



The Report Card on Electricity and Gas Reform

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Introduction

A comprehensive reform program has been, and continues to be, applied to the energy sector in Australia that would have seemed unimaginable ten years ago. Since reform packages in electricity and gas were brought within the National Competition Policy (NCP) framework in 1995, a great amount of work has been done to make these industries more effective and efficient. The benefits are now starting to flow through to consumers, business and the environment, and will continue to do so, provided some outstanding challenges can be met.

As part of the NCP framework, the Council is required to report to the Commonwealth Treasurer on implementation progress by the States and Territories. The Council's assessment informs the Treasurer's decision on competition payments to the jurisdictions. The Council has just delivered its third report, and while the contents must remain confidential pending the Treasurer's decision on competition payments, I can inform you that progress in electricity and gas reform has been, in the main, strong. But implementation in some areas has proved more challenging than originally envisaged. Shortly, I will outline some of the key issues.

Three strands of utility reform

Essentially, there are three strands to NCP reform in the energy sector:

1. generic NCP reforms covering all sectors of the economy;
2. the national access regime set out in Part IIIA of the Trade Practices Act;
and
3. specific industry reform packages for the electricity and gas industries.

1 The generic NCP reforms

A central element of the generic NCP reforms is the *review of anti-competitive legislation*. Under clause 5 of the Competition Principles Agreement (CPA), governments have committed to reform legislation that restricts competition unless the community benefits of the restriction outweigh the costs. In gas and electricity, these commitments are complemented, and in many areas reinforced, by specific obligations in the industry reform packages.

In gas, for example, legislation covering the upstream gas industry has been a contentious area – for example, regulations covering the allocation of exploration permits and rules for developing gas fields. In the past, such

regulations have helped to confer monopoly status on particular gas producers in some gas basins.

A 1998 report by the Upstream Issues Working Group, UIWG prompted a national review of the Petroleum (Submerged Lands) Acts of all jurisdictions. In addition, most States and Territories have conducted, or are conducting reviews of onshore acreage arrangements under their own petroleum legislation.

The Council is monitoring the independence and transparency of these reviews and the extent of which implementation reflects UIWG reform principles. The Council considers that the national review was soundly designed and that its recommendations generally meet UIWG principles, although some outcomes are still to be determined. The State reviews have also brought some significant progress. For example, South Australia has introduced a new Petroleum Act that incorporates acreage management principles proposed by ANZMEC, and the Government has directed efforts to facilitate new explorers in the Cooper Basin.

Similarly, the Victorian review introduced a number of changes to remove obstacles to exploration and production. The new Act provided that successful bids must be chosen principally on the basis of the respective merits of work programs and the likelihood that the programs will be conducted, combined with more effective relinquishment and re-evaluation provisions. In addition, the Act provides for increased transparency in award and appeals processes.

A second generic NCP reform, the *structural reform of government monopolies*, has been particularly relevant to the utilities sector. In electricity, for example, we have seen contestable activities separated from regulatory aspects of the industry and the introduction of greater competition between electricity businesses in generation and retailing. Similar reforms have occurred in gas. The structural separation of the old energy monopolies was crucial to the development of competitive markets.

A third generic NCP reform is the introduction of *competitive neutrality* so that privately owned businesses can compete with those owned by government on an equal footing. Some concerns have been raised about competitive neutrality with regard to state-owned electricity businesses. It is important to note that complaint mechanisms are now in place in all jurisdictions to hear such concerns and the Council urges any private businesses concerned by possible infringements to report them to the relevant body. All complaints raised (and responses by Governments) are notified to the Council as part of each jurisdiction's annual reporting obligations.

There is a question, however, about whether the specific energy industry reform packages raise broader competitive neutrality issues in the competition among and between public and private businesses, especially in electricity generation. I'll say more about this later.

2 The National Access Regime

While regulatory reform, structural reform and competitive neutrality have injected greater competition into contestable segments of the energy market, competition is not feasible in markets for bottleneck infrastructure (such as electricity grids). Yet parties need to use such infrastructure to make competition viable in areas such as electricity generation, gas production and energy retailing.

To address this, the NCP reforms introduced a national access regime, set out in Part IIIA of the Trade Practices Act. The regime gives parties a legal right to share the use of certain infrastructure services of national significance on reasonable terms and conditions. It applies only to the services of facilities where:

- it is economically efficient for only one facility to service the market – that is, development of another facility would represent a wasteful use of resources; and
- businesses in an upstream or downstream market require use of the facility in order to market products and services to customers. In this situation, the facility owner is in a position to exercise market power in the dependant market, with possible adverse consequences for consumers.

The industry reforms in gas and electricity include industry-specific access codes for the services of transmission and distribution facilities. These codes operate within the broad Part IIIA framework and have been in place for some time. Later, I will outline some current issues raised by each of these codes.

Part IIIA itself has been the subject of an independent review by the Productivity Commission. The Commission's draft report recommended some quite sweeping changes to the regime's architecture, including changes to the criteria for declaring infrastructure for access. While the Council accepts that some aspects of Part IIIA require fine-tuning, it has expressed concern at some of the Commission's proposed changes. The Council's three submissions to the Productivity Commission, including its response to the Draft Report, are available on the Council's website at www.ncc.gov.au. The Productivity Commission has now completed its review and the final report has been forwarded to the Treasurer. However, the report is not yet publicly available.

3 Industry reform packages

The 1995 NCP agenda incorporated pre-existing reform packages in the electricity and gas industries. Governments have refined certain aspects of these two industry packages since 1995, including changes to some implementation dates.

The energy reforms were a response to traditional industry structures dominated by vertically integrated monopolies that sold high-cost, inefficient services. The reforms sought to open potentially contestable segments of the industry to competition, and to provide efficient regulation of the natural monopoly bottlenecks through third party access.

Electricity

The centrepiece of the electricity reforms is the creation of a National Electricity Market (NEM) in south-east Australia, establishing a single wholesale market for electricity. The philosophy is to allow customers (including retailers and aggregators) to bid against one another for electricity sold into the wholesale pool by competing generators.

The market is supported by:

- a National Electricity Access Code, providing non-discriminatory access to the transmission and distribution network;
- the removal of legislative barriers to entry in electricity generation and retail supply; and
- the removal of legislative barriers to interstate and intrastate trade in electricity.

Currently, the NEM comprises New South Wales, Victoria, Queensland, South Australia and the ACT. Tasmania is set to join once it is interconnected with Victoria.

The National Electricity Market has been a remarkable achievement by Governments. The market has already conferred enormous benefits to medium and large businesses. For example:

- the Australian Bureau of Agricultural and Resource Economics (ABARE) has estimated that Australia's GDP by 2010 will be \$2.4 billion higher (in 2001 prices) than in the absence of reform, with the net present value of benefits of reform between 1995 and 2010 totalling \$15.8 billion in 2001 prices (Short et al. 2001, p. 84).
- a July 2001 report by the International Energy Authority (IEA) finds that real electricity prices have decreased by 10 per cent on average in the last ten years, with benefits across the economy amounting to at least \$1.5 billion in the year 2000 (IEA 2001).

While households cannot yet choose their electricity supplier, they have nonetheless gained through more efficient service provision. For example, a recent determination by Victoria's Office of the Regulator-General reduced distribution charges by up to 22 per cent from 1 January 2001, saving households up to \$65 on annual electricity bills.

Despite the substantial benefits, there have been many critics of electricity reform. The criticisms have been made against a background of rising energy costs world-wide (driven by rising oil prices and demand for energy) and an erosion of excess capacity in domestic generation as demand rises. In combination, these factors are eroding opportunities for very low wholesale electricity prices. Some have suggested that the electricity market is following the path of the high profile failures in California, and that governments should move to re-regulate the industry. With the more recent world wide downturn in the demand for energy, a general easing of electricity prices would be expected. This appears consistent with Australian experience. The coming summer may test the adequacy of electricity supplies in some regions of the NEM: other presentations to this conference will address this issue.

There is no doubt that the National Electricity Market is approaching a watershed in its development and decisions made by governments over the next six to twelve months will be crucial. The Council believes that the basic market framework – competition between generators and retailers of electricity, with shared use of transmission and distribution infrastructure – provides the best opportunity for an efficient electricity industry and competitive prices to consumers in the long run.

Nevertheless, there is evidence that the market is not currently working as well as it could. The concept of a ‘market’ signifies an integrated field of rivalry or, in other words, a sphere of competition. For a national electricity market, that rivalry or competition exists in the generation and retail sectors,

and should occur both within and between regions of the NEM. Sustained, large inter-regional differences in electricity prices are inconsistent with the notion of a competitive national market, although some differences in price can always be expected due to differences in generation costs between regions and transportation costs (taking into account transmission losses and capital costs). *Some* market power and price volatility in the wholesale electricity market is a necessary feature of the NEM, as it is of most markets. But the sustained exercise of substantial market power is inconsistent with effective competition, and inconsistent with an effective wholesale electricity market.

The issues that currently arise reflect a need to *refine* the market arrangements, rather than overturn them. Areas in need of further work include:

- ways of improving inter-regional competition;
- ensuring that the institutional framework provides for efficient market operation and regulation;
- the settling of appropriate and consistent arrangements for extending competition to the sale of electricity to households; and
- addressing aspects of current NEM arrangements and structure, and safeguarding against changes, that may mean that competition between generators is less than effective.

Inter-regional competition

While NSW and Queensland have excess generation capacity, South Australia (and to a lesser extent, Victoria), have faced shortages. This has resulted in excessive price differences between regions. One solution is investment in efficient interconnectors between regions, but at least one major proposal (between NSW and South Australia) has been held up, in part, by deficiencies in the regulatory framework. While the regulatory architecture has since been modified, and there has been some recent progress on this and the SNOVIC proposal, the Council remains concerned that further work is needed to streamline regulatory approvals processes.

The institutional framework

Experience suggests that the current institutional arrangements between the National Electricity Code Administrator (NECA), the National Energy Market Management Company (NEMMCO) and the Australian Competition and Consumer Commission (ACCC) are at times cumbersome, with degrees of tension and overlap between roles. The Council notes that regulatory arrangements in the NEM are to be reviewed by CoAG and by the States. In the Council's view, these processes could usefully consider (1) achieving clear accountabilities for regulation, market performance and market development, regulatory certainty and efficiency; and (2) ensuring appropriate levels of regulatory and compliance costs.

Extending competition to the sale of electricity to households

The Council recognises that metering and market transfer arrangements raise complex issues. There is also the issue of raising consumer awareness of what contestability is about. While some jurisdictions are making a concerted effort to address these challenges, others appear to be adopting approaches that may not ultimately serve the interests of consumers. In particular, Queensland has recently indicated that a study it has commissioned does not establish a public interest case for of full retail contestability in that state, although the Council has not yet been provided a copy of this report. This can be contrasted with, for example, the position of the Victorian Government, which believes that FRC will deliver considerable benefits to all users.

The Council accepts that NCP reforms, including in the electricity and gas industries, should not be undertaken if the costs of the reforms outweigh the benefits. However, the Council considers that amendments to the agreements concerning this area of market arrangements should be subject to joint examination by governments in a robust, transparent and co-ordinated manner. The potential benefits of providing choice of electricity supplier to all consumers and increasing the depth of the electricity market throughout the NEM should be weighed against all viable means of minimising the costs of transition and reform.

Similarly, the Council is concerned that the continuation of vesting contracts – designed to manage the very genuine risks to retailers from buying

electricity at market prices while selling to consumers at regulated prices – may interfere with the market once full retail competition is effective.

Competition between generators

Recent high pool prices in some regions of the NEM (and price differentials between regions) raise the question of whether the structure of the generation market is ensuring sufficient competition. Price increases may partly be a reflection of capacity constraints being reached. This provides important signals for new investment in electricity supply capacity and opportunities for enhanced competition.

But high regional pool prices could also indicate that the generation market is too thin and that individual generators have substantial market power. A recent study by ABARE lends weight to this possibility. It finds that ‘in the recent past, in certain months up to half of the price paid for the wholesale supply of electricity in New South Wales, Victoria and South Australia may be attributable to strategic behaviour in the market.’ (Short et al. 2001, p. 89.)

While NEM-participating jurisdictions introduced horizontal separation in generation, the Council considers that the unbundling of generation in many jurisdictions has been the minimum necessary for a competitive market. The Council would be highly concerned by any move to reduce the number of generating companies in any jurisdiction. In particular, it would regard any such reduction as undermining structural reform commitments, where generators are in public ownership. The Council would also be concerned by

any increase in government intervention in market outcomes, including intervention in the type or level of capacity or in the operation of generating companies.

Further, as touched on earlier, the NEM may require refinements to ensure effective competition between and among publicly and privately owned generators. The general NCP competitive neutrality obligations may not sufficiently address possible problems in this area. This is not to suggest that public ownership of parts of the NEM is contrary to NCP; public ownership is entirely consistent with NCP principles. However, public ownership can raise special issues about market structure, even where there has been adequate structural separation among publicly owned generators. Consequently, enhanced rules about how structurally separated publicly owned generators compete against each other and against privately owned generators may be required to ensure effective competition within the NEM.

NECA, in response to market concern with the behaviour of some generators, has reviewed bidding and re-bidding strategies and their effect on prices. NECA has forwarded proposed changes to the National Electricity Code to the ACCC aimed at removing current inefficiencies in the system, requiring generators' bids and re-bids to be made in good faith and prohibiting bids and re-bids that materially prejudice the efficient, competitive or reliable operation of the market. The ACCC is currently considering the proposed changes.

The CoAG Reviews

At its June 2001 meeting, CoAG reaffirmed its commitment to electricity reform and agreed to establish a Ministerial Council on Energy to examine energy market directions, including the harmonisation of regulatory arrangements and opportunities for increasing interconnection and security arrangements. CoAG also noted the establishment of an NEM Ministers Forum to consider, among other things, impediments to interconnection and regulatory overlap, transmission pricing, market behaviour, and the effectiveness of regulatory arrangements.

The Council is strongly supportive of the review of NEM arrangements. Governments have a clear role, from an economic policy perspective, in ensuring that the National Electricity Market architecture is and remains appropriate given the over-riding objective of an efficient and effective set of market arrangements. This role may include introducing policies to deal with the social implications of electricity supply and consumption. For example, concerns have been raised that the National Electricity Market has exacerbated environmental problems by increasing coal-fired generation. It is open to governments to respond with appropriate regulation, tax or subsidy measures to correct for these environmental costs. Indeed, the NEM principle of separating generation from other parts of the supply chain makes this possible. New South Wales, for example, has introduced measures to allow consumers to choose 'green' electricity without impeding the operation of the market.

But governments should not become involved in the day-to-day operation of the market. Some price volatility in the short to medium term is an inevitable – indeed efficient – aspect of the market’s operation, as it encourages appropriate supply and demand responses. Indeed, there is some evidence that rising wholesale prices are already encouraging expansion of, and new entry in, generation activities. Price changes are also affecting the way businesses use electricity. These developments are essential to ensuring competitive prices in the long run.

Market refinements along the lines I outlined earlier should reinforce these incentives, but overly intrusive government action risks defeating them. The primary cause of problems in California has not been the operation of a competitive market – rather the problem has been inadequate market incentives to encourage new investment in response to strong demand and inadequate price signals to influence the supply of, and demand for, electricity. Inevitably, retailers found themselves squeezed between retail price caps and a soaring wholesale market.

The risk of a California–type event in Australia is only plausible if we fail to deal with these issues. In particular, we need to ensure that the right incentives are in place for investment in interconnection and new generation, as well as the utilisation of existing generation capacity. The other lessons from California are the importance of getting institutional arrangements right, and that household contestability issues need to be addressed in a sensible and orderly manner.

Gas

The gas reforms focus on improving efficiency in gas transportation, with the National Gas Pipelines Access Code now in place in all jurisdictions. The Code provides for third party access to spare and developable capacity in transmission and distribution pipelines, allowing, for the first time, gas users to contract for gas supply directly with an upstream producer of choice, and then ship the gas on reasonable terms and conditions under the Code. In this sense, the access reforms promote competition both in the upstream sector and in energy retailing.

Supporting the access reforms have been comprehensive structural reforms to break up the old vertically integrated gas utilities into separate businesses providing transmission, distribution and retailing services. In addition, legislative and regulatory barriers to interstate and intrastate trade have been removed or are being phased out.

Gas reform has been a major success story, with the original NCP reform agenda now largely in place. The only significant outstanding matter is the extension of competition in gas production and retailing to the household sector. The delay here reflects similar issues to those arising with regard to household contestability in electricity: the need to establish appropriate business rules enabling customers to select between competing suppliers. The central issues relate to:

- implementing information technology systems to handle customer billing and transfer;
- determining a cost-effective approach to metering gas use by small customers; and
- achieving consistency across jurisdictions and with the electricity industry, bearing in mind that parties selling gas to consumers may be multi-utility retailers operating in many States and Territories.

The Gas Code (as well as the Electricity Code) has raised concerns in part of the energy industry that regulated access may be hampering efficient investment in new infrastructure.

The costs of access regulation stem from the intrusions it makes upon property rights, especially in relation to privately owned infrastructure. For example, the compliance costs for business in developing access undertakings for regulators can be considerable. These costs are inevitably built into access charges and may – in the case of a relatively small market – negate the benefits of regulation. More generally, investment in marginal projects may be deterred if investors perceive regulators to be over-conservative or erratic in their approach to access outcomes, especially with regard to green-fields investments. A regulatory framework that is subject to frequent change can also aggravate investor uncertainty.

Against this, it is important not to lose sight of the purpose of access regulation. When applied appropriately, access can open up competition in dependant markets, bringing lower prices and/or better service provision to consumers. In providing a means to avoid unnecessary duplication of infrastructure, it also allows a more efficient use of the community's resources. Those resources freed up from otherwise inefficient investment can be used in ways to advance community welfare – perhaps to build new hospitals or schools.

The Council plays a number of roles under Part IIIA in assessing what infrastructure services are covered by access regulation. The Council is coverage advisory body under the Gas Code, recommends to Ministers what services should be declared for access under Part IIIA, and vets the coverage of State and Territory access regimes.

In conducting these roles, the Council accepts that, by nature, access regulation is intrusive, and should only be imposed where it will promote net economic benefits.

The Council gives careful consideration to balancing the benefits of access for potential infrastructure users against the costs to existing and potential infrastructure operators. It also aims to be responsive to the needs of governments and the wider community. In considering these trade-offs, the Council notes that regulated access under Part IIIA, the Gas and Electricity Codes:

- is confined to a narrow range of infrastructure with natural monopoly characteristics;
- recognises the significance of existing contractual rights;
- ensures that regulatory and arbitration processes take into account the interests of infrastructure owners; and
- requires consideration of whether regulated access is in the public interest.

Having said that, it must also be conceded that the regulatory framework has not always worked perfectly. Perhaps it is not surprising that some deficiencies in such a complex regulatory framework will arise in the early phases of regulation before the appropriate refinements can be made.

But it is also apparent that the regulatory framework is behaving in a much more adaptable and forward-looking manner than some critics give credit. For example, the ACCC's decision on the Central West Pipeline recognised the inherent risks in green-fields pipelines by setting a return on equity of 15.4% and allowing the owner to earn higher rates through market expansion. The decision reflects a weighing of the issues of appropriate returns to investors and efficient prices to users.

The Gas Code architecture provides for access regulation only where it is needed – that is in regard to natural monopoly pipelines where the operator

is able to exercise substantial market power. The Council observes these principles in regard to applications for coverage (and revocation of coverage) in its role as coverage advisory body under the Code.

The Council considered that a recent application regarding the Duke Eastern Gas Pipeline raised a number of difficult issues. On the basis of the information available to it, the Council felt that the pipeline operator was able to exercise market power in a dependant market and that regulation would promote competition. On the basis of different information the Australian Competition Tribunal came to a different view. The Tribunal affirmed the Council's approach to the application and in deciding not to award costs, noted that this was a matter on which there could be different points of view and legitimate differences of opinion. The Council is currently considering similar issues in relation to an application by the Australian Pipeline Trust for the revocation of coverage under the Gas Code of the Moomba to Sydney Pipeline. The Council regards this matter as a critical signpost to the role of the Gas Code in relation to transmission pipelines across Australia and is accessing the best available assistance on the implications for competition in gas markets.

More generally, of 17 revocation applications received since 1999, the Council has recommended that coverage of 12 pipelines be revoked, recognising that the regulatory costs in each case would outweigh any efficiency benefits.

While getting the right balance between the competing interests of infrastructure owners, access seekers and the wider community involves fine

judgements, there is a growing body of evidence to suggest that the balance is now being achieved. Under the Gas Code, regulators have scaled back returns on a number of pipelines, giving price benefits to customers that are making gas a more attractive energy option. At the same time, the twin reforms of the Gas Code – especially in relation to distribution pipelines – and regulatory reform in gas exploration have opened up new possibilities in gas production and pipeline development that are transforming Australia’s gas industry.

There is unprecedented interest in the development of gas resources in Bass Strait, the Cooper Basin, the Otway Basin, the Timor Sea and elsewhere. The Duke Eastern Gas Pipeline, linking gas processing facilities at Longford in Victoria with consumers in Sydney, Canberra and elsewhere in New South Wales and Victoria, was recently completed. BHP has argued that construction of this pipeline was only made viable because of access rights under the Gas Code to the Sydney gas distribution network. Access was needed to ensure that gas carried through the transmission pipeline could find a market in Sydney. Without access, BHP claimed, the \$450m project would not have been built (PC 2001, p.64).

There are competing proposals to build new pipelines linking gas fields in Victoria and consumers in South Australia, and linking gas fields in the Timor Sea to consumers in south-east Australia. Other pipeline proposals include linking Longford to Tasmania, gas fields in PNG to Queensland and possibly south-east Australia.

All of this provides important context for the recent concerns expressed by transmission pipeline owners about the impact of access regulation in the gas industry. Some of the views expressed have confused the distinction between, on the one hand, the issue of whether pipelines are likely to satisfy the criteria for coverage under the Code with, on the other hand, the issue of how pipelines should be regulated under the Code if they are covered. Let me be as clear as possible on this important distinction. Pipelines that do not have relevant, enduring and substantial market power should not be covered by the Code. I believe that the Council and the Tribunal have already demonstrated that the Code should not and will not be applied where it is not needed. However, pipelines that do satisfy the criteria for coverage should be regulated to ensure that the substantial market power that they possess is addressed in the interests of competition in the gas market and consumers.

The gas industry will play an increasing role in meeting Australia's energy needs, in part because of the environmental benefits of gas-fired electricity generation. In this sense, a well developed and competitive gas industry is vital to Australia's economic and environmental future. On the evidence to date, NCP is playing a vital role in stimulating the rapid development of a vibrant and competitive gas industry in this country.

Conclusion

The reforms in electricity and gas are among the most far-reaching and important features of the NCP agenda. Critically, they have the potential to

deliver major benefits to the community and the environment. Already, the architecture for both industry reform packages is in place.

In gas, perhaps the most advanced of all the NCP reforms, early outcomes have been overwhelmingly positive with this relatively green energy source now heading towards unprecedented growth.

In electricity, the structures are well in place and have delivered significant benefits to users over the last four or five years. Now is the time to address the remaining imperfections in the electricity market – to sort out the issues in interconnection, the institutional framework and contestability, to ensure that the early benefits of reform are sustained.

These are, I think you will agree, worthwhile pursuits.

References

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