to these rapid changes and the type of flexibility we expect to see in this market.

The gas and electricity markets are becoming increasingly linked and we need to be aware of this when confronting the objectives of security, reliability and efficiency across both markets. The large retailers, with varying combinations of upstream gas interests, gas-fired generation and energy customers across the country are already facilitating co-optimisation between gas and electricity markets. But transparent gas markets are critical to continuing this process. While the introduction of new gas short term trading hubs and the National Gas Market Bulletin Board—which displays data on gas production and delivery in eastern Australia—are significant steps, the push for transparency and efficiency in gas market design should continue. To this end, Minister Ferguson's draft Energy White Paper refers to considering the development of upstream gas market trading. Gas swaps and trades are of course already a feature of the industry, and an upstream market might facilitate greater participation by major users and increased liquidity in the market.

The National Electricity Market, extending from North Queensland to South Australia and Tasmania, is highly regarded for its stability and delivery to date of solid outcomes of reliability, price and investment. But, while recognising our position as world leaders in wholesale market design, there are still areas where there is ongoing work to ensure that the frameworks surrounding the markets are effectively supporting their efficient operation.

In particular, there is still work to do on the interface between the competitive electricity market and the natural monopoly network elements. Over the next 20 years, there is a sizeable investment challenge for both networks and generation. A low carbon future will change the pattern of investment in both segments of the market. Our concern is that the two segments need to have aligned incentives to ensure the most efficient investment mix, leading to least cost energy delivery to

customers. This means that generators should have clear pricing signals to locate in the most efficient part of the network. At this time, generators have comparatively low liability for costs of access to the shared electricity transmission network, compared with their cost to access gas transmission. This is an issue that is currently being investigated by the Australian Energy Market Commission as part of its Transmission Frameworks Review.

Equally, when looking at options for meeting growing demand, network companies need to be appropriately incentivised to genuinely consider all options, including non-network options such as demand side participation or local generation. A regime that is skewed towards network investment risks crowding out more efficient options, leads consumers exposed to paying more than is necessary for a safe and reliable energy supply. There is an economic test which must be applied to new infrastructure and one the AER's responsibilities is to ensure that the electricity transmission and distribution companies properly assess the alternatives before committing to an expensive network option.

Another area that we are watching closely is the change to market structure that has been occurring within the NEM. As a precursor to market start, the previous state-government-owned all-in-one energy companies were vertically separated and corporatised. From market start, it had been envisaged that generators and retailers would manage their exposures to the compulsory gross pool by entering bilateral financial contracts. However, over time the dominant business model that is emerging is that of the vertically integrated generator-retailer. In this model generators and retailers hedge at least some of their positions physically, rather than relying on financial instruments.

While different, this model in and of itself may not be cause for concern. However, it is possible that vertical integration could have adverse impacts on competition with flow-on effects for consumers. For example, the dominance of a few vertical integrated participants could lead to difficulty in gaining contract cover, increasing barriers for new entrants in the retail sector.

Ultimately our concerns are for the outcomes at the retail end of the market. If the retail market is competitive, consumers should see efficient prices. However, if the retail market stagnates, and retail margins grow to excessive levels, with no new entry

as would normally be observed in competitive markets, we would be concerned for the wellbeing of the whole system.

It is too early to say whether these concerns about energy structures are well founded, but one of the tasks the AER has set itself is to monitor and report on these developments. The AER will, from 1 July this year, take on new responsibilities in the regulation of retailer conduct, and monitoring of the retail market will be a new focus for the organisation.

Empowering consumers

One of the ways we can help facilitate competition in the retail market is to ensure that consumers have high quality information to on which to base firm purchasing decisions.

As required under the new Retail Law, we are developing a new price comparator website for consumers – this will allow small consumers to compare various offers available to them. Our price comparator will be simple, independent and impartial. It will not offer a switching service, act like a broker or have affiliations with energy retailers or other interested parties. It will be a valuable independent and effective guide for consumers trying to navigate this often complex market.

The price comparator website is due to go live on 1 July 2012, when the Retail Law is expected to commence.

In addition to the price comparator, the national energy retail reforms will transfer significant new functions to the AER from 1 July 2012. The reforms aim to deliver streamlined national regulation that supports an efficient retail market with appropriate consumer protection.

Demand side management

A critical aspect of consumer empowerment is the ability to engage and participate in the market. As I outlined at the start, we are currently experiencing a period where average consumption is falling, while peak demand is growing. It is important to recognise that the growth in peak demand is one of the major drivers of costs across the supply chain- in both networks and in energy production. The AEMC's directions paper on its 'Power of Choice' review refers to estimates of $11 billion of

infrastructure being required for 100 hours of the year. Thus it stands to reason that containment of growth in peak demand is one of the necessary measures to moderate the growth in prices.

There are no easy measures in this space. The solution will require more than smart meters and allowing time of use pricing. While important, price signals alone are unlikely to be sufficient to contain the growth in demand at those critical times of maximum demand which drive the need for network investment and peaking plant capacity. As I mentioned earlier, network companies need to be giving genuine consideration to non-network options as part of their planning and assessment processes to meet future energy needs and there should be both obligations and incentives to ensure that demand side management is implemented.

In addition, there is a need to better understand the benefits that could be gained from the installation of 'smart grid' infrastructure. 'Smart grid' is a term used pretty widely to describe a broad suite of technologies that actually form part of a spectrum. On one side, you have the traditional electricity network, with a communications network overlay to enable fast identification of network faults and more efficient real time monitoring and control. With further development, there are opportunities for intelligent load control and local supply options, such as solar, electric vehicles and fuel cells, with a more enhanced communications network being used to hold a more decentralised energy supply arrangement together.

The key to the future of demand management is the consumer engagement made possible by modern communication technology. A communications network with an in-home display is a start in providing information for informed choice. But even without the consumer's direct involvement, there are relatively simple technologies that enable direct load management, such as by remote switching of compressors on air-conditioners to control peak loading on networks. Such opportunities should increasingly become a feature of network development plans. The AER, through its determination of charges for use of networks, makes allowances for expenditure on demand management and also provides for trials of innovative demand management solutions.

From a regulator's perspective, we need to be able to assess the business case for these expenditures. We note the possibilities for development of demand

management, energy efficiency and carbon reduction. The cost and scope of the technologies, particularly the communications technology necessary to synchronise the entire system including centralised and local generation, network and load control, is reducing rapidly, opening a wave of possibilities. But what is not yet clear is how the distributed benefits of reduced consumption, savings in the network and savings in peak generation can be captured such that the total benefits can be brought together to warrant the costs. This underscores the importance of the Smart Grid, Smart City $100 million trial that is being conducted by the Australian Government and the further work being undertaken by the AEMC as part of its Power of Choice review.

This trial can help to analyse the costs and benefits of the various applications and importantly, understand which segment of the supply chain – network businesses, retailers, demand aggregators, users or a new class of agent, is best placed to capture these benefits. There are significant policy questions to be answered here in terms of who owns what, who can capture what and how and who gets paid for which services. The results of this trial will be instructive in identifying how the technologies and institutions may develop and whether the current regulatory regime will be capable of supporting the efficient uptake of these technologies.

Network regulation

While growing peak demand, together with the need to replace ageing assets are the key drivers of network cost increases, the AER has also said that changes are required to the regulatory regime to give consumers confidence that they are not paying more than is necessary for a safe and reliable supply of energy. Late in 2011 we proposed a package of measures that would amend the national electricity and gas rules and equip the regulator with the tools required to assess of network spending proposals and determine an independent forecast of required expenditure.

The rule changes proposed by the AER are now being considered by the Australian Energy Market Commission through its consultative processes. In very broad terms, there are three areas that are being considered.

First, the process for determining the forecasts of required expenditure. Second, the incentives on network companies to spend only what is necessary to provide a safe and reliable supply of energy. Finally, the process for determining the rate of return that networks earn.

The directions paper prepared by the AEMC canvasses the need for changes to the incentives provided to networks and the manner in which the rate of return is set. In regard to the determination of forecast expenditure, the AEMC has flagged the need for further work and more evidence.

From the AER perspective, we see it as important that, at the end of the process, there is a regulatory regime that provides incentives for efficient investment in the networks and constraints on inflated forecasts and unnecessary expenditure. Further the method for setting the allowance for the cost of capital must be adaptable to reflect changing financial markets and funding practices.

Setting forecasts of required expenditure

I spoke earlier of one of the strengths of the NEM being the stability of its design. Similarly in network regulation, the stability of the regime is ensured by a set of revenue and pricing principles that reside within the gas and electricity laws. Importantly, the first of these principles is that networks should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing services and complying with regulatory obligations. The language 'at least efficient cost' reflects the accepted principle in regulatory economics that, given the cost to the community of a failure in supply, a small under-investment in infrastructure has a greater economic cost than a small over-investment.

This is a critical consideration and one that has been at the heart of the development of the AER's rule change proposal. Nothing in the AER's proposal seeks to amend the clear and consistent set of principles established in the law.

Further, sitting under the law, the rules contain a set of expenditure objectives, which must be observed by the regulator. Again the AER proposal does not seek to amend these objectives. The retention of these core principles and objectives maintains the stability and predictability of the regime.

Within these bounds, the AER proposal would allow a more balanced approach to setting forecasts, while ensuring that networks are funded to provide a safe and reliable electricity supply.

In addition, we have proposed changes to improve the process of regulation and allow more effective involvement of consumers in the process. Given that consumers ultimately bear the consequences of the regulatory decisions, it is important that consumers have confidence that the approved expenditure has been subject to a rigorous and independent assessment.

Setting the rate of return

The final aspect of network regulation that I will mention today is the process for determining the cost of capital, or the rate of return that networks are allowed to earn on their assets.

The AER currently administers three separate regimes for setting the cost of capital across electricity distribution and transmission and gas. The AER has proposed a hybrid of these models, borrowing what we see as the best performing features of each one.

It is essential that investors are able to rely on a consistent approach to determine the rate of return. That said, there must also be a mechanism to develop, in consultation with stakeholders, refinements in approach to be sure that changes in financial markets and financing practices are recognised by the regulatory regime. Under the AER proposal, the AER would undertake a cost of capital review at least every five years that would establish the methodologies, and in some cases the individual numbers, to be used at each subsequent price reset. We see this as the correct balance between the flexibility needed to initiate a review if there is a marked shift in the market, with the certainty required for both users and the networks themselves.

One of the key changes that would follow from our proposal would be a change to the way we calculate the allowance for the cost of debt. As it stands at the moment, the AER is tasked with creating a benchmark cost of debt based on a benchmark Australian BBB+ corporate bond of 10 years maturity. However, because of changes in financing practices, particularly since the GFC, there is a lack of bonds from which to establish a consistent and reliable benchmark. Current practise is to use the Bloomberg fair value curve, which extends only to 7 years. This means that we must extrapolate out to 10 years. The spot tests that we able to carry out on the resulting benchmark suggests that it is higher than the costs being achieved in the real world.

Broker reports on some of our listed companies also reflect this view, observing that the high margins embedded in recent determinations are unsustainable.

The key for all parties in this process is that a set of rules emerges that is flexible enough to keep pace with financial markets and the financing practices of the sector. It is for this reason that the AER has proposed a mechanism that would allow for a holistic consideration of all parameters and the underlying methodology for their calculation as part of the WACC review, rather than attempting to codify this in the rules. We look forward to contributing to the AEMC's examination of this issue and responding to other suggestions in the coming months.

Conclusion

Energy market reform has delivered much for Australia, but we see, we can learn from looking back over our experience and should always be looking forward as comparative costs, emerging technologies and community values are changing rapidly. The regulatory regime and regulatory practices must adapt. Reform is a process of continual fine-tuning to ensure that the market continues to deliver in the long-term interests of consumers.

The Australian regulatory framework, through the National Electricity Laws and Rules, is set on solid foundations and clear, consistent and predictable principles and objectives. But bounded by these, we must always be prepared to review, analyse and question the outcomes. The regulator is uniquely positioned to provide an operational perspective, and we appreciate the opportunity to share this perspective with you today.

Thank you.