INFRASTRUCTURE PARTNERSHIPS AUSTRALIA

BUILDING AUSTRALIA TOGETHER

Water Infrastructure – Issues & Reform Options

Contacts:

Brendan Lyon
Chief Executive Officer
Infrastructure Partnerships Australia

P | 02 9240 2050
E | brendan.lyon@infrastructure.org.au

Jonathan Kennedy
National Manager - Policy
Infrastructure Partnerships Australia

P | 02 9240 2057
E | jonathan.kennedy@infrastructure.org.au

1. Background

In recent years, urban water supply has become a critical issue impacting all levels of government.

The pressures of population growth and declining water availability have required governments to: invest in new water supplies; improve the management and delivery of water services; and facilitate innovation and more efficient water use.

In New South Wales, major investments have been made by government - in partnership with the private sector - aimed at both securing and diversifying the State's water supply system. This has included the Kurnell Desalination Plant, which supplies up to 15 per cent of Sydney's water needs.

New South Wales has also led the way in facilitating private sector involvement in the delivery of water and wastewater infrastructure – most notably through the 2001 commencement of Australia's largest residential water recycling scheme at Rouse Hill. The Rouse Hill scheme – which was entirely funded and delivered by the private sector – has enabled over 4.7 billion litres of wastewater to be treated for residential use each year, at zero capital cost to taxpayers.

More recently, New South Wales established the *Water Industry Competition Act 2006* (WICA) which provides - for the first time in Australia - a licensing regime for private sector participants to operate in all facets of the water and wastewater industries, as well as for third party access to water and wastewater infrastructure.

Several ground-breaking projects have already been established under WICA, including the $100 million Rosehill-Camellia Recycled Water Scheme - which has been enabled by the licensing provisions of the Act. Once complete, the scheme will supply high quality recycled water to six of Sydney's largest industrial water users.

Notwithstanding the progress made over the last decade, there remains considerably more to be done to encourage competition and contestability in the New South Wales water industry.

1.1 Consultation

IPA has consulted extensively with its members in developing this briefing paper. This included establishing a Steering Group comprising industry leaders from across the spectrum of the infrastructure sector - including developers, constructors, operators, financiers and legal advisors.

2. Executive Summary

Continued investment in new water infrastructure and services is unavoidable; but the view that public sector water utilities should deliver all of this required investment is being challenged.

Policymakers are increasingly looking at opportunities for shifting capital expenditure costs onto the private sector. The success of this approach, and of each individual project, will ultimately come down to whether or not it makes 'commercial sense', and provides value for money for consumers.

In recent years, capital expenditure by New South Wales public water utilities has increased exponentially. As of the 30 June last year, Sydney Water had financial liabilities of $6.5 billion - representing a 126 per cent increase on 2005-06. Sydney Water's new borrowings reached $947 million in 2009-10 - this represented a 270 per cent increase on 2005-06 borrowings.

The roll-out of water infrastructure to new development areas accounts for a large proportion of increased capital costs - almost 40 per cent of the $3.7 billion Sydney Water intends to spend on new assets in the next five years is to service population growth. The Coalition's commitment to release 10,000 blocks over four years has the potential to add to these costs.

At the local water utility level, capital 'constraints' are more prevalent. The State's rural water utilities reported a combined net loss after tax of $27 million in 2008-09, resulting in the State Government picking up a significant proportion of local water utility capital costs. Currently, around 15 per cent of local water utilities capital expenditure costs are funded by the State Government through the *Country Towns Water Supply and Sewerage Program*.

In the case of Sydney Water, this capital expenditure growth has been matched by an increased capacity to service debt. In fact, Sydney Water should be commended for accommodating a fast growing capital works program while simultaneously delivering high quality services and maintaining an operating surplus. Operating efficiencies, such as those realised through the 'NetWorks Alliance'[1], have undoubtedly assisted in this regard.

But while Sydney Water's current capital works expenditure is well within manageable limits, from a financial accounting perspective it is - along with that of other public trading enterprises in sectors such as energy - impacting on State Government balance sheets.

This trend is set to continue over the forward estimates. Over the four years to June 2014, State sector net financial liabilities are forecast to rise from $84.8 billion to nearly $107.9 billion, an increase of $23 billion or 27 per cent. Public trading enterprises account for around 80 per cent of this increase - from June 2010 to June 2014 public trading enterprise net financial liabilities are forecast to increase by $17.8 billion.

If the State Government's intention is to contain net financial liability growth, then it must do so without slowing down the roll-out of water infrastructure to new development areas.

Getting this right is made all the more important by the forthcoming rollout of water infrastructure to the North West and South West Growth Centres. These growth areas are intended to accommodate 181,000 new dwellings, as well as employment for around 500,000 new residents.

[1] The NetWorks Alliance is an innovative collaboration formed by Sydney Water to deliver a program aimed at reducing leaks and main breaks from Sydney Water's 21,000 km water supply network. The Alliance combines the expertise of Sydney Water, with Bovis Lend Lease, Veolia Water Network Services and CLM Infrastructure.

Effectively utilising private sector capacity to fund, construct, and operate large scale water infrastructure will be key to successfully addressing this challenge. Engagement of the private sector, through instruments such as PPPs (with appropriate risk transfer and balance sheet structures), will benefit not only water utilities but ultimately, water consumers.

New South Wales is at least approaching this challenge from a position of relative strength. The *Water Industry Competition Act 2006* (WICA) - the first of its kind in Australia - has put in place a robust mechanism for private sector participation in the water industry. The view of business is that WICA is working well, and should continue as the principal mechanism by which private sector participation is encouraged and overseen.

The task ahead for a new State Government is to ensure this mechanism, five years on since its introduction, is being utilised as effectively as it could be. Key to this will be ensuring financial viability for large scale (private sector) projects, beyond simply water re-use.

This briefing paper outlines opportunities for greater private sector involvement in the water industry, including on a large scale project basis, and suggests some practical improvements in the operation of WICA.

It should be noted that reform options - and their associated drivers - have been outlined in brief, and that more detailed analysis is necessary to determine their practicability and implementation. IPA is eager to work further with the Government in this regard.

IPA also understands that the WICA will shortly be reviewed (as provided in s104 of the WICA). This Review will provide a unique opportunity for the regime to be improved based on learnings from the first five years' of its operation, and as such IPA will be providing considered input.

See overleaf for a summary of reform recommendations.

3. Recommendations (Summary)

To assist in shifting capital expenditure from the public to the private sector, without slowing down the roll-out of infrastructure to new developments, Infrastructure Partnerships Australia (IPA) encourages the new State Government to consider the following reform recommendations.

Reform Driver	Recommended Reform	Key Considerations	Key Benefits
- Contain the considerable capital expenditure costs for public water utilities resulting from continued population and economic growth – particularly the expensive roll-out of water infrastructure to the North West and South West Growth Sectors..	- Explore the feasibility - under the *Water Industry Competition Act 2006* - of : ▪ large-scale private sector water utilities providing drinking water, recycled water and wastewater services (as vertically integrated suppliers with regulated retail functions) to Sydney's new growth areas; ▪ private sector construction, operation and ownership of water & wastewater infrastructure networks - which are made accessible to public and private water utilities on a 'user pays' basis.	- Structuring and (appropriate) risk-share is necessary to avoid **negative accounting** impacts on public utility and government balance sheets. - An enabling and stable **regulatory framework** (regulated by IPART). - Sufficient **scale** to ensure an adequate rate of return on investment. - **Staged roll-out** of infrastructure in order to minimise economic inefficiencies. - Commencement of a **revenue stream** as early as possible after establishment of the utility. - Provision of a **backstop guarantee** to reduce risk for investors/operators/consumers (i.e. Rouse Hill). - Price and volume certainty (i.e. guaranteed cash flow stream), in order to **reduce risk** for investors.	- Enable major **capital expenditure** costs to be shifted to the private sector, without slowing **the roll-out** of infrastructure to new growth areas - **Realisation of efficiencies** from private sector design, construction, operation and ownership.
- Facilitate greater private sector involvement in the water sector beyond metropolitan areas - enabling rural and regional water consumers to also benefit from contestability and technological innovation.	- Extend the 'access regime' under the *Water Industry Competition Act 2006* beyond the areas of operation of the Sydney Water and Hunter Water corporations.	- Financial and operational **impacts** on Councils will need to be **minimised**. For smaller councils this should include the **costs incurred in negotiating** arrangements for third-party access. - A **simplified system of pricing regulation** should also be considered.	- Enable the **benefits** of private sector access to be extended into rural and regional areas - such as **improved quality standards** and **pricing**. - Assist local water utilities to meet the **substantial investment** that is required over the next 30 years.
- Address the current regulatory barriers and disincentives to private sector participation in the water sector - particularly those facing developers and third party operators in providing localised infrastructure solutions. - Assist to transition the New South Wales water sector towards a more sustainable footing through encouragement of localised (decentralised) infrastructure solutions.	- Streamline assessment and approvals processes under the *Water Industry Competition Act 2006* - with a focus on reducing costs, time delays and red tape for applicants (particularly developers and third party operators providing localised infrastructure solutions).	- A transparent and definitive approvals **timeframe**. - A modernised applications process **format**, including technologies such as file-sharing. - **Appropriate resourcing** for IPART, as the overseer of WICA, to ensure expeditious approvals without compromising diligence. - Clarification of **supplier of last resort** under WICA. - Improved **residuals management**.	- Instil greater **certainty** and **incentive** in the third-party access and licensing regime - particularly for those providing localised solutions. - **Speed-up the rollout** of localised solutions to new developments. - Assist to transition the State's water sector towards **a more sustainable footing**.

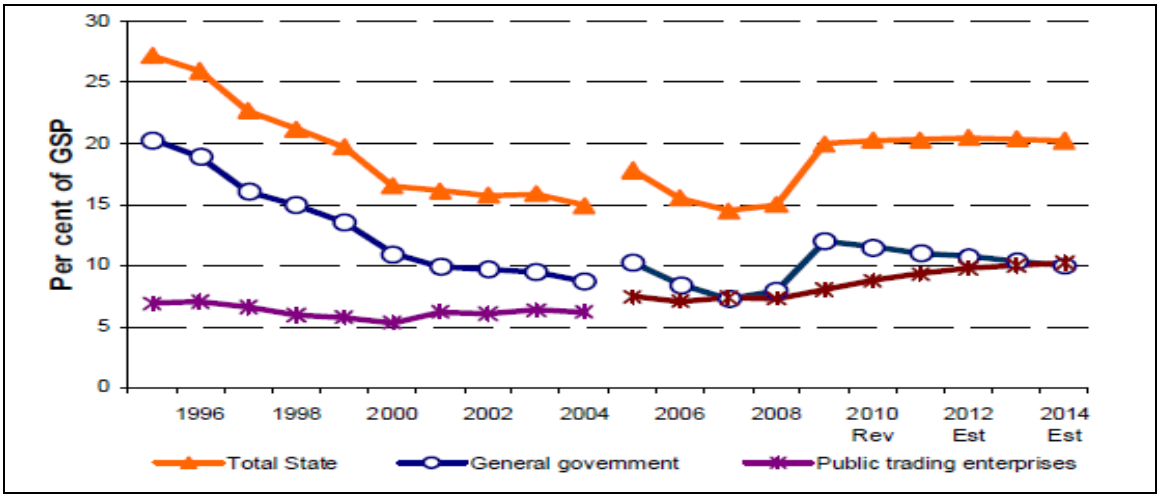
State Government - Financial Overview

Net Financial Liabilities

Over the four years to June 2014, State sector net financial liabilities are forecast to rise from $84.8 billion to nearly $107.9 billion, an increase of $23 billion or 27 per cent. This increase is largely due to the growth in gross debt, which is forecast to rise by $23.1 billion.

Increasing public trading enterprise net financial liabilities account for around 80 per cent of this increase (as shown in Figure 1 below). From June 2010 to June 2014 public trading enterprise net financial liabilities are forecast to rise from $36.8 billion to $54.5 billion - an increase of $17.8 billion.

Figure 1 - Net financial liabilities by sector

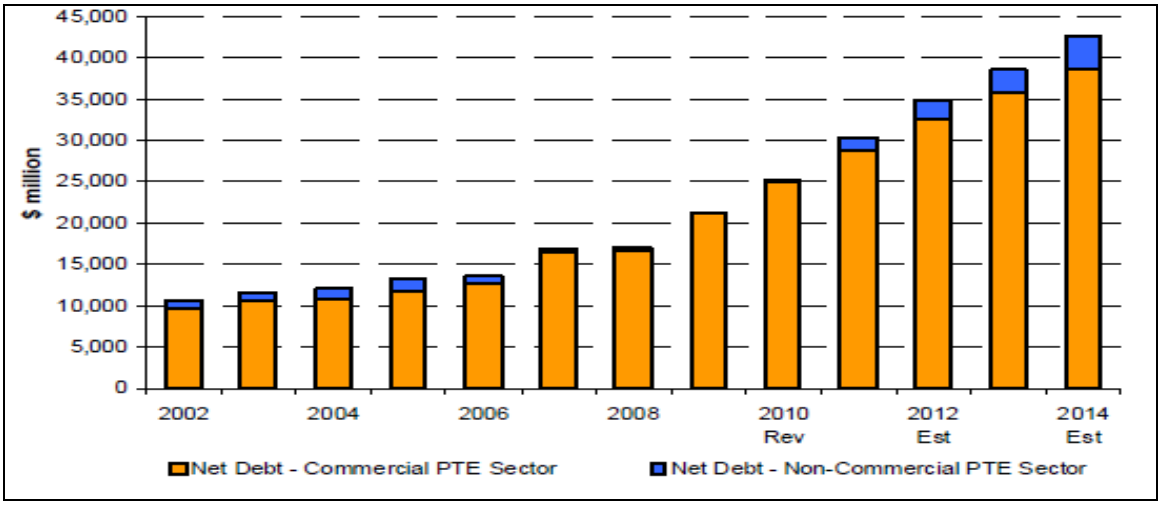


Source: New South Wales Budget, 2010-11, Budget Paper No.2, Chapter 7

Net Debt

State net debt is forecast to increase over the next five years, reaching 10.3 per cent of gross state product by June 2014. The increase is attributable to substantial increases in PTE sector borrowings to fund capital works (as shown in Figure 2 below).

Figure 2 - Public trading enterprise sector – net debt



Source: New South Wales Budget, 2010-11, Budget Paper No.2, Chapter 7

4. Reform Options – In detail

4.1 Explore the feasibility - under the *Water Industry Competition Act 2006* - of:

- large scale private sector utilities providing drinking water, recycled water and wastewater services (as vertically integrated suppliers with regulated retail functions) to Sydney's new growth areas; and
- private sector construction, operation and ownership of water infrastructure networks - which are made accessible to public and private water utilities on a 'user pays' basis.

Reform Drivers

Sydney Water's financial liabilities have grown exponentially in recent years (as shown in Figure 3 below).

At 30 June last year Sydney Water's total liabilities were $8.4 billion - representing a 15 per cent increase on 2008-09, and a 94 per cent increase on 2005-06. Financial liabilities account for the vast majority of the increase in total liabilities over this period - increasing 17 per cent on 2008-09 and 126 per cent on 2005-06.

Sydney Water should be commended for accommodating this fast growing capital works program while simultaneously delivering high quality services and maintaining an operating surplus. Operating efficiencies, such as those realised through the 'NetWorks Alliance'[2], have undoubtedly assisted in this regard.

Figure 3 – Sydney Water: Financial Snapshot 2005-06 and 2009-10

Financial Year	*2005-06*	*2009-10*	*Variation (%)*
New Borrowings ($m)	*253*	*947*	*274%*
Capital Expenditure ($m)	*520*	*1,200*	*131%*
Financial Liabilities ($m)	*2,800*	*6,500*	*126%*
Total Liabilities ($m)	*4,335*	*8,400*	*94%*
Borrowing Costs ($m)	*172*	*291*	*69%*

Source: IPA analysis based on Sydney Water's 2005-06 and 2009-10 Annual Reports

But while Sydney Water's current capital works expenditure is well within manageable limits, it is - along with that of other public trading enterprises in sectors such as energy - impacting on State Government balance sheets.

This trend is set to continue over the forward estimates. Over the four years to June 2014, State sector net financial liabilities are forecast to rise from $84.8 billion to nearly $107.9 billion, an increase of $23 billion or 27 per cent. Public trading enterprises account for around 80 per cent of this increase - from June 2010 to June 2014 public trading enterprise net financial liabilities are forecast to increase by $17.8 billion.

[2] The NetWorks Alliance is an innovative collaboration formed by Sydney Water to deliver a program aimed at reducing leaks and main breaks from Sydney Water's 21,000 km water supply network. The Alliance combines the expertise of Sydney Water, with Bovis Lend Lease, Veolia Water Network Services and CLM Infrastructure.

Closer analysis reveals that the roll-out of water infrastructure to new development areas accounts for a large proportion of required capital investment. According to Sydney Water's 2010-11 *Statement of Corporate Intent* almost 40 per cent of the estimated $3.7 billion it will spend on new assets in the next five years is to service the population growth.

The Coalition's commitment to release 10,000 blocks over four years will further impact capital expenditure costs. Longer term, the rollout of infrastructure to the North West and South West Growth Centres will also add significantly to capital expenditure pressures - these growth areas are expected to accommodate 181,000 new dwellings, and land for employment for around 500,000 new residents over the next 25-30 years.

If the State Government's intention is to contain net financial liability growth, then it must do so without slowing down the roll-out of water infrastructure to new development areas.

Business believes that the most economically efficient solution to the challenge outlined above is to better utilise the private sector's capacity to fund, construct, and operate much needed - but expensive - water infrastructure, particularly the roll-out of this infrastructure to new growth areas.

Private delivery of water infrastructure can help public utilities commission new infrastructure in a timely and efficient manner - in particular, it can help transfer (appropriate levels of) risk away from the State including construction costs and timing, operational costs and reliability, project management and delivery, as well as foster innovation in design and technology.

Ultimately, effectively utilising the private sector - through instruments such as a PPP (with appropriate risk transfer and balance sheet structures) - will benefit not just water utilities and taxpayers, but ultimately water consumers.

Reform Considerations

Through the *Water Industry Competition Act 2006* (WICA), New South Wales has in place a rigorous framework for harnessing the innovation and investment potential of the private sector in the water and wastewater industries.

While several ground-breaking projects have already been established under this framework, including the $100 million Rosehill-Camellia Recycled Water Scheme, private sector engagement under WICA has been mostly limited to water re-use. In particular, WICA has yet to facilitate the establishment of private sector water utilities (vertically integrated suppliers with regulated retail functions) or large scale construction, operation and ownership of water and wastewater networks.

Given the capital constraints facing public utilities (as outlined above), there is clear value in exploring the feasibility of private sector innovation and investment above and beyond current levels.

In particular, the State Government should explore the degree of investment appetite for this level of private sector involvement - and once established - should take appropriate steps to further incentivise this involvement.

To assist in this regard, some key considerations to the establishment of private sector water utilities servicing new growth areas - or privately constructed, operated and owned water and wastewater networks - have been outlined below:

- Appropriate structuring and risk-share is essential. A private utility (retailer) or infrastructure network owner will need to be structured in a way that avoids negative accounting impacts on public utility and state government balance sheets. For example, establishing the utility on a long-term availability payment basis may fail to relieve pressures on State balance sheets.
- An enabling and stable regulatory framework is already provided by the *Water Industry Competition Act 2006* (WICA), with one exception - WICA currently requires that *"a licensee be in a position to obtain sufficient quantities of water from a source other than from a public water utility"*. This will need to be reviewed if a private utility is able to offer services at the regulated price (and in-line with Sydney Water's prices).
- The role of an independent regulator (IPART) in price setting and arbitration will also prove essential.
- There would also need to be sufficient scale to ensure financial viability (an adequate rate of return on their investment) for both utilities and network owners/operators.
- Equally, there would need to be a staged roll-out of infrastructure in order to minimise economic inefficiencies (i.e. minimise periods where high capital expenditure on new trunk infrastructure is yet to return a revenue stream - which could be used to service debts).
- The commencement of a revenue stream as early as possible after establishment of the utility or network would also assist to secure investment, and to contain borrowing costs. In the case of a new utility (retailer), consideration would need to be given to 'gifting' assets in surrounding areas that have been previously 'gifted' to the incumbent, ensuring commencement of a revenue stream for use in retiring debt. '
- In the case of a private network owner, a guaranteed cash flow stream (price and volume certainty) is necessary to ensure viability, as well as to reduce risk –this must, however, be structured in a way that does not have adverse financial accounting impacts for public utilities (and ultimately government).
- The provision of a backstop guarantee – if needed and subject to appropriate financial accounting treatment - would assist to reduce risk for investors, operators and consumers. The Rouse Hill Infrastructure Consortium (RHIC) provides an example of how a backstop guarantee –in this case provided by Sydney Water - was used successfully.

There is - with the exception of the requirement that *"sufficient quantities of water must be sourced from a source other than from a public water utility"* - a rigorous enabling framework in place for the establishment of private sector water utilities and network operators/owners.

The fact that proposals are not forthcoming therefore indicates that, under current policy settings, the private sector does not see there being sufficient financial viability in the establishment of a large-scale utility or network operator/owner. Ultimately, the success of any approach to encourage private sector involvement will come down to 'commercial sense', with each project or initiative being judged on this basis.

Exploring how financial viability can be achieved for private sector utilities or network owners/operators requires a separate and more detailed piece of work, and should be a key focus for a new State Government.

CASE-STUDY - Prospect Water Filtration Plant

On behalf of Sydney Water, Degrémont operates the state-of-the-art water filtration plant at Prospect, some 35 kilometres west of Sydney's central business district.

It is the largest water filtration plant built at one time in the world, with a capacity to provide drinking water to 85 per cent of Sydney's population - 3.5 million people.

The Plant operates 24 hours a day and uses innovative water filtration techniques to purify the water, and can currently filter up to three billion litres of water a day.

The Plant provides Sydney with water that is cleaner, clearer and of high quality, and complies with the drinking water guidelines of national health authorities.

The Filtration Process

Water stored in Warragamba Dam and the upper Nepean Dam flows through huge pipes and canals to the Prospect Water Filtration Plant.

The Plant filters out sediments and other particles from the water using a process called 'contact filtration'. Water flows along a contact channel where special compounds are added to the water causing tiny particles to bind together into larger particles, which are easier to filter out.

The water then flows by gravity down through huge sand filters, and only clean, clear water comes out through the bottom. The filters are backwashed automatically, up to three times a day.

Finally, minute amounts of fluoride and chlorine are added to the water. Fluoride for dental health purposes, and chlorine to prevent the growth of micro-organisms.

Both in accordance with health authorities' requirements.

Fast Facts

Project	Water Filtration Plant
Client	Sydney Water Corporation
Contract	Build, Own, Operate, Transfer
Completed	1996
Contract Period	25 years
Estimated Population Served	3.5 million (85% of Sydney)
Plant Capacity	3000ML/day

(Source: www.degremont.com.au)

4.2 Extend the 'access regime' under the *Water Industry Competition Act 2006* beyond its current limited geographical scope - the Act is currently limited to the areas of operation of the Sydney Water and Hunter Water corporations.

Reform Drivers

All communities serviced by local water utilities should be able to benefit from a secure water supply and expect professionalism, cost effective service standards and regulatory safeguards in the delivery of water supply and sewerage services. Unfortunately, due to the varying performance of local water utilities, this is not a reality for many New South Wales residents.

Greater private sector involvement in the provision of water and wastewater services at the local utility level has the potential to change this.

A range of factors have a bearing on the level of private sector involvement beyond metropolitan areas - such as sufficient scale and appropriate governance frameworks - however one obvious incentive would be to extend the third-party 'access regime' under *the Water Industry Competition Act 2006* (WICA) beyond its current limit to the Sydney and Hunter regions.

WICA's current limited jurisdictional scope has the potential to create difficulties for third-party operators who seek access - other than for sewer mining - in rural and regional areas. In particular, under WICA's current jurisdictional scope a third party would have to deal directly with a local water utility without the benefit of clear negotiation protocols requiring the access seeker and service provider to act in good faith, or without the ability to refer disputes to IPART.

NSW Rural Utilities
'A Financial Snapshot'

In 2008-09 NSW rural utilities reported a combined **net loss after tax of $27 million** on total revenues of $920 million. In effect, the sector is consuming what capital it has.

By contrast the two NSW metropolitan utilities reported profits of $222 million on revenues of just over $3 billion.

About $75 million of the total annual capital expenditure of $660 million in 2007-08 was funded by NSW Government through grants under the Country Towns Assistance Scheme - this represents about **15 percent of capital expenditure**, but as the rules of the scheme are biased towards the smaller utilities - they can get 50% of the construction cost of projects whereas large utilities can only claim 20% - the level of support from the Government is likely much larger for the smaller utilities.

While the extent of private sector requests for access to non-metropolitan water and wastewater infrastructure networks has been very limited, the inconsistency in the application of access issues between metropolitan and non-metropolitan areas of the State has the potential to create a further disincentive for private sector engagement at the local utility level

This disincentive, in-turn, could further entrench the fact that large parts of the State's water sector are failing to benefit from much needed private sector capital and expertise. With local water utilities facing a substantial investment task over the next 30 years, private the role of the private sector at the local level will become even more important - particularly in ensuring that water supply and sewerage services are high quality, affordable and sustainable.

More broadly, ensuring a uniform regulatory framework - in respect of access - across the State would assist in addressing water inequality between rural and non-rural areas. This inequality is well documented - a 2008 New South Wales Government Inquiry report stated *"of great concern to the Inquiry is the failure of 17 local water authorities to meet the microbiological water quality requirements of the Australian Drinking Water Guidelines, 2004 and the occurrence of 22 boil water alerts over the 25 months to June 2008"*[3].

In its response to the 2008 Government Inquiry (outlined above), IPART stated that "the WICA framework could equally be applied to publicly owned local water utilities"[4].

Reform Considerations

Clearly, third-party access will not be beneficial or commercially viable in all rural and regional areas. However, ensuring that a consistent regulatory framework - in respect of third party access - is in place would allow the market to utilise opportunities for contestability and innovation, where they may exist. In-turn, this could have (potentially) considerable flow-on benefits for rural water consumes.

As a first step, WICA could be expanded to include the five smaller public water supply authorities that operate water supply, sewerage and/or drainage functions under the *Water Management Act 2000*.

These authorities oversee considerable networks of infrastructure which could be accessed by third parties to enable contestability in upstream or downstream markets. The largest of these water supply authorities - the Gosford-Wyong Councils' Water Authority (GWCWA) - provides water, sewerage and drainage services to approximately 320,000 residents, as well as industry, on the NSW Central Coast.

A key consideration of extending the access regime under WICA to rural and regional areas is the limited resources of some local water utilities, and the subsequent need to minimise costs incurred in negotiating arrangements for third-party access. One option to address this - according to IPART - is a simplified system of pricing regulation for local water utilities[5].

[3] New South Wales Government 2008 Inquiry "Secure and Sustainable Urban Water Supply and Sewerage Services for Non-Metropolitan New South Wales"

[4] IPART Response to the New South Wales Government 2008 Inquiry "*Secure and Sustainable Urban Water Supply and Sewerage Services for Non-Metropolitan New South Wales"*. March 29, 2009

[5] Ibid.

CASE-STUDY - Rouse Hill Infrastructure Consortium Pty Ltd (RHIC)

RHIC was formed in 1989 - the founding shareholders were significant landowners/developers in the Rouse Hill Development Area (RHDA). RHIC was renamed Australian Water Holdings in 2009.

The genesis of RHIC was to privately fund and deliver water infrastructure in the RHDA in order to meet the demand for much needed urban development/land release. The RHIC delivery arrangement overcame the financial constraints that restricted the Water Board (as Sydney Water was then known) from being able to deliver the necessary water infrastructure in the RHDA.

The relationship between RHIC and Sydney Water is in the form of a contract known as the Other Stages Deed ("the Deed") which was executed in 1992. RHIC is responsible for the funding and delivery of water infrastructure to the RHDA which has been re-defined by the Growth Centres Commission ("GCC") as the North West Growth Centres ("NWGC").

The responsibilities of RHIC fall within the following main categories: finance; master planning; engineering design; environmental design; the Principal for the delivery of the works; project management – construction; project management – commissioning; environmental assurance; quality assurance; and occupational, health and safety assurance.

The water infrastructure delivered included the Sewage Treatment and Recycled Water Treatment Plant at Rouse Hill, sewer carriers, potable water mains, recycled water mains, reservoirs, water and sewage pumping stations and trunk storm water drainage works. These works comprised the first residential dual reticulation (recycled water) system in Australia.

Land Release

The water infrastructure delivered by RHIC enabled urban development to proceed as follows:

- Stage 1 1,200 developable hectares: 16,000 lots (1994)
- Stage 2 800 developable hectares: 9,000 lots (2000)
- Stage 3 810 developable hectares: 10,000 lots (2006)

Environment

RHIC has played an important role in addressing the issues surrounding water scarcity in greenfield release areas. The dual reticulation system has also seen an extensive reduction to effluent discharge into the Hawkesbury / Nepean river systems.

Finance Structure

Stages 1, 2 and 3 were financed by senior debt arranged by special purpose subsidiaries of RHIC. The financing was supported by acceptable securities from a substantial number of landowners and developers. Where there had been insufficient security provided by landowners, Sydney Water provided backstop guarantees (Stage 1 and 3).

All the costs incurred by the various stages were intended to be recovered through developer charges – section 73 of the Sydney Water Act. The developer charge is a rate per equivalent tenement, and is established and maintained in accordance with the requirements of IPART. To the extent that Sydney Water does not recover 100% of the cost of the water infrastructure through developer charges, then Sydney Water utilizes some of its periodic operating charges to fund the differential amounts

RHIC has delivered water infrastructure at a cost of approximately $630 million to service 35,000 lots.

4.3 Streamline assessment and approvals processes under the *Water Industry Competition Act 2006* - with a focus on reducing costs, time delays and red tape for applicants (particularly for developers and third party operators providing localised infrastructure solutions).

Reform Drivers

The provision of water and sanitation services is a natural first step for a developer.

In locations that could be serviced by a large scale 'area' solution, multiple small-scale, stand-alone facilities may not be the most economically efficient option in the longer term. Large scale centralised/reticulated solutions enable efficiencies from economies of scale and are - generally speaking - better able to manage risks including health risks.

There are situations, however, where there is clear value in pursuing localised solutions to the provision of water infrastructure. This is particularly the case in remote 'greenfield' developments where the cost of rolling-out infrastructure is uneconomical for the nearest public water utility.

Localised solutions may also provide an interim step in the roll-out of infrastructure to new development areas, until there is sufficient critical mass for a large scale area solution.

Feedback from developers suggests that the rollout of water infrastructure to new developments - particularly 'greenfield' sites - is being delayed. The resultant project delays are having considerable flow-on costs for developers, and more broadly, are contributing to overall housing affordability and liveability issues.

Case-Study: Johnson Property Group (Vermont Estate, Pitt Town)

The Johnson Property Group recently reported savings of $17 million at its 940-lot Vermont estate development near Pitt Town, through the use of localised water solutions.

The savings were achieved through the construction of a $7 million recycled water system - provided by a privately owned micro water utility, Water Factory Company - which enabled the developer to avoid the $24 million cost of connecting to Hawkesbury City Council's sewerage system, which would have required 7km of pipelines and two pumping stations.

It aims to supply 500kL a day to homes and businesses for clothes washing, toilet flushing and outdoor uses, and 100kL a day to community facilities and sporting fields for irrigation, toilets and general wash down.

Ultimately, public water utilities - operating under capital constraints - are reluctant to roll-out expensive trunk infrastructure without a commensurate return on their investment, or will seek to minimise the period of time that an asset lies dormant.

As outlined above, many public utilities – particularly rural and regional utilities – have very limited spare capacity to expand its capital works budget beyond current commitments, and must carefully manage its capital works budget. This makes faster rollout of infrastructure unlikely under current policy settings.

This is not a criticism of public water utilities - which are merely operating as any economically efficient business would - rather, criticism is aimed at the barriers which developers are facing in pursuing localised solutions to infrastructure roll-out.

Developers have reported considerable regulatory barriers, risks, and financial uncertainties (i.e. reductions on headwork's charges) in pursuing localised solutions. In particular, there is an increased focus on developers to not only provide localised solutions, but to reduce water demand within these projects. These difficulties have been further compounded by the growing complexity of the water sector, such as the onset of integrated water management.

There is clear value in pursuing localised solutions to the provision of water infrastructure – aside from reducing public utilities' capital costs, decentralised water infrastructure provides considerable opportunities to put the State's water sector on a more sustainable footing – which is an essential component of the State's 2010 *Metropolitan Water Plan*.

Reform Considerations

Developers and third party operators must be better supported by government when providing localised infrastructure solutions.

In particular, there would be considerable benefit in streamlining the license application process under WICA so as to remove some of the barriers and disincentives facing developers and third-party operators.

Key considerations in this regard include:

- The need to clarify supplier of last resort (SOLR) provisions under the Act, in order to assist IPART to speed-up its assessment of applications. In settling on SOLR provisions, the Government should be mindful not to unduly increase costs on third-parties.
- The need for a more transparent and definitive timeframe for approvals. Applicants face considerable commercial pressures, including the need to commit to, and negotiate with, developers for the delivery of infrastructure. The current timeframe and broader process is compounding these commercial pressures.
- The current format of applications is outdated and voluminous. A modernised process, which includes mechanisms such as online file-sharing, would assist in speeding up approvals, particularly given the need for input from numerous interested parties; and
- The need for adequate and appropriate resourcing of IPART - as the regulator of WICA - to ensure expediency and effective costs-management.
- The need to assist developers and third party operators with residuals management. Local (i.e. decentralised) recycled water systems are inefficient at managing residuals such as excess sewage during winter months and solids removed from sewage. One solution would be the establishment of access regimes permitting the management of residuals (in accordance with pre-determined and auditable access costs).