



2005 Energy Summit  
Sydney

Where the Australian energy sector is  
heading

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Ed Willett, Commissioner

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In recent weeks we have seen a campaign by certain vested interests in the gas and electricity sectors to create the impression Australia is on the verge of a collapse in infrastructure.

This collapse, the critics argue, is due to the failure of the Australian Competition and Consumer Commission to allow them to earn a reasonable income out of their monopoly pipelines and transmission lines, leading to an investment drought and almost sending them to the poor house.

The reality of course is very different. First, there has been no shortfall in investment in infrastructure regulated by the ACCC, or where regulation by the ACCC is in prospect. In fact, the reverse is true. Second, and just as important but often ignored, ACCC regulation has facilitated very high levels of investment by regulated infrastructure users. Third, many investment problems have been caused not by regulation, but by a lack of regulation in some areas of monopoly infrastructure. And fourth, regulation has limited price rises for regulated infrastructure and promoted competition in dependent markets to the benefit of consumers.

#### **Investment in regulated infrastructure - the record under the ACCC**

It's now been nearly a decade since all Australian governments committed to a comprehensive and ambitious reform agenda to improve our economic performance – National Competition Policy.

These reforms led to the opening up of Australia's previously rigidly state controlled infrastructure like gas, electricity, rail and telecommunications with the ACCC given the job of ensuring fair access by new entrants while providing reasonable returns which would stimulate investment and competition.

In the opinion of the ACCC, and most observers, it's no coincidence these reforms have coincided with the best run of economic growth in our history.

Just last month, for example, the most recent OECD economic survey of Australia declared that in "the last decade of the 20<sup>th</sup> century Australia became a model for other OECD countries".

In particular the report singled out the National Competition Policy reforms as playing a central role in Australia's economic success story, declaring them to

have been “the most extensive economic reform program in Australia's history”.

And the facts show that this economic reform program has not only benefited consumers with cheaper prices and better services, but has helped underpin a much overdue investment in vital national infrastructure.

#### *Electricity infrastructure investment*

In electricity transmission around \$4.2 billion has been invested in just the first five years of the ACCC regulatory regime. This investment adds around 30% to the replacement costs of transmission assets. This is very high considering the long life of these assets. Investment of nearly \$3 billion has been accommodated in ACCC decisions to date. Actual investment outcomes are likely to be even higher.

For example, TransGrid's actual investment expenditure over five years was approximately \$180 million higher than the \$885 million in the ACCC's 2000 decision (that is, a total of approximately \$1.06 billion over the regulatory period). Similarly, EnergyAustralia's actual capital expenditure was \$116.3 million for the period 2000 to 2004 compared to the \$57 million included in the ACCC's initial revenue cap decision.

The revenue caps for the next five years for Transgrid and EnergyAustralia are currently under review by the ACCC. As part of this process, the two companies have sought approval for unprecedented levels of capital expenditure: Transgrid \$2.15 billion and EnergyAustralia \$280 million. In TransGrid's case, the ACCC's draft decision allows about \$1 billion with provision for another billion if the need arises.

Now, maybe that's an aberration, so let's see if there's been an investment drought in gas.

You'd certainly think so if you've been listening to the pipeline industry, which for some time now has been claiming that the current regulatory environment is deterring efficient investment. For example, in a media release on 28 October 2001, APIA stated:

*The current regulatory quagmire is suffocating new pipeline development and requires urgent policy attention by governments.<sup>1</sup>*

#### *Gas infrastructure investment*

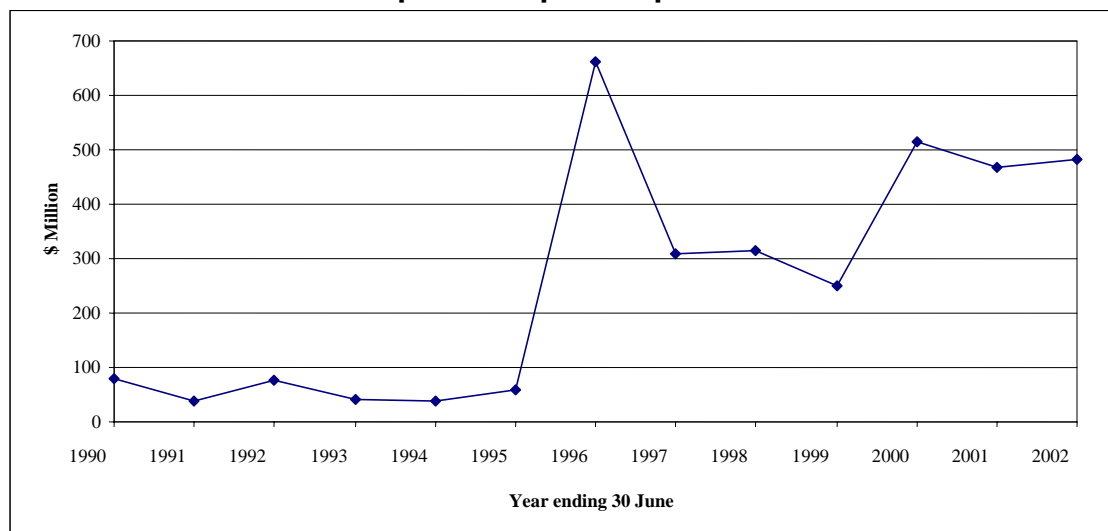
Well, actually, the record of investment in gas transmission under ACCC regulation has been even more impressive than it has been for electricity. According to the pipeline industry association's own figures, 14,000 km of new transmission pipelines have been laid in Australia since 1997. This amounts to a doubling in the length of transmission pipelines in Australia to 28,000 km in just seven years.

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<sup>1</sup> Australian Pipeline Industry Association 28 October 2001, *Media release: urgent call for national leadership in Australia's gas infrastructure development.*

Capital expenditure on new pipelines has increased substantially. The chart below shows that capital expenditure on new transmission pipelines stepped up to new levels around the time of the reform package in the mid 1990s. Data is not available for the most recent years, but based on the industry's statements about the construction of new pipelines since 1997 we would expect the trend in the graph to have continued if not accelerated.

**Transmission Pipeline Capital Expenditure 1990-2002**



Source: Australian Gas Association, *Gas Statistics Australia*, various editions.

Major new pipelines to have been constructed in the past few years include:

- Eastern Gas Pipeline: Longford (Vic) to Sydney
- Tasmanian Gas Pipeline: Longford (Vic) to Tasmania
- Roma to Brisbane Pipeline looping
- SEA Gas Pipeline: Port Campbell (Vic) to Adelaide
- North Queensland Gas Pipeline: Moranbah to Townsville
- Telfer Gas Pipeline: Port Hedland to Telfer (WA)

In addition, a number of new pipelines are currently under advanced consideration.

- Central Ranges Pipeline: Dubbo to Tamworth
- PNG Gas Pipeline: Papua New Guinea to South East Queensland
- Trans-Territory Pipeline: Darwin to Gove (NT)

Now, it is true that most of these new pipelines are unregulated, but that just demonstrates the flexibility of the regulatory framework in distinguishing between pipelines that need regulating and those that don't.

What it certainly does NOT support is any contention that the Gas Code, as applied by regulators, is deterring investment.

*Infrastructure investment in other regulated infrastructure*

And this success story isn't just confined to energy.

Take telecommunications for example, where since the opening up of the telecommunications market to full competition, and the opening up of access

regulation under the TPA, in July 1997, new investment has totalled more than \$19.7 billion since 1997.

There has also been a general downward trend in the prices of most call services with the price of an average basket of telecommunications services falling by 20.1 per cent in real terms between 1997–98 and 2002–03.

The ACCC has also accepted Airservices Australia's proposed investment program of \$542 million for the period 2004/05 to 2008/09. This is a substantial investment program for ASA, developed in consultation with the aviation industry. It will allow for the replacement and upgrading of essential navigational equipment.

### **Investment in dependent markets by infrastructure users**

This significant new investment under ACCC regulation, has also underpinned similar growth in related markets.

For example, the electricity generation industry has benefited from a significant increase in gas fired generation capacity since 1997, which is forecast to continue.<sup>2</sup> This demonstrates the increasing interdependence between gas and electricity market reforms.

Similarly, the significant increase in gas supplies in south east Australia has been supported by substantial exploration and development investment in both traditional gas fields and in coal seam methane. We are now seeing the development of new gas fields such as Geographe and Thylacine in Bass Strait west of Melbourne, Yolla in central Bass Strait and a host of coal seam methane fields in Queensland and NSW.

Lower gas prices stimulate greater usage of electricity and gas and greater activity in upstream and downstream industries. ACIL Tasman estimated that by 2013, access regulation could stimulate increased consumption of gas by the equivalent of a new market the size of NSW and the ACT combined.

This result highlights the importance of considering the impacts in related markets when assessing investment levels. For example, failure to moderate monopoly pricing in the transmission sector may inhibit the development of marginal gas fields in south east Australia reducing basin on basin competition and inhibiting competition and investment in downstream industries.

When assessing investment levels it is important to distinguish between efficient investment and investment which may represent a misallocation of resources. In some circumstances there is potential for inefficient pipeline investment to displace efficient investment in other areas. For example, if a northern pipeline project had been built prematurely with inappropriate support, it may have had an adverse impact on the development of Coal

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<sup>2</sup> ESAA (2004), *Electricity Australia 2003*, pp. 32-33.

Seam Methane (CSM) which is currently taking place in Queensland and NSW.

The development of an effective access regime over the past decade also means niche players can now invest in gas exploration and development, confident they can access transmission and distribution systems on reasonable terms. A good example of this is the Sydney Gas Company which has begun selling coal seam methane into the Sydney market.

### **ACCC regulation – good for investors**

This extraordinary level of investment across all these regulated industries begs the question of why would anyone invest such large sums of money when they are being denied the opportunity to earn a reasonable rate of return? Perhaps the returns that are being permitted under the regulatory regimes are not that unreasonable?

Since 1996, the Utilities Accumulation Index has generated a compound annual return of 17.4%, well in excess of the compound annual return of the ASX200 accumulation Index of 11.1%.

Ratings agencies have been just as positive about the prospects of regulated companies over the next three to five years. Moody's noted "the supportive regulatory frameworks and stable operating and financial profiles" while Standard and Poor's noted the "supportive and transparent regulatory regimes". Similarly, Fitch Ratings stated "the current regulatory regime appears relatively supportive for transmission entities".

The Allen Consulting Group (ACG) has also prepared a report that reviews the adequacy of the returns of regulated Australian utilities. ACG concluded that 'the Australian regulatory framework is providing adequate scope for companies to earn appropriate returns in the energy infrastructure industry'.

In addition, the recent pipeline sales by Epic and Duke attracted substantial interest from the investment community and that recent sales of regulated assets have been at prices exceeding their regulated asset valuations.

So the market has delivered its verdict on regulation in Australia – it is actually pro-investment under ACCC regulation.

### **Consequences of relaxing the current framework**

But what if the current regulatory framework were to be wound back?

What if there were no regulations and monopoly owners were allowed to exercise their monopoly power and raise prices unreasonably?

Although both gas and electricity directly account for less than 2% of GDP, even small changes to either sector can have a major effect on the entire economy.

The Parer Review<sup>3</sup> for example found energy costs account for 20% of the production costs in the paper manufacturing industry.

Work undertaken by ACIL Tasman has shown that that failure to restrain monopoly prices in gas and electricity could reduce Australia's GDP by around \$11 billion over the next 15 years.

This would be a disastrous outcome for the Australian economy.

Even with regulation we have seen nominal prices for electricity transmission increasing in all states, rising by an average of 15% over the last regulatory period.

This has been caused by investors seeking to earn a reasonable rate of return on the massive investment that has taken place in recent years.

However these price rises demonstrate the risks that would be involved in any move to wind back the current regulatory framework.

### **Where access regulation can promote further investment**

Access regulation under Part IIIA of the Trade Practices Act is now approaching its tenth anniversary. Part IIIA has been highly successful in developing attitudes on the shared use of natural monopoly infrastructure owners and most aspects of the implementation of the National Access Regime have worked very well. While Part IIIA largely reflect principles already adopted in most other developed countries, there is no doubt that it has been, and remains, contentious.

This is not surprising, because Part IIIA was designed to directly threaten the interests of natural monopoly infrastructure owners, especially those with extensive vertically integrated portfolios, for the benefit of infrastructure users (especially new users), competition in dependent markets and consumers.

The now CEO of a longstanding gas supply company told me in the early days of Part IIIA that it was the biggest setback for his company since the invention of the electric light globe. I thought that it was a good joke at the time, but as I observe the current debate on access regulation, I wonder whether it was intended to be so funny! Further, I find incongruous the oft repeated criticism of the ACCC's role in infrastructure regulation as too consumer orientated. After all, most economists regard notions of consumer welfare, community welfare and efficiency as synonymous. I certainly share that view.

The most contentious issue lately has involved the funding of capacity expansions for regulated infrastructure.

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<sup>3</sup> The Parer Review 2002, p.65.

It has been argued that the experience with Western Australia's Dampier to Bunbury Natural Gas Pipeline (DBNGP) reflected a failure of regulation under the National Gas Code. EPIC bought the pipeline and, disappointed with the return proposed by the regulator in the first access arrangement under the Code for this pipeline, refused to consider any proposals for much needed capacity expansion unless the returns on the existing investment were substantially increased.

But the real problem was that Epic Energy paid around \$1 billion too much for the DBNGP believing that, somehow, the clear implications of coverage of the pipeline under the Gas Code would not apply to them. A secondary problem was inadequate treatment of expansion under the Gas Code. One of the Productivity Commission's recommendations on reform of the Gas Code would address this problem.

A second pipeline to meet Western Australia's needs could be built for around \$1.2 billion. If it were not for the costs of a two year wait faced by energy consumers in the Perth region who desperately need more power, a second pipeline might have been the best solution.

In competitive markets, if someone pays too much for an asset, especially if the price is well above replacement cost, then they can expect to face substantial losses. But in the case of the DBNGP, EPIC was able to hold the state and gas consumers to ransom so as to limit the losses on its mistake.

This was despite the fact that a number of users wanted to fund expansion of the pipeline. The problem was ultimately resolved with limited damage in the sale of the pipeline to the Duet Consortium.

In another example of frustrated investment, over the past decade a number of iron ore mining companies have sought to fund the expansion of existing rail and port infrastructure in the Pilbara region so they could share the use of that infrastructure and expand iron ore production. But the existing infrastructure owners have resisted shared use, suggesting, explicitly or implicitly, that the access seekers should build their own infrastructure, regardless of how expensive or wasteful of resources. The result has been less investment in infrastructure and lower iron ore exports at a time when prices are booming.

In the case of Dalrymple Bay Coal Terminal, while capacity constraints appear to have arisen mainly as a result of continuing unexpected high global demand for coal, it appears that capacity expansion is not proceeding because of a substantial difference between what users are willing to pay and the price the coal terminal owners are seeking before they undertake that expansion. One solution might be if the users directly fund the expansion, as envisaged under Part IIIA and the Competition Principles Agreement.

Resolving such issues is always complex and difficult. What we do know is that simply granting a monopoly a greater return - even allowing monopoly rents - on its existing operations does not guarantee that capital expansion will take place.

Compare these examples with the recent experience in the Hunter Valley. Here, the ACCC is working with coal miners, rail service providers and the operators of Port Waratah to, initially, limit the costs of existing capacity constraints and, over time, expand capacity by joint investment by coal miners in alleviating capacity constraints. Shared funding and use of such infrastructure reflects the *raison d'être* of Part IIIA and will bring about higher levels of infrastructure funding and capacity expansion than any pandering to monopoly interests could ever achieve. The great irony of this experience is that the infrastructure owners in the Pilbara are among the keenest advocates of shared use of infrastructure in the Hunter Valley.

There have been similar experiences in the shared development of 3G mobile phone infrastructure, improving both investment and competition outcomes. On the other hand, monopoly control of the copper wire network continues to require heavy regulation to promote investment in dependent infrastructure.

There are two very simple lessons from these examples:

- First, that shared use of infrastructure – the *raison d'être* of Part IIIA – is likely to facilitate greater investment in monopoly infrastructure and lead to better market outcomes than monopoly control; and
- Second, regulation under Part IIIA may be necessary in these circumstances to facilitate access to the infrastructure, including funding capacity expansions, and address monopoly problems.

### **Appropriate policy settings for encouraging investment**

Now, this is not to in anyway indicate that the ACCC believes the current system is perfect and no further changes are needed. Far from it.

The ACCC has, for example, recently expressed some concerns about trends toward re-aggregation in the National Electricity Market, and in particular, a risk that relying on Section 50 of the Trade Practices Act alone may fail to prevent the creation and exacerbation of market power problems in electricity generation. Such market power problems would cause serious detriment to electricity consumers, both industry and households. Any such market power problems in electricity generation would also be likely to suppress investment in electricity generation.

This is because, despite the rhetoric of monopolies and their representatives, monopolies do not invest more than firms in competitive industries – in fact, the reverse is true. It is basic economics and well established experience that monopolies exercise market power by restricting output and increasing prices compared to competitive levels. Part of the monopoly profits monopolists earn is in saving on investment costs. Barriers to entry in these markets can mean that monopolists don't have to worry about new entrants making the investment that the monopolists forsake.

Promoting the interests of monopolists and wannabe monopolists is not the way to promote investment!



In the last five years, the ACCC has considered 60 applications for informal merger clearances, involving all elements of the electricity supply chain. A large amount of these applications have been horizontal and related to generator – generator mergers.

It is widely acknowledged that generators, at times, have the incentive and ability to withhold capacity from the spot market in order to cause high spot prices.

Generators can exercise market power by ‘withholding’ generation capacity at peak periods and spiking prices. It only takes a few such events to have a large impact on overall prices.

Certain proposals for vertical re-integration also raise competition concerns, particularly those involving a merger of networks with contestable elements of the electricity industry.

The recent acquisition of TXU by SP Energy, which concerned all four key aspects of the electricity supply chain, is an example.

It is the ACCC’s view that there is a strong incentive for an integrated firm holding a monopoly in the provision of a network service in the electricity industry to discriminate in favour of the vertically integrated firm’s own operations and against competitors in upstream and downstream markets.

Another concern is the ability to exploit market power in respect of the region which presently has the largest generation entities, NSW, where the market is dominated by three entities that control over 95 percent of the market.

The Parer Report recommended that the NSW Government should further disaggregate its assets. In deciding the way forward for the energy sector in NSW the analysis of Parer should not be forgotten.

### **Ongoing reform**

So the ACCC is constantly on the lookout for any developments which threaten to undermine the reforms of the last decade, while always ready to make changes that improve the climate for investment and by providing greater certainty, transparency and incentives for efficient investment.

In electricity, for example, in just the past 12 months, we have announced further reforms to promote greater certainty in the industry and more efficient investment.

These include

- The Statement of Regulatory Principles for the Regulation of Electricity Transmission Revenues (SRP) – an incentive form of regulation which aims to encourage efficiency while balancing the provision of adequate service quality to consumers.

- Review of the electricity regulatory test – to ensure consistency between it and the National Electricity Code and promote further interconnection between states, which will in turn increase competition between generators.

But the key development in further advancing the cause of reform has been the establishment of the Australian Energy Regulator.

- The Australian Energy Regulator

The key principle behind the establishment of the Australian Energy Regulator was that the choice between gas and electricity should be determined by competition and not regulation.

Different approaches to regulating utilities across industries distort investment decisions and create unnecessary costs and barriers for utilities operating in more than one industry.

A single consistent and independent regulator will reduce regulatory costs to business and barriers to entry and allow both gas and electricity to develop in a way that encourages competition within, and between the two, to the benefit of industry, consumers, and ultimately the nation.

The ACCC will continue to be responsible for approving mergers, access codes and undertaking, and for investigating and where necessary, prosecuting possible contraventions of the Trade Practices Act.

However, the AER will now assume the ACCC's current electricity and gas transmission revenue regulation functions, initially including regulating electricity and gas transmission revenues, and ensuring compliance with the National Electricity Code.

At all times when performing its regulatory functions the AER will be required to act in a manner that is likely to contribute to the achievement of the national electricity market objective.

This means the AER has to look to the long term and promote greater investment, interconnection, efficiency and security of supply, and not just cheaper short term prices for end users.

Importantly, it must provide effective incentives to the operator to promote the efficient provision of regulated services, including the making of efficient investments.

### **Protecting the Gains**

If the regulatory regime is really deterring investment then the data should surely demonstrate investment lagging in both the gas and electricity transmission sectors. It should also show that those who nevertheless ignore the doomsayers should be making a poor return on their investments.

In fact, the opposite is the case - both gas and electricity transmission are recording unprecedented levels of capital expenditure under the regulatory regime and those who do make these investments are out performing other sectors of the economy.

As the Allen Consulting Group concluded in its report on the impact of regulation on investment:

*In summary, there is no evidence to suggest that Australia's regulatory framework is deterring investment in regulated utilities. On the contrary, the regulated utilities sector has relatively strong investment fundamentals, whether compared to the Australian market or internationally.*

So in the opinion of the ACCC the question we should really be asking is not whether the current regime has stifled investment or returns – it clearly has not – but what would be the consequences for the Australian economy if the current regulatory regime were to be wound back.