Alinta

Alinta Limited
ABN 11 119 985 590

Level 14, 1 O'Connell Street
Sydney NSW 2000

PO Box R 1465
Royal Exchange NSW 1225

Telephone +61 2 9270 4600
Facsimile +61 2 9270 4601

31 August, 2007.

Inquiry on Competition in the Water and Wastewater Service Sector,
Economic Regulation Authority,
PO Box 8469,
PERTH WA 6849.

By e-mail to: watercompetition@era.wa.gov.au

Dear Sirs,

I attach Alinta's response to the document entitled "Issues Paper – Inquiry on Competition in the Water and Wastewater Services Sector" issued by the Economic Regulation Authority in July 2007.

Should you wish to discuss the submission, please contact Warwick Tudehope on 02 9270 4551.

Yours sincerely,

Sandra Gamble
Group Manager Regulatory

Economic Regulation Authority

Inquiry on Competition in the Water and Wastewater Services Sector

This submission by Alinta Limited is made in response to the document entitled "Issues Paper – Inquiry on Competition in the Water and Wastewater Services Sector" (the Issues Paper) issued by the Economic Regulation Authority in July 2007.

Although Alinta has no direct involvement in or detailed knowledge of the water and wastewater industries in Western Australia, it does have a strong and developing interest in the water industry generally through its acquisition of the infrastructure business of The Australian Gas Light Company (AGL) in late 2006. In particular, Alinta is the proponent of a number of large water recycling projects for Sydney. Alinta (previously through AGL) has also been an active participant in the review and consultation processes that culminated in the enactment of the groundbreaking Water Industry Competition Act 2006 (the WICA) in NSW in late 2006. Those processes included:

- A review by the Independent Pricing and Regulatory Tribunal of NSW (IPART) entitled "Investigation into Water and Wastewater Service Provision in the Greater Sydney Region". IPART's Final Report was published in October 2005. Its recommendations provided the basis for the WICA.

- Consultation conducted by the NSW Government on "Creating a dynamic and competitive metropolitan water industry" (May 2006). This consultation informed the ultimate structure of the WICA.

- A review by IPART of "Pricing arrangements for recycled water and sewer mining" IPART's Determinations and Report were published in September 2006.

Alinta also delivered a paper entitled "Structural Change in the Urban Water Services Industry – Lessons from Gas and Electricity" at the OZWATER 07 Conference held in Sydney in April 2007.

There are significant parallels between the inquiry presently being undertaken by the ERA, and IPART's 2005 investigation into water and wastewater service provision, in that both reviews are examining options for structural change in an industry dominated by vertically integrated Government-owned enterprises, and both are directed to "make recommendations for providing the services in the most efficient, effective and sustainable way"[1]. In the case of the IPART investigation, there were a number of contextual factors that gave a particular focus to the investigation. These included:

- the accepted position that "Sydney's demand for water [exceeded] the sustainable yield of its catchment"[2];

- the concurrent application by Services Sydney to the Australian Competition Tribunal for review of the NSW Premier's deemed decision not to declare certain sewage services provided by Sydney Water Corporation; and

- the NSW Government's Metropolitan Water Plan "which outline[d] a mix of actions to deliver a long-term balance between supply of and demand for water" and

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1 ERA and IPART Terms of Reference.

2 IPART Terms of Reference.

included as a key element, "encouraging the involvement of the private sector in developing innovative solutions to Sydney's water problems"[3].

Given the similar scope of the two reviews, it appears to Alinta that, except where they deal with NSW-specific matters, IPART's report and findings should be a useful point of reference for the ERA.

Many of the issues canvassed in the Issues Paper are addressed by AGL in its June 2005 submission in response to the issues paper published by IPART in connection with its investigation, and in the paper presented by Alinta at OZWATER 07 in April 2007. Copies of both documents are attached. A summary of Alinta's position follows under the headings 1. Drivers for reform in water and energy are different; 2. Industry structure; 3. The place of access in water reform; 4. Water Pricing; 5. Access Pricing; and 6. Efficient delivery of services.

1. Drivers for reform in the water and energy industries are different:

The drivers for reform in water and energy have been quite different. The reforms in electricity and gas have focused on promoting economic efficiency by enabling effective competition in those parts of the supply chain (production, wholesaling and retailing) where markets are contestable. Development of those markets was facilitated by the removal of barriers to inter-state trade in gas and the establishment of a National Electricity Market; by providing for third party access to the monopoly infrastructure that conveys the gas or electricity from production source to market; and by the progressive opening-up of end-use markets to competition.

For water, the drivers for reform have been resource management, and balancing long term supply and demand in the face of uncertain and even diminishing supplies from conventional sources, increasing populations, and environmental pressures. There is an increasing focus on the efficient use of resources, which is encouraged and facilitated through cost reflective-pricing and the development of trading arrangements.

There are also differences between water and energy that affect physical and market operations. Production locations for gas and to a lesser extent electricity are largely determined by the location of resources, and long distance transmission grids interconnecting production sources and markets are a feature of those industries. Water transmission is costly and, in most cases, collection and storage occurs close to point of consumption. Opportunities for interconnection of major water markets are limited.

These differences suggest that large-scale structural reform in water may not be necessary or justifiable in the same way that it has been in the energy industry.

2. Industry structure:

Industry disaggregation has been a key feature of the reform processes in electricity and gas. In gas, production and merchant/retail functions are separated completely from the monopoly transmission and distribution functions. In electricity, generation and transmission are conducted separately but there are still integrated distributor/retailers in some jurisdictions. The reforms have also seen a substantial increase in direct private sector participation in both industries.

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3 IPART Terms of Reference.

The transmission and distribution sectors of the water industry and the gas industry in particular are very similar, both in terms of technology and the management skills required. This makes the water industry a logical avenue for growth for established infrastructure providers such as Alinta. The private sector is well positioned to bring innovation, new technology and capital to the water industry in the way that it has to electricity and gas but, if this is to happen, it will be necessary to establish an appropriate regulatory regime including licensing arrangements, and an environment where there is the opportunity for participants to obtain rewards commensurate with risk.

In the water supply industry, bulk supply is the analogue of production in gas and generation in electricity. In Alinta's view there is a strong case for the separation of bulk supply of water from distribution and merchant/retailing as has been done already in NSW and Victoria. In this way bulk supply costs can be made transparent thus providing appropriate price signals to the proponents of the new sources of supply that will be required to meet demand. However, given that aggregate supply is the primary concern in the water industry, it appears unnecessary to take the further step of separating existing bulk supply operations into competing businesses.

While some new entrants may see direct retailing, and hence access, as an essential part of their business models, such models are not dependent on the disaggregation of the incumbent's distribution and merchant/retailing functions. Alinta agrees with IPART's conclusion that the costs and benefits of disaggregation need to be fully understood before that action is taken.

3. The place of access in water reform:

Full retail contestability was a fundamental aspect of the reforms in the gas and electricity industries, and access to monopoly infrastructure services was essential for that to occur. Without access, competing retailers would not be able to deliver electricity and gas to their customers. The costs of establishing access and systems to support full retail contestability in electricity and gas have been substantial.

As far as Alinta is aware, there is no evidence that *full* retail contestability would be an appropriate policy objective in the water and wastewater industries. Having said that, it is desirable to remove barriers to retail contestability and provide for access to facilitate innovative models that may involve direct retailing and/or access to infrastructure. For example, direct retailing and access are features of the Services Sydney proposal. At the same time there are other possibilities such as the development of a new supply source for sale to the incumbent on a wholesale basis, that would not involve either access or retailing.

If the decision is taken to provide for access, options range from the basic negotiate/arbitrate model recommended originally by the Hilmer Committee and adopted in the WICA, to a fully codified regime with mandatory access arrangements such as exists for gas. The latter is expensive to establish and administer.

Given that the level of demand for access in the water industry is uncertain, Alinta favours a basic access regime built around the negotiate/arbitrate model as a first step. More sophisticated arrangements can be adopted later if warranted. Alinta supports the "adaptive management" approach adopted by the NSW Government.

4. Water Pricing:

The water industry reforms initiated by the 1995 CPA and more recently the 2004 National Water Initiative, have resulted in significant changes. In terms of urban supply, major water utilities have been corporatised and cost-reflective pricing and usage-based charging have replaced rate-based systems. Despite this, the National Water Commission has noted that establishment of proper water pricing practices remains an important priority.[4] The fact that all significant proposals for augmenting supply, including recycling and conservation projects, require subsidies or direct funding, also suggests that potable water prices are currently too low.

Proper pricing at the bulk supply level in particular, is critical if the private sector is to become involved in the development of new resources. Proper pricing at the retail level is also important as a means of promoting conservation and ensuring that consumption choices (such as between potable water and recycled water, where it is available) are not distorted.

5. Access Pricing:

IPART recommended in its review that the ECPR should be used to set access prices. IPART noted that ECPR, being based on regulated retail prices, has advantages in situations such as in Sydney where there is postage stamp pricing. The ECPR approach also avoids the need to allocate the costs of a vertically integrated access provider between access provision and its other activities.

Depending on how the savings and costs of providing access are determined, the ECPR may yield an access price that is very close to the regulated retail price so that the access seeker is left with an unviable margin. On the other hand, access prices will promote economic efficiency so long as they at least cover the variable costs of providing access. It follows that, under the negotiate/arbitrate model, there is significant scope for negotiation on access prices, especially in cases where the access seeker has a viable alternative such as to by-pass the incumbent.

Alinta notes that Services Sydney's application for access led ultimately to an access dispute with Sydney Water Corporation. That dispute was arbitrated by the ACCC which has recently published its decision and reasons[5]. The principal issue in dispute was the access price. The ACCC determined that access prices should be calculated as Sydney Water's regulated retail prices minus avoidable costs (plus any facilitation costs) where avoidable costs are those costs that Sydney Water could avoid in the long run by providing access rather than those costs it will actually avoid. It is not clear yet what effect this decision will have on the viability of the Services Sydney proposal.

6. Efficient delivery of services:

It is well accepted that regulation is a second best alternative to competitive markets as a means of promoting efficient outcomes. The Issues Paper canvasses a range of alternatives that could increase competitive pressures on existing providers ranging from extended use of competitive procurement to the structural separation of the Water Corporation to enable comparative competition.

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[4] National Water Commission, 2006, *Progress On The National Water Initiative: A Report To The Council Of Australian Governments*, June.

[5] ACCC, 2007, *Access dispute between Services Sydney Pty Ltd and Sydney Water Corporation – Arbitration report 19 July 2007*, Canberra, July.

Structural separation of the Water Corporation would be a complex and potentially costly undertaking for uncertain gains, whereas expanding the use of competitive procurement and a move towards outcomes-based rather than project-based procurement could be achieved at relatively little cost. Alinta favours the latter, coupled with a legislative regime that provides for direct private sector participation in the industry and access to monopoly infrastructure as discussed previously.

Alinta Limited, August 2007.

Tel: 02 9921 2999
Fax: 02 9957 3671

The Australian Gas Light Company
ABN 95 052 167 405

North Sydney
AGL Centre, 111 Pacific Highway
North Sydney NSW 2060

Locked Bag 1837
ST LEONARDS NSW 2065
www.agl.com.au

15 June 2005

Dr Michael Keating, AC
Chairman
The Independent Pricing and Regulatory Tribunal of NSW
Level 2, 44 Market Street
PO Box Q290
QVB Post Office
SYDNEY NSW 1230

Dear Dr Keating

Investigation into water and wastewater service provision in the greater Sydney region

Thank you for the opportunity to respond to the Issues Paper published by the Tribunal in connection with its Investigation into Water and Wastewater Service Provision in the Greater Sydney Region.

AGL's submission is attached. Please contact Linda Gyzen on 9921 2792 if you wish to discuss the submission.

Your sincerely,

Robert Wiles
General Manager
Regulation and Policy

INVESTIGATION INTO WATER AND WASTEWATER SERVICE PROVISION IN THE GREATER SYDNEY REGION

This submission is made by The Australian Gas Light Company (AGL) in response to the Issues Paper published by the Tribunal in connection with its Investigation into Water and Wastewater Service Provision in the Greater Sydney Region.

1. Summary:

Given appropriate incentives and regulatory structures, the private sector, and AGL in particular, is well equipped and positioned to expand its involvement in the provision of water-related infrastructure and services for Sydney. This would be consistent with the policy direction established by the Government in its Metropolitan Water Plan for Sydney, and with announcements relating to the provision of water and sewer services for new land release areas in South West and North West Sydney.

While a disaggregation and access model such as that established in the energy sector (for example) may be appropriate for water at some time in the future, such a move should be made only when the costs and benefits are fully understood. We acknowledge the Tribunal's concerns about making major structural changes too rapidly. A considered evolutionary approach is preferable for reform in the long term. In the meantime, there are actions that can and should be taken to address immediate policy concerns and objectives.

In AGL's view, a significant increase in private sector participation in the water industry could be achieved in the short to medium term by modifying existing arrangements to provide for private ownership, management and operation of infrastructure throughout the industry including potable water reticulation, waste water collection, water reclamation and recycling. Some legislative changes would be required, including the establishment of activity based licensing arrangements for private business.

Structural changes will be ineffective unless accompanied by appropriate commercial incentives and signals, both for investors and for consumers. The current price of water is significantly lower than the expected cost of water from the next tranche of capacity, either by way of bulk supply (desalination?), and/or reclamation and recycling technologies. Some adjustment to pricing for potable water is inevitable if those technologies are to be viable. This could involve a combination of changes to the overall level of prices as well as to pricing structures where rebalancing of fixed and variable charges and inclining block tariffs are options.

2. The extent of reform and delivering Government policy:

The Tribunal canvasses a wide range of industry models as depicted on Page 23 of the Issues Paper. There is no doubt that the policy and implementation issues become more complex the further the chosen option is from the status quo. For example, if a third party model were adopted, access pricing and the sustainability of postage stamp pricing become issues requiring resolution.

The Australian energy sector has undergone significant change over the last decade or so including disaggregation and the introduction of access regulation to transmission and distribution. This has been accompanied by the removal of

barriers to interstate trade in gas, and increased interstate connectedness and trade for both gas and electricity. It is generally accepted that these changes have produced net economic benefits. While this may have been the outcome for the national energy sector, it cannot be said, at this stage, what the result would be if the water industry in Sydney was disaggregated and opened to access: there are significant differences between the energy and water industries, particularly in their upstream/production sections, and the costs, benefits and risks of major structural change are not yet understood well enough to enable an informed decision. Even if a start were made immediately, it is likely to be some time before a decision could be made on disaggregation and access and then, if the decision were to proceed in that direction, it would take some time to implement.

In the meantime, the Tribunal is conducting its investigation in a context where adequacy of water supply is an immediate issue for the greater Sydney region. As one strategy to address this problem, the Government has adopted a policy position of increasing private participation in the infrastructure and supply side of the industry. The Government's intention is to:

1. Establish laws and policies in relation to recycled water that protect public health, but do not raise unnecessary barriers to innovation by private developers and service providers. (Sydney Metropolitan Water Plan, p15);

   and

2. Introduce contestability in the provision of water and sewer services in new land release areas with the aim of ensuring the delivery of good quality, cost-effective water supply and sewerage services, as well as increasing the efficient use of water through water recycling and re-use schemes. (NSW Government's plans for land release in North West and South West Sydney, FACT SHEET 3 What Infrastructure Will Be Provided?).

In AGL's view, establishment of a policy and commercial environment which facilitates greater private sector involvement in the provision, management and operation of infrastructure for water services (including water reclamation and recycling), should be the first priority. By facilitating that involvement, the resources available to the industry, including capital, technology, and innovation, will be increased. It is an effective first step which can be implemented relatively quickly and simply. At the same time, a process can be established for the orderly consideration, and implementation as appropriate, of other more complex options, including disaggregation, retail contestability, and open access.

In summary, AGL favours a staged approach as discussed by the Tribunal in section 3.2.7 of the Issues Paper.

3. Providing for private sector involvement

The scope for private sector involvement could range from contracting to Sydney Water to deliver specified services as at present, to disaggregation and private ownership. The Tribunal has noted that increased private sector participation has potential consequences for system planning. AGL's position on this, and the mechanisms and scope for private sector participation are outlined below.

Planning

AGL agrees that the Government should maintain a 'back-stop' centralised planning function. A significant consideration in the expansion of private sector participation in essential services such as water is the need to ensure supply while:

- managing resources in a sustainable manner;
- identifying and developing new resources efficiently;
- taking advantage of efficiencies obtainable through commercial arrangements; and
- maintaining flexibility and adaptability to take up innovations.

In AGL's view these outcomes would be best achieved, for the time being at least, by maintaining a single central planning authority, while at the same time making use of competitive outsourcing for service delivery on the basis of competitive performance.

The criteria for establishing competitive performance should be developed not only in relation to commercial propositions such as price, availability and quality but also with regard to the sustainable practices required to manage these in the long term, consistent with the Government's broader sustainability principles.

Structures for private sector involvement in major undertakings

Under the evolutionary model proposed by AGL, Sydney Water would remain the principal asset owner and service provider, and the sole retailer for the time being.

Within that model, AGL supports private sector participation in service provision for significant projects and for the development of specific service areas. This could include developing, owning and operating parts of the water and waste water networks and major facilities and could involve a variety of commercial structures to effect risk and opportunity allocation between Sydney Water and the private participant. These structures include:

- Public Private Partnerships (PPPs) which allow for appropriate allocation of risk and responsibility, ownership of assets and varied goals.
- Alliances which allow for joint involvement of parties that both have a vested interest in the system ownership and operation.
- Build Own Operate mechanisms which allow for the development, ownership and operation of specific projects, allowing the assets to be owned by the private sector.

Private sector participation, particularly for new development areas and specific projects, can lead to more efficient use of water resources through, for example, synergies in service delivery and by taking advantage of related industry developments and innovations.

Competitive Procurement

In the case of existing assets for water and wastewater distribution, AGL supports the continuation and expansion of outsourcing to the private sector of tasks to assist Sydney Water in its operations, such as:

- Construction and rehabilitation of Sydney Water's distribution, recycled water and sewerage networks;
- Restorations after planned and scheduled maintenance;
- Metering and meter reading of water supply;

- Operation of smaller treatment plant and reticulation systems;
- Maintenance of electrical and mechanical systems;
- Scheduled and emergency civil maintenance;
- Call centres and customer billing;
- Operation and Maintenance of networks; and
- Asset Management.

AGL considers outsourcing an efficient model to contain costs and meet tight timeframes for maintenance of existing infrastructure.

4. Pricing

Water is an essential commodity and must be priced so that all people have sufficient for their basic needs, within their means.

AGL suggests that retail pricing for potable water be set by reference to the greater of Long Run Marginal Cost and Sydney Water's actual costs. That is, prices should be reflective of the availability of water and of the real cost associated with providing it from the next generation source. This approach does not necessarily discriminate between how the water is produced, for example expensive desalinated water, or cheap gravity fed surface water. Instead, it takes account of the full administration, production and transportation costs associated with providing water from any source.

Uniform pricing of water across the consumption scale, and at prices below the real cost of production, sends the signal that water is not a valuable commodity.

Regardless of the elasticity of demand for water and hence the value of pricing as a means of moderating demand, multi-tier pricing is considered necessary to signal that high consumption is not sustainable and to provide the economic incentive for the development of new, more costly, sources of supply including recycling. AGL therefore supports the Tribunal's 2004 finding that "the most suitable [pricing] structure for Sydney is likely to be an 'inclining block' structure, which includes a two-tiered variable water use charge and a lower fixed access charge."[1]

It is essential that the price of recycled water be sufficient to encourage private sector investment in, and development of, recycled water schemes with due regard to the risks and social and environmental factors.

At the same time, consumers are likely to require some encouragement to use recycled water, particularly in existing areas where continued use of potable water is a choice[2]. Price is one means of providing this encouragement. Alternatives include, for example, legislation – in California's Orange County it is illegal to use potable water where recycled water is available and its use is appropriate. Consultation and education can also be effective. In Singapore the community has accepted potable water reuse following an extensive program. Niche marketing is a further option where local recycled water treatment can be tailored to meet the quality requirements of specific industries.

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1 Issues Paper, p9

2 In new developments where recycled water is reticulated and connected at the outset, uptake can be facilitated by restricting the locations and number of potable water outlets on a property.

5. Legal and Regulatory Framework

From AGL's perspective, the key requirements for facilitating greater private sector involvement (including for recycled water) include:

- Amendments to the licensing regime to provide for private participation and activity-based licenses. Activities would include:
  - Raw water treatment
  - Water distribution (potable and recycled)
  - Waste water collection and treatment
  - Water retailing (potable and recycled) (Under the approach proposed by AGL, where the first step would be facilitation of greater private sector participation in infrastructure provision etc, Sydney Water would continue to be the sole retailer for Sydney for the time being at least.)
- Any changes necessary to facilitate private sector participation in infrastructure provision etc such as rights to access land and to lay pipe
- Establishment of standards for recycled water
- Ensuring that there are no impediments to Sydney Water entering into appropriate commercial arrangements (for example PPP, BOOT, BOO and other structures) with the private sector

The Tribunal makes a number of comments about licensing arrangements and the types of obligation that might be imposed through licenses. It is not clear which types of obligation the Tribunal envisages being in the licences themselves as opposed to the regulations.

The content and structure of licenses for gas and electricity was dealt with by the Tribunal in a review which concluded in 2003. We take this opportunity to reiterate the position taken by AGL in that review, that licenses themselves must not be a vehicle for making and implementing policy. License conditions should be standardised and limited to those technical and prudential matters relevant to the fitness and competence of the licence holder. Matters of policy should be dealt with in legislation (including regulations) and, where appropriate, in codes and guidelines made in accordance with legislated principles. It is unnecessary and undesirable for a licence to duplicate the provisions of legislation and regulations.

The Tribunal also invites comment on the extent to which agencies involved in the regulation of the water industry should be independent of Government. In AGL's view, the importance and value of separation of powers as a principle, cannot be overstated. Policy making is the domain of the Government and must be separate from the functions of administration and enforcement.

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Structural Change in the Urban Water Services Industry – Lessons from Gas and Electricity

Linda Gyzen, Alinta Asset Management, linda.gyzen@alinta.net.au
Warwick Tudehope, Alinta Limited, warwick.tudehope@alinta.net.au
Chris Harvey, Alinta Limited, charvey@alinta.net.au

INTRODUCTION

Historically, urban water services throughout Australia have been provided almost exclusively by Governments (Local or State) acting directly or, more recently, through Government-owned enterprises.

The National Water Initiative (NWI) and persistent drought conditions have stimulated extensive policy debate and development in the area of water management and planning. In the case of New South Wales, new legislation has recently been enacted that provides for the first time for direct private sector participation in key areas of urban water service provision. The licensing scheme is complemented by arrangements whereby parties will be entitled to negotiate and, if necessary have arbitrated, terms of access to monopoly water infrastructure[1].

These developments present significant opportunities for the private sector. As Australia's largest energy infrastructure business, Alinta sees the water industry as a natural avenue for growth.

Direct private sector participation in and reform of the country's largest urban water market has and will involve complex political, regulatory and economic issues. However, there are models and extensive experience in other utilities that can be drawn upon. There are parallels and, at the same time, important differences, between what has occurred in the gas and electricity industries during the past 10 to 15 years and the structural changes that will accompany direct private sector participation and access in the water industry. Alinta has direct experience of the types of changes that are now taking place in the water industry through its involvement in the gas and electricity industries.

COMPETITION REFORM

Government reform of the Australian gas and electricity industries began in the early 1990s with the adoption of gas and electricity industry strategies. However, it is the Hilmer inquiry, commissioned in 1992, that has set the direction of competition reform in Australia since the mid 1990s. The inquiry's recommendations formed the basis for the National Competition Policy reforms agreed to by the States, Territories, and Commonwealth in 1995. The reforms included the development of a national access regime to enable competing businesses to use nationally significant infrastructure (like airports, electricity cables, gas pipelines and railway lines); and specific regulatory reforms to the gas, electricity, water and road transport industries.

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[1] "Access" in this context refers to arrangements whereby third parties have a right to negotiate (or have arbitrated) terms and conditions on which their water (or wastewater) will be transported through another party's monopoly infrastructure, as distinct from the right to access a water resource itself.

In its 2005 Review of National Competition Policy Reforms, the Productivity Commission concluded that "National Competition Policy (NCP) has delivered substantial benefits to the Australian community which, overall, have greatly outweighed the costs" and went on to say that while much had been achieved over the previous 10 years "Further reform on a broad front is needed to secure a more productive and sustainable Australia."[2]

GAS AND ELECTRICITY

The NCP reforms in electricity and gas have been extensive and focused on promoting economic efficiency by enabling effective competition in those parts of the supply chain (production, wholesaling and retailing) where markets are contestable. Development of those markets was facilitated by the removal of barriers to inter-state trade in gas and the establishment of a National Electricity Market; by providing for third party access to the monopoly infrastructure that conveys the gas or electricity from production source to market; and by the progressive opening-up of end-use markets to competition. These arrangements are supported by ringfencing requirements (imposed on the infrastructure owner) to ensure a level playing field for users whose gas and electricity is transported through the infrastructure, and for prospective users. In addition, for most significant assets, regulators oversee the terms and conditions of access, including price. In both industries, the reforms have been effected through extensive bodies of Legislation (including regulations and codes) established nationally, and associated institutional structures.

The competition elements of the electricity and gas regimes are complemented by jurisdictionally based licensing regimes and (for gas) market operation structures. While licensing/authorisation pre-dated the competition reforms, those regimes required modification to accommodate competitive participation by multiple new private and public sector entrants.

Access, licensing and market arrangements are now well established for both gas and electricity. At the same time recent reviews have led to further evolutionary change including modifications to institutional arrangements and legislation for gas and electricity. In particular, economic regulation and licensing are being transferred progressively to national bodies.

WATER

The reforms agreed for water in the National Competition Policy of 1995 had a somewhat different focus from the energy reforms reflecting then-current concerns about water resource management. The agreement (which was not supported in its entirety by all jurisdictions) dealt with (among other things) water pricing; water allocations or entitlements and trading in them; institutional arrangements; and environmental matters.

In the ensuing period "States and Territories have made considerable progress towards more efficient and sustainable water management. … At the same time, there has been an increase in demand for water, and an increased understanding of the management needs of surface and groundwater systems, including their interconnection. … The current variation in progress with water reforms between regions and jurisdictions, and the expanded knowledge base, creates an opportunity to complement and extend the reform agenda to more fully realise the benefits intended by COAG in 1994." (Preamble, National Water Initiative (NWI), 2004)

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[2] Productivity Commission 2005, pXII

The water reform agenda has been reinvigorated with agreement on the National Water Initiative (NWI) in 2004. This was against a background of deepening drought, increasing demand, and forecast capital requirements of many billions of dollars to maintain and replace aging infrastructure and expand capacity to meet demand growth[3].

In several jurisdictions there is now recognition that the private sector can make an important contribution to the industry through innovation and new technology, and through the provision of capital. In NSW this has been translated into new legislation that provides for the licensing of private sector participants in key areas of water service provision. The licensing arrangements are complemented by a State-based access regime whereby parties will be entitled to negotiate (or have arbitrated) terms of access to monopoly water infrastructure.[4]

ENERGY AND WATER COMPARED

The drivers for reform in water and energy have been quite different. In the case of energy it was the opportunity to improve economic efficiency by opening up markets to competition while, for water, the drivers have been resource management, balancing supply and demand in the face of drought, increasing urban populations and environmental demands, and efficient use of resources (including cost-reflective pricing and trading arrangements).

There are similarities between energy and water: electricity and water services, and to a lesser extent gas, are classed as essential services, and all three involve distribution by networks that have natural monopoly characteristics. In terms of distribution technology, gas and water are very similar because both involve underground pipe infrastructure. Finally, all three involve risks and potential for public harm (health in the case of water services, and safety in the case of electricity and gas) and consumers have quality of supply and reliability expectations which must be managed competently.

At the same time there are differences that affect physical and market operations. Electricity cannot be stored so production and demand must be balanced instantaneously. Gas and water, on the other hand, can be stored. Resource location determines where gas and to a lesser extent electricity are produced, and long distance transmission, and interconnection of production sources and markets are a feature of those industries. Water transmission is costly and has been unnecessary to date with collection and storage occurring close to point of consumption. Long distance transmission may prove to be a viable solution for some urban markets in future. The extent to which this occurs will depend on the availability and cost of alternatives.

The history and extent of private sector involvement have also been different as between gas, electricity and water, and between jurisdictions. For example in NSW, gas reticulation and retailing has, for the most part, been undertaken by the private sector. Privatisation of gas businesses in other states has followed more recently, and is now essentially complete with the sale of the Allgas distribution business in Queensland in 2006. In the

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[3] For example, "Over the next twenty years it is estimated that necessary water supply and sewerage capital expenditure in South East Queensland, Sydney and Melbourne will amount to $12.6 billion." (Institution of Engineers 1999, p37) and, more recently, United Water managing director Graham Dooley is quoted as saying that Australian urban water infrastructure had a capital deficit of between $20 billion and $30 billion. (*The Australian*, October 13, 2006)

[4] Access is presently available under the National Access Regime contained in Part IIIA of the Trade Practices Act as demonstrated by Services Sydney's successful application for access to elements of Sydney Water Corporation's sewerage system. If a State-based regime is established and certified as effective then it would supplant the National regime.

case of electricity, Victoria led the way when it privatised the industry in that state in the mid 1990s, and some other jurisdictions have followed to varying degrees reflecting the political pressures that surround the privatisation of essential services. For example, the most recent electricity privatisations (in Queensland) have been confined to retail businesses only while, in NSW, the electricity industry remains predominantly in Government hands.

As with electricity, privatisation in the water industry is politically sensitive and so, by comparison with gas and electricity, the water industry is a long way behind. While a large and growing proportion of water industry expenditure has been out-sourced to the private sector for some time, it is only recently that the policy mix has included licensing to permit direct private sector participation in water service provision.

IMPLICATIONS FOR WATER POLICY AND REGULATION

There is no doubt that the private sector can make a valuable contribution to the water industry both through innovation and technology, and with capital, particularly in urban areas. Provision of infrastructure and related services in growth areas, and water recycling as an alternative to conventional sources of supply, offer immediate opportunities. The extent to which this potential is realised will depend greatly on policy settings including the form of regulatory structures and the establishment of a "level playing field" for participation.

There are two fundamental components of regulation:

- arrangements for third party access and, associated with that, economic regulation of natural monopolies;
- technical and operational regulation, accomplished through licensing. Licensing provides a filter to ensure that only persons with appropriate skills and resources are permitted to operate in the industry.

Wholesale market structure is a third, related, element. In the case of electricity and gas, market structures reflect the characteristics of the commodity, pre-existing arrangements, and the scope for efficiency gains through market interconnection. Those structures are still evolving. Water trading is also developing with most activity involving irrigators on river systems which provide the physical connection between buyer and seller. Opportunities for trading to urban markets are limited by the absence of physical connections and current bulk supply arrangements which generally involve monopoly suppliers. While arrangements (and infrastructure) that facilitate urban trading may evolve in time, that is not a prerequisite for purposes of meeting immediate policy objectives including encouraging private sector investment and innovation in delivering new water sources. Provision for access and for private sector participation (through licensing) are the essential and appropriate first steps. In NSW, IPART's recommendation that incumbents make greater use of outcomes-based competitive procurement processes will also provide opportunities for the development of a competitive market for wholesale supply.

Retail pricing of electricity and gas are becoming deregulated although significant components of retail costs (i.e. charges for use of the monopoly infrastructure that connects sources of supply to markets) are regulated. Deregulation of retail pricing for water services is unlikely for some time. The regulated prices of water services are therefore the de facto benchmark against which private sector entrants will assess potential opportunities. It follows that it is important that the pricing aspects of the NWI are

fully implemented. In particular, there should be a rigorous determination of Long Run Marginal Cost (LRMC).

Level Playing Field Essential

A "level playing field" between new participants and between them and the incumbent provider is essential. Ownership structures, and the extent of unbundling/separation, particularly of incumbents and where Government interests are involved, have a significant bearing on the required arrangements. Options range from accounting and behavioural separation of monopoly and competitive activities at one end of the scale to complete structural separation at the other. Ringfencing also has a part to play as it does for gas and electricity.

IPART has observed, correctly, that the costs and benefits of industry disaggregation and unbundling need to be understood before that course is adopted for water. At the same time, IPART recognised that certain of the incumbents' procurement activities should be "ringfenced" and undertaken independently. Beyond that, there are other aspects of current arrangements in NSW that will require amendment to establish a level playing field. For example a mechanism is required to enable private sector participants to access developer charges and avoided costs that can be attributed to the participant's project and would otherwise flow to the incumbent provider.

Other Policy Settings

As a general observation, policy settings should be directed to achieving optimal outcomes. There is a current example of where that might not be achieved. The NSW Government has recently amended planning rules that apply to small-scale "stand-alone" water recycling schemes to facilitate such schemes.

In many cases, a reticulated solution will be more efficient than a multiplicity of stand-alone projects because of the economies of scale associated with reticulation. A large scale reticulated solution can also provide a foundation for efficient growth and expansion to meet the needs of new development areas and consumers on line-of-main who could never justify their own stand-alone facilities, thus increasing overall uptake of recycled water. However, reticulation systems are characterised by large up-front costs and generally require significant foundation loads to ensure their viability. Promoting stand-alone solutions before reticulation options have been fully explored could result in the loss of potential demand for the reticulation alternative, perhaps to the point where it does not proceed.

National Or Jurisdictionally-Based Access Regimes

In the case of electricity, third party access, while essential, was just one aspect of the competition reforms which included separation of generation businesses and establishment of the inter-connected National Electricity Market to enable competition within and between states. Similarly, in the gas industry, where the development of inter-state trade was also a feature, access was a prerequisite for the development of competition in and between upstream markets and in downstream markets. In this context, it made sense to develop National arrangements for both electricity and gas.

Current arrangements for bulk supply of water from existing sources to urban markets do not lend themselves to competition in bulk supply and so third party access will not of itself promote competition among those sources. It will take some time, and private involvement in the development of significant new water sources, before there is widespread competition in the retail market for water services in the way that there is for electricity and

gas[5]. For these reasons the level of demand for third party access to potable water infrastructure, while unknown, is not likely to great. However, third party access may be a pre-requisite for some specific concepts such as Services Sydney's recycling proposal, or where the distribution and retailing of water in areas such as new growth areas is undertaken by a private sector operator.

While the issues in all jurisdictions are similar, namely the need for new sources of supply and sourcing capital for necessary investments, there are significant differences between jurisdictions in terms of their preparedness to embark on direct private sector participation and third party access, so development and implementation of a national access regime for water infrastructure is likely to be problematic in the short term and could delay reform in the more progressive jurisdictions.

National uniformity is a desirable objective in itself, and so one option is to develop a national access regime for water modelled on the gas or electricity regimes (for example). However, this would involve a substantial investment in establishing legislation and an access code and then the preparation and regulatory review of incumbents' access arrangements. On current knowledge, it is questionable whether that investment can be justified. Having said that, the primary question is the general form that the third party access arrangements will take. If agreement could be reached at a National level on the principles and form of a water access regime, then jurisdictions could proceed at their own pace within that framework.

Alinta believes that a jurisdictionally-based negotiate/arbitrate model supported by arrangements for declaration (to establish a right to negotiate); optional access undertakings; published access pricing principles and guidelines for arbitration; and access to limited merits review of decisions, is likely to be the most workable solution and should be given time to operate (and be refined) before more radical alternatives are considered. The new regime in NSW has these characteristics (with the exception of merits review) and could become a model for other jurisdictions.

The principal measures of the access regime's effectiveness will be:

- whether it provides an environment where competition between access seekers can occur on a level playing field;
- whether it results in investment in infrastructure and the development of new sources of supply;
- whether it promotes negotiations for access that are commercially reasonable for both access seekers and access providers; and
- whether the costs of providing and negotiating access are kept to a minimum.

Just as it has been for the energy industry, it is inevitable that the legislative and regulatory scheme for water will require refinement as the industry develops – the regime must evolve with the industry. The NSW Government has recognised this by adopting an "adaptive management" approach. This is an important and valuable attribute of the NSW arrangements and the industry would expect to participate actively in those processes.

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[5] Lack of diversity in existing sources of wholesale/bulk supply is one factor that is likely to inhibit the development of competition in retail markets for potable water. This outlook is reinforced in the NSW model by the pre-condition for grant of a retail licence that "sufficient quantities of the water supplied by the licensee will have been obtained otherwise than from a public water utility." (Water Industry Competition Act, s10(4)(d)) In Alinta's assessment, retail margins are also unlikely to be adequate to stimulate and support widespread competition.

Pricing

Legislative structures, including licensing arrangements, are clearly necessary to facilitate direct private sector involvement in the water industry. However, if the private sector is to be encouraged to avail itself of that permission and invest in the industry, there must be the opportunity to obtain an appropriate commercial return on that investment. Ultimately that equation comes down to revenues and costs.

For the foreseeable future, the principal competitor and *de facto* determinant of revenue for private sector recycling and potable supply projects will be the regulated price of potable water supplied by incumbent providers. Recent regulatory decisions have seen significant increases in potable water prices reflecting the June 2004 NWI and a growing understanding of the costs of the next large tranches of supply, which include desalination in some cases. However, the fact that all significant proposals for augmenting supply, including recycling and conservation projects, require subsidies or direct funding, would suggest that potable water prices are still below LRMC. In its June 2006 report on, Progress On The National Water Initiative, the National Water Commission confirmed that establishment of proper water pricing practices remains an important priority.[6]

On the cost side, access pricing is a significant issue for those projects that require access. Legislated pricing principles are an important part of the framework for negotiation and, if necessary, arbitration, between access seekers and the service provider.

There has been much debate about the objects of providing access, and access pricing principles in the context of the review of the National Access Regime and more recently the National Electricity and Gas Regimes. The pricing principles for the National Access Regime are in section 44ZZCA of Part IIIA of the Trade Practices Act (TPA). In summary:

(a) regulated access prices should:
    (i) be set so as to generate expected revenue that is at least sufficient to meet efficient costs; and
    (ii) include a return on investment commensurate with the risks involved; and
(b) access price structures should:
    (i) allow multi-part pricing and price discrimination when it aids efficiency; and
    (ii) be non-discriminatory as between access seekers; and
(c) there should be incentives to reduce costs or otherwise improve productivity.

In the gas and electricity industries, access prices are, as far as practicable, set to reflect the efficient costs of providing the relevant service. The total cost of providing services is built up from its components – O&M, return of capital (or depreciation) and return on capital – to produce a revenue requirement which is then allocated across the various access and related services that are to be provided. For large customers in particular, this can result in prices that vary according to the customer's location.

The NSW Water Industry Competition Act (WICA) has adopted the pricing principles of Part IIIA of the TPA with the qualification that they be implemented "in a manner that is consistent with any relevant pricing determinations for water supply and sewerage services including (where applicable) the maintenance of 'postage stamp pricing'" (WICA, s41). This qualification highlights one of the political and practical realities of water pricing i.e. postage stamping, and is one of the factors that led IPART to recommend that the Efficient Component Pricing Rule (ECPR) should be adopted as the *prima facie* basis for

6 National Water Commission, p8

setting access prices. ECPR also avoids the need to allocate the costs of vertically integrated incumbents between water, sewerage and retailing activities.

In simple terms, an ECPR access price is set by taking the incumbent's regulated retail price and adding (or deducting) the incremental costs (or savings) incurred by the incumbent in providing access. In many cases those costs and savings are likely to be small with the result that access prices are close to the "benchmark" regulated retail price, leaving very little margin for the access seeker. However, access prices will promote economic efficiency (and will therefore be consistent with the TPA and WICA pricing principles) so long as they at least cover the variable costs associated with providing access. That is, the incumbent's customers, taken as a whole, will be better off if access is provided at a price that at least covers the variable costs of providing access than they would be if access was not provided at all. It follows that, under the negotiate/arbitrate model, there is significant scope for negotiation on access prices, especially in cases where the access seeker has a viable alternative such as to by-pass the incumbent.

CONCLUSION

The reform processes in gas and electricity have been driven by the need (and opportunity) to improve economic efficiency by enabling competition in production/generation and retail/supply sectors, both within and between states. The reforms have been characterised by the establishment of national arrangements that provide for access to existing monopoly infrastructure, and the development of physical networks that enable inter-state trade in both commodities.

In the case of water, the policy imperatives are to secure new sources of supply and to encourage investment and innovation. The private sector stands ready and able to respond. However the opportunities for interconnection of sources of supply and major urban markets are much more limited for water than they are for gas and electricity. There are also considerable differences between jurisdictions in their preparedness to undertake reform. Jurisdictionally-based solutions, guided by national principles, seem appropriate.

Recent developments in NSW have potential to transform the water industry in that State and could become a model for other jurisdictions. Policy and regulatory settings (including pricing) will play an important part in determining the extent to which that potential is realised.

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