Queensland Power Conference

What does the Australian Energy Regulator envisage for Queensland?

Geoff Swier, AER Member

13 September 2007

Introduction

The Australian energy sector has been markedly transformed over the past 15 years. The central reforms included the establishment of a National Electricity Market (NEM) in 1998, regulated access to energy networks and the introduction of retail competition. We have seen privatisation of the Victorian and South Australian electricity industry, and recently Queensland's electricity retail sector. New South Wales is presently considering privatisation of the retail and generation sectors. More recently, there has been substantial progress towards more competitive and integrated markets in gas.

The liberalisation of energy markets has led to substantial new investment. Across the NEM, annual investment is running at around $700 million in electricity transmission infrastructure and $3,000 million in the distribution sector.

Overall, network investment will rise by around 40 per cent in real terms in the five years to 2007–08, driven largely by transmission expansions and upgrades. There has also been strong investment in gas, including around $2.5 billion in transmission pipelines and expansions since 2000. Over this period the energy market has generally delivered reliable services, it has improved productivity and - until very recently - lower energy prices. There has been upward pressure on prices in 2007, a matter I will return to shortly.

Queensland is a rapidly growing and dynamic region in the energy industry. It has been fully interconnected with the NEM since 2000. The State has recorded the strongest growth in generation investment in the NEM with around 3700 MW of new plant being added since 1999. There has also been substantial investment in the networks. Queensland's gas sector has seen strong competition between PNG gas and coal seam

methane, with impressive growth in CSM since the suspension of the PNG pipeline project. The government's initiative to privatise the energy retail sector in 2006 will give significant further impetus for industry change.

Transition to national regulation

A central focus of policy reform in the past five years or so has been the development of a national regulatory framework to meet the needs of an emerging national energy market. In 2005, governments established the Australian Energy Regulator to implement a consistent national approach and replace the previous state by state approach to regulation.

In undertaking its roles, the AER is guided by the objective set out in the legislation, which is:

to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.

The AER is becoming the regulator of the energy sector on a staged basis. It has been the regulator of the electricity wholesale market and transmission networks since July 2005. The regulation of electricity distribution networks, gas pipelines and some retail functions will transfer from the states to the AER over the next six to 18 months. The transfer of network regulation seems likely to occur by early 2008 once the enabling legislation is passed through the South Australian Parliament.

A second tranche of legislation, scheduled for later in 2008, will transfer a number of retail functions to the AER. These cover non-price areas such as consumer protection and retailer-of-last-resort arrangements.

The regulation of retail prices will remain with the jurisdictions unless they choose to either deregulate retail energy pricing or transfer this role to the AER.

Once the new legislation is in place the AER will undertake economic regulation of over 40 network businesses. The number of AER reviews undertaken annually will rise

from an average of around two to eight. At the peak of the review cycle in 2010, the AER will undertake reviews for around 12 network businesses.

The AER has been preparing for its expanded responsibilities for some time and will be well placed to take on its new functions. We have been working closely with the jurisdictional regulators and regulated businesses to improve our understanding of the regulatory environment in which each business operates, and the specific issues for particular states and networks. At present the AER is well advanced in planning and consultation with the electricity distribution businesses in NSW and ACT in preparation for regulatory resets due for July 2009

The AER will recruit around 50 new staff over the next two years, including many from the jurisdictional regulators. We will also have a local presence in most NEM jurisdictions. There are currently AER offices in Melbourne, Canberra, Sydney and Adelaide, and a Brisbane office is planned for the near future.

The new legislation

The new legislation includes some fundamental changes that go beyond a transfer of functions to the AER. There will be a new National Gas Law and amendments to the National Electricity Law. A comprehensive set of Rules will sit beneath each Law.

A central theme has been to promote regulatory certainty though a more prescriptive approach to revenue cap regulation. This has been implemented both through legislative amendments and through a 2006 review of the electricity transmission pricing rules by the AEMC. In general, the new arrangements codify (albeit with a lot more prescription and clarity) the incentive based ex-ante building-block approach already used by the AER and prior to that the ACCC.

Among the changes are tighter and more prescriptive time frames for regulatory decision making — 11 months for electricity transmission, 13 months for electricity distribution and 6 months in gas.

The legislation has strengthened the regulator's information gathering powers which is important in ensuing objectives of regulation are achieved and enabling these timeframes to be met. For example, the information powers will cover associated

entities. At the same time, there are new accountability mechanisms to ensure that information is gathered for *bona fide* regulatory purposes.

There have also been efforts to engender greater consistency between regulatory approaches in electricity and gas. A key change is that the merits review provisions currently available in gas will be extended to electricity.

Some of the most significant changes will occur in the regulation of gas pipelines. There has been some criticism in recent years that the gas sector is over-regulated, following substantial investment to create an interconnected pipeline network in south-east Australia. The new gas framework responds to this concern by introducing a less intensive regulatory regime. In particular, the regime allows for a 'light' regulation option under certain conditions, and a 15 year regulatory 'holiday' for new gas pipelines.

The AER's approach to energy regulation

The new legislation aims to achieve a consistent national approach to energy regulation that reduces regulatory costs and uncertainty to business. The AER is undertaking it's work and planning consistent with this objective.

In the past there have been criticisms that regulators sometimes changed the rules mid-process. The new legislation provides certainty by pre-determining many aspects of the regulatory process. The AER will seek to further minimise regulatory risk through clear up-front requirements and consultative processes.

The new timeframes mean that an initial regulatory proposal by a business will need to be comprehensive and fully supported by documentation.

A key message is that it will be very strongly in the interests of regulated businesses and the regulator to have consulted on the regulatory proposal to ensure that as far as possible all relevant information is provided upfront. With that in mind, the AER is working with the businesses to set out the type of information that should be submitted in regulatory proposals, and the form in which it should be submitted. This will both speed up the regulatory process and help ensure that proposals meet the requirements of the Rules. The AER has adopted this consultative approach with the NSW and ACT

distribution businesses for their upcoming resets, and will do likewise in Queensland and elsewhere.

State of the Energy Market Report

The AER recently published a major new report on the state of the energy market as a whole. This report aims to present a big picture perspective of the energy market, covering the wholesale and forward electricity markets, networks, retail and gas markets. The report has been written for a wide audience and aims to consolidate a wide range of information from various sources into a single user friendly publication. We are interested in stakeholder's views of the report and areas for focus and improvement in future.

The Queensland energy sector

I would like now to move on to discuss some recent developments in energy markets, with a particular focus on Queensland.

I might start by talking about the wholesale electricity market, which has this year experienced higher prices caused by a combination of high demand, constrained supply and generator bidding.

Electricity wholesale market

In the wholesale market, the AER monitors the compliance of participants with the National Electricity Law and Rules, and prosecutes breaches.

The AER reports on weekly market activity, unusual incidents, and is required by the national electricity rules to report on extreme price events.

Wholesale prices rose sharply this autumn due to the effects of drought on hydro-generating capacity in the Snowy, Tasmania and Victoria. The drought also limited the availability of water for cooling in some coal-fired generators such as Tarong and Swanbank in Queensland. These tight supply conditions were exacerbated in June by rain and flooding in the Hunter Valley, which affected some capacity. Cold winter conditions increased heating requirements, leading to a number of new record demands.

These factors led to an extremely tight supply-demand balance during the early evening peak hours, particularly in New South Wales.

These factors were exacerbated by generator day ahead bidding practices of generators. In particular, Macquarie Generation, regularly repriced capacity into higher price bands during evening peaks throughout June. Typically Macquarie repriced around 20 per cent of its capacity from under $500/MWh to over $5000/MWh between 5 p.m. and 7.30 p.m. These practices did not involve a breach of the National Electricity Rules. More generally the AER has not detected any evidence of collusion between generators.

In combination these conditions led to an unprecedented pattern of high spot prices. Spot prices exceeded $5000 per MWh on 42 occasions in June 2007 in New South Wales, Queensland and Snowy. The AER as required by the rules published a report on these events in July 2007.

High prices flowed through to the forward market for electricity derivatives, which also experienced record prices in June. This put pressure on some retailers and those large energy users that needed to recontract their forward energy purchasing arrangements. Two retailers exited or scaled down their presence in the market. Energy One withdrew from the market and triggered a retailer of last resort event, while Momentum Energy divested most of its small customer contracts.

This shakeout has reduced the number of independent retailers, but has undoubtedly strengthened the focus on risk management by retailers and large energy users. This should have positive impacts on incentives for investment and demand side management and in turn on reliability.

While forward electricity prices have eased since June, they remain higher than in the past, particularly in Queensland. There are risks that extreme prices may recur in the future due to capacity constraints caused by drought. These risks may be reflected in the pricing of forward electricity contracts. Longer term, forward prices also reflect expectations for new investment. As mentioned, Queensland is experiencing strong generation investment, and this looks set to continue. The anticipated completion of new water supply infrastructure should relieve current generation capacity constraints. A major new 750 MW power station will be fully operational at Kogan Creek this year.

Origin Energy recently announced the construction of a new 630 MW gas-fired power station in the Darling Downs, scheduled for full operation by early 2010.

There are nonetheless some concerns about investment at the national level. The Energy Reform Implementation Group's 2007 report to COAG referred to the risks associated with government-owned energy businesses and evidence of intermittent but persistent market power in the NSW market. The NSW Owen Inquiry report, released this week, recommended that the government should divest its generation and retail interests to the private sector to secure necessary investment. Similar concerns were recently raised in a report by the AEMC Reliability Panel.

Compliance and enforcement with the National Electricity Rules is an important area of the AER's work. The Rules contain around 1500 obligations that apply to different parties. Some are very important - for example compliance by generators with their technical standards is necessary to maintain power system security. The AER has recently completed a comprehensive risk assessment of the rules. This involved assessing the rules in terms of the probability an obligation would be breached, and the impact any breach would be likely to have on the market. The outcomes of this work was recently published in a detailed statement by the AER of its approach to compliance and enforcement. The aim is to provide greater transparency and encourage compliance with the rules.

Electricity transmission

The AER recently completed a major transmission revenue reset for Powerlink which was the AER's first major revenue reset decision since the transfer of transmission regulation from the ACCC.

In establishing a revenue cap for Powerlink, the AER's task was to assess the efficient costs of providing transmission services in Queensland. The AER undertook extensive consultation with stakeholders, including public forums, meetings with stakeholders and multiple submissions processes. A central challenge was to understand and account for specific factors affecting Powerlink - in particular rapid demand growth and the impact of electricity industry cost pressures and the related cost impacts of the minerals and construction boom.

In respect of demand growth, Queensland has experienced summer state-wide growth in electricity demand of 31 per cent over the five years leading up to the reset. Looking forward, Powerlink forecast annual peak summer demand growth of around 4 per cent over the regulatory period, based on economic and population growth projections. Another factor is the increased penetration of air-conditioning. The impact of air conditioning and population growth was particularly evident in south-east Queensland, where growth was forecast at around 7 per cent per anum.

The AER decision on Powerlink provides for $2.6 billion of investment over the next five years to meet demand growth and the need to replace ageing assets. The decision provides for annual average investment of around $520 million—a rise of 80 per cent compared to the past five years. There is a further contingent projects allowance of $1.4 billion related to a number of defined triggers events. The inclusion of these projects on a contingent basis acknowledges that mining developments, industrial developments, drought conditions and changes in generation patterns could possibly require additional spending to meet demand and maintain reliability standards.

It is important to note that transmission revenue decisions provide transmission companies discretion over how to manage their businesses and to adjust expenditure decisions to events as they unfold. The decision has been structured to provide incentives for transmission companies to seek more efficient ways of delivering services. The AER has sought to balance expenditure efficiency incentives against a new incentive scheme on service levels. The scheme rewards Powerlink if it is able to raise service levels above targets set out in the decision.

The AER considers that the Powerlink decision provides a fair and reasonable risk adjusted rate of return on efficient investment and balances the interests of Powerlink and network users as required by the national electricity rules.

The Powerlink decision increased transmission charges by around 6 per cent per year. Of course the price impact for most customers is much less given that transmission costs account for less than 10 per cent of average end user electricity charges in Queensland.

In June the AER issued an issues paper proposing improved service standard incentives for electricity transmission companies. This reflects research indicating that transmission outages account for 30 to 40 per cent of total congestion costs. The proposed new service standards incentive scheme would reward transmission companies for reducing the number and duration of outages that have a market impact and providing more advanced notice of outages. Transmission companies should have better incentives to time outages in off-peak periods, conduct live line work and better co-ordinate outages. The AER is in the process of considering submissions on the proposals and should be in position to announce the next steps shortly.

Electricity distribution

Current indications are that jurisdictional agreements will allow economic regulation of distribution networks to be transferred to the AER by early 2008.

Regulatory resets for ENERGEX and Ergon Energy will be the AER's second round of electricity distribution resets following NSW and ACT, and are due to be finalised in mid–2010.

The AER understands that a good knowledge of the environment in which each network business operates is important to ensuring a smooth transition to the new regime. To this end, we will continue to engage in discussions with energy businesses and the local regulators, and as mentioned in due course AER expects to attract staff presently working for the jurisdictional regulators.

The latest indication from the policy makers is that the AER will be required to start consultations for distribution resets around 24 months before the new regulatory period, and finalise its regulatory framework 18 months before the new regulatory period. This will mean beginning consultation for the Queensland resets in mid–2008. Depending on the timing of the new legislation, it is possible that some transitional arrangements may be needed for the Queensland resets. This is because some elements — such as ring fencing and some other non-price areas — are being addressed in the second tranche of legislation. But the basic framework for economic regulation will be clearly established.

The AER has undertaken considerable work in developing guidelines and models to clarify the regulatory approach in distribution and help businesses develop suitable

information systems. These include guidelines on the asset base roll forward model, the post tax revenue model, a cost allocation guideline, and an efficiency benefit sharing scheme.

The AER intends to release draft guidelines and models shortly after the new Rules take effect. As mentioned, the AER has been working closely with the NSW and ACT distributors to clarify information requirements. The requirements established for NSW and ACT will be important precedents for Queensland distributors.

The AER will follow similar consultation processes for Queensland, in particular to ensure we account for factors that are specific to Queensland. For example the AER is well aware of the strong growth in demand in Queensland. We are also aware that reliability has been identified as an issue requiring attention for the Queensland networks. The 2004 Somerville review led to new standards of service delivery that have increased investment requirements. The AER will be mindful of these contexts in planning the reviews.

Gas markets

After several years of stability, gas prices have tracked higher over the past 12 months. This is most apparent in Western Australia, where prices have risen from around $2.50 per GJ to over $7 per GJ in the space of a year. Higher prices have been driven by a combination of tight supply and escalating LNG prices on export markets.

Gas prices have been relatively constrained on the east coast, due in part to a rising supply base with new discoveries of coal seam methane, notably in Queensland. The growth of CSM has been extraordinary, with production rising from around 2 PJ in 1998 to 70 PJ in 2006. Indeed by 2006, CSM supplied 56 per cent of the entire Queensland gas market. This expansion has led to some rationalisation of CSM assets through mergers and acquisitions, which have come under the scrutiny of the ACCC.

There has been some price pressure coming from rising demand – especially from gas fired electricity generation. In the short term, the effects of drought on electricity prices have increased the attractiveness of gas fired generation.

CSM has added a new source of gas supply in Queensland to compete with more established supplies from South West Queensland and the Surat and Bowen Basins. Over the last few years, CSM has also competed with the proposed PNG Gas Project for new gas contracts, and ultimately contributed to the suspension of that project.

Now that uncertainty over the PNG pipeline has ended, very substantial contracts are being written with CSM producers. This is exemplified by a recent contract for the supply of 470 PJ over 20 years to Rio Tinto's alumina refinery at Gladstone. In addition, Origin's forthcoming 630 MW power station in the Darling Downs will be supplied by CSM.

Until now it has only been possible to market Queensland CSM interstate through swap arrangements, because Queensland is separated from the pipeline networks to the south. That is about to change, with Epic Energy's announcement of the Queensland to South Australia and New South Wales (QSN) pipeline link. The link will run from Ballera to Moomba, with expected completion by the end of 2008. The new link will complete the physical interconnection of transmission pipelines from Queensland to Tasmania and South Australia. The final link in the chain will be to reverse the flow of the Ballera to Wallumbilla Pipeline to allow the physical movement of gas to the QSN link and beyond.

This is likely to trigger an early AER review of the access arrangement for the Ballera to Wallumbilla Pipeline to consider tariffs for westward transportation.

With CSM reserves continuing to rise, Santos in July 2007 announced a proposal to build a 3–4 million tonnes a year LNG facility near Gladstone, to be supplied with CSM gas. The facility, if it eventuates, could generate exports that exceed total current Queensland gas production. Clearly this would alter the supply–demand balance in Queensland and would have implications for prices.

While these developments are commercially driven, efficient pipeline access will continue to be an issue for stakeholders. Gas pipelines are regulated under the National Gas Code, soon to be replaced by the National Gas Rules under the new legislation. The approach involves the setting of benchmark reference tariffs that reflect efficient costs. The regulation of transmission pipelines is expected to transfer from the ACCC to the

AER by early 2008. Similarly, the regulation of distribution networks will transfer to the AER from the state regulators.

The National Gas Code currently applies to only five Queensland pipelines — the South West Queensland, Roma to Brisbane, Carpentaria, Queensland Gas and Dawson Valley pipelines. Several pipelines — mostly smaller networks — are not covered by the Code, although there are provisions that allow for an activation of coverage. When the Queensland Government enacted the Gas Code in 2000 it also included derogations that restricted the regulator's discretion. In particular, it prevented the regulator from setting tariffs for major pipelines for up to 20 years. While the derogation on the Roma to Brisbane pipeline recently ended, the others remain in place.

The AER's approach to pipeline regulation recognises the need to respond to market conditions and to foster competition and market development. By way of illustration, in assessing the access arrangement for the Roma to Brisbane Pipeline last year the AER had to consider how to deal with capacity expansions. The owner — APA Group — proposed that tariffs should be negotiated rather than set by a reference tariff, because rising construction costs made it difficult to set a tariff in advance that would ensure future cost recovery. The regulator agreed that to ensure the timely construction of expansions, it would be appropriate for tariffs to be negotiated commercially — subject to the parties having recourse to independent arbitration.

The retail sector

Queensland's energy retail sector has undergone major changes in the past year with restructuring and privatisation of the state owned electricity retailers and introduction of full retail competition for small business and household retail market. In terms of regulatory reform, a number of retail regulatory functions will transfer to the AER from late 2008. These include the regulation of default supply arrangements, marketing and contracting standards, retailer of last resort obligations and business authorisations. The jurisdictions will retain responsibility for the setting of default tariffs unless they choose to transfer those responsibilities to national regulation.

Privatisation of the two state owned electricity retail business have led to the entry of Origin Energy and AGL Energy. This continues a trend towards national energy retail

businesses and a concentration in ownership between the three major private retailers. . However there has also been some interest by niche players from interstate.

Full retail contestability for electricity and gas was introduced very recently - in July 2007 and follows the earlier introduction of FRC in other mainland NEM jurisdictions.

This development in combination with privatisation and new entry should provide a solid base for the development of a competitive and more efficient market, particularly in south-east Queensland.

Retail price regulation has been intended as a measure to protect consumers from the exercise of market power during the transition to effective competition. Jurisdictions have decided that retailer price regulation controls will be retained pending the outcome of AEMC reviews into the effectiveness of retail competition in each market.

The AEMC's first review of retail competition in Victorian is currently underway. No date has yet been set for any Queensland review. It can be expected that the decisions and experience on further retail market liberalisation in other jurisdictions will influence how retail price regulation in Queensland evolves in future.

The national retail framework is being developed by the Retail Policy Working Group under direction from the Ministerial Council on Energy. The AER is participating in the consultation process and is working with jurisdictional regulators to produce a seamless transfer of functions.

A particular challenge will be the rational division of responsibilities for consumer protection between the various regulators. The AER, State and Territory ombudsman schemes, the ACCC, and fair trading authorities will all have a consumer protection role. The Productivity Commission is conducting an inquiry into the consumer protection framework. The inquiry's recommendations may have repercussions for the framework being developed by the working group.

Further issues arise due to differences in jurisdictional regulatory approach. For example, Queensland has opted to make standing offer contracts the responsibility of the financially responsible market participant for each connection point — rather than a 'local retailer' as in other jurisdictions. The framework recently proposed by the Retail

Policy Working Group allows for these different approaches by making the designation of responsible retailers a jurisdictional matter.

A new scheme for retailer of last resort arrangements is likely to be developed separately from the main legislative package. The recent exit of retailers from the market has highlighted the need for an effective national retailer of last resort arrangements. The AER has argued that this process should be fast tracked, possibly by setting up an expert panel to consider the issue in detail.

Conclusions

The Queensland energy sector is one of the most dynamic in Australia, and has undergone the most extensive changes of any jurisdiction over the past year. There is strong investment across the entire supply chain in electricity, and coal seam methane is driving an impressive investment story in gas. The retail sector has been seen major reforms. Managing resource and cost pressures, and in the short term, the impact of droughts are important challenges for the sector.

The AER is well advanced in planning for taking over its new functions. We look forward to working closely with energy businesses and the local regulator for a seamless transition from local to national regulation, and to help ensure that Queensland's power and gas requirements are met through sufficient — and efficient — investment.