



19 April 2017

National Water Reform Inquiry
Productivity Commission
GPO Box 1428
Canberra City ACT 2601

Initial Submission – Productivity Commission inquiry into the progress of Australian governments toward an alignment with the National Water Initiative (NWI)

The purpose of this letter is to seek your consideration of key points as part of the Productivity Commission's inquiry into the Australian government's progress toward alignment with the National Water Initiative (NWI) and a further refinement of the national reform priorities.

A secondary purpose of this letter is to introduce Living Utilities, and highlight the interdependent role that urban water policy, planning and delivery, coupled with the private sector has within the Australian economy, such as unlocking affordable housing.

Key Points for Consideration

There is an enormous opportunity to raise the bar for the vision and role of the Australian water systems and markets as a key enabler for a prosperous and productive Australian society, which includes resetting regulatory and market structures to drive the right behaviour, investment and outcomes for all Australians and communities.

The following key points are provided for consideration into the preliminary framework – national water reform priorities:

- The **overall policy goal** – “Water use in Australia is efficient and sustainable” does not go far enough to recognise the need for a strategic transition of Australia's water supply system to enable and ensure a liveable, growing and resilient Australian society for the next 50 years
- This should include extending the definition of Australia's water systems and markets to include integrated water management, noting that the wastewater sector is 50% of water costs and provides a significant opportunity to improve outcomes and costs
- There should be a National vision with an updated overall policy for Australia's water systems, recognising the interdependence of our water systems to underpin the prosperity and productivity of our economy, as well as the places we live, work and play at a variety of levels, including going beyond a focus on customers:
 - Valuing system security, adaptability and affordability through diversified sources and continued innovation
 - Ensuring communities are more liveable, resilient and enabled for growth by supporting the development of 'water sensitive cities'; and
 - Customer services, consumer protection and value.

- **Reform Context.** Recognise that the water sector reforms continue to transition through the three 'eras' and that the water sector is seen by some participants (government, government owned corporations and regulators) as special and should be protected from the wider-economic reforms and deregulation, such as the telecommunications industry, or in fact the broader restructure currently underpinning the Australian economy - A clear statement is required as to why the water industry is not reformed along the lines of other industries or should policy makers and regulators consider the water industry on a unique or different path for reform.
- If we take a strategic approach to reform, *"we can avoid costly mistakes, such as the vertical integration of Telstra at privatisation that constrained competition and ultimately triggered the decision to develop the National Broadband Network (NBN)"* (p51, 'Doing the important, as well as the urgent: Reforming the urban water sector, November 2015, IPA & Water Services Association of Australia).
- A fourth era is also occurring that includes growing community needs and expectations with a focus on customers, services (not infrastructure), resilience (defined as the ability to absorb stress and shocks, as well as be able to adapt to changing circumstances, such as diversified sources of supply) and smart prosumers (enabled by the Internet of Things (IoT) and big data).
- These themes need to be also included as we transition to smart communities, precincts and cities, as well as water sensitive places – We need an approach that not only responds to the current challenges, but future-proofs the water systems and markets from the emerging challenges and opportunities from social (e.g. increased population and urbanisation), technical (e.g. IoT and big data), environmental (e.g. climate change), institutional changes (e.g. in ownership of public assets) and economic challenges (e.g. availability of public finance to sustain aging infrastructure or growth in trunk water and sewer services, affordable housing).
- Recognise that political policy and economic regulation is critical to control price, protect customers and to signal appropriate participation from non-government sources – and that the current state-based approaches with retail minus pricing is entrenching traditional monopolies, infrastructure supply side approaches and are focused more on security of supply than the requisite innovation required to deliver productivity improvements – there is a need to identify the ideal urban water institutional management and performance framework.
- This includes the next evolution of the market to harness private participation and investment, recognising the role of the 'learning curve' in innovation comes with an upfront investment for longer-term benefits, in contrast to where the natural monopoly is incentivised to achieve economies of scale through extending old approaches.
- The propensity of governments and independent regulators to use 'postage stamp' pricing to further promote cross subsidies of the natural monopolies, increasing expenditure on trunk infrastructure and water consumption amplifies the bias toward the status quo, and limits competition and further sources of participation and funding – a clear position on postage stamp pricing and the role of private investment should be provided to provide investment clarity and certainty for potential new entrants.
- "A range of studies have shown that urban water sector performance is increasingly hampered by immature frameworks to support competition, a lack of efficient, independent economic regulation and a failure to use price signals to regulate

demand and fund investment” (p5, ‘Doing the important, as well as the urgent: Reforming the urban water sector, November 2015, IPA & Water Services Association of Australia). We think this review has the opportunity to reset the regulatory and economic frameworks to support a longer-term vision.

- We are supportive of a **new policy approach**, similar to that outlined within “Doing the important, as well as the urgent: Reforming the urban water sector”, November 2015, IPA & Water Services Association of Australia, inclusive of:
 - **Development of a National vision and policy** for Australia’s water systems with integrated water management, recognising the interdependence of our water systems to underpin the prosperity and productivity of our economy and the places we live, work and play – a consistent approach to leadership and strategy focussed on:
 - Valuing system security, adaptability and affordability through diversified sources and continued innovation;
 - Ensuring communities are more liveable, resilient and enabled for growth; and
 - Customer services and consumer value.
 - **New national standards for best practice governance**, including clear and non-conflicting objectives, as well as the role of independent regulators in aligning pricing determinations with broader policy objectives without creating an unintended distortion toward reinforcing the status quo – a consistent approach to improved governance and structure.
 - **Harmonisation of national standards for efficient, independent economic regulation** in urban water in all states and territories, or pricing mechanisms that capture the full value of innovation and enable national providers to facilitate the sharing of innovation across jurisdictions - a consistent approach to economic and technical regulations.
 - It should be noted that in practice, the regulation of public water utilities is pseudo regulation of private entrants, and is a material costs for new entrants. Spread across seven state and territory jurisdictions across economic, regulatory and technical regulations – an unnecessary burden in pursuit of efficient outcomes.
 - **A mutually supporting ‘competition / participation framework’** – a consistent approach to competition and private participation, with frameworks that should also encourage partnerships and collaboration with participants to foster innovation and value, not just promote competition and cheap water.
 - **This should include an investigation into the barriers and enablers of investment in economically efficient recycling initiatives.** By building integrated water and recycling solutions into development areas, we can further reduce demand on drinking water supplies, help mitigate flooding risks, reduce pollutants entering our waterways and delay or possibly avoid the need for new water infrastructure (e.g. desalination plants).
- Productivity improvements can also include improvements to process, where the current planning and approval processes are lengthy and costly. This includes the



fractured and spasmodic approach to water reform with no integration or alignment between Federal and state government reviews and pricing determinations – the opposite to responsive and adaptive planning.

- A broader range of stakeholders should be considered for participation in the consultation, noting the broader role that councils, private participants and communities are playing in the shaping of water practices within Australia.

Introducing Living Utilities

At Lendlease our vision is to create the best places to be enjoyed and celebrated – both today and in future generations. This with people at the heart, people who are customers and consumers of the lifestyles we create, enabled by efficient and sustainable services.

To underpin this vision we have developed a world-leading integrated approach to precinct-scaled utility infrastructure and services via our Living Utilities business; an approach that we believe ensures that the places we create incorporate solutions that will enable them to thrive in the future.

Living Utilities is a private utility business that leverages Lendlease's people and integrated business capabilities to:

- Provide leadership in the development of the best utility solutions; and
- Manage the delivery of utility infrastructure assets and services to benefit those living and working in our places

Population growth and urbanisation pressures have led to increasing demand for natural resources. Living Utilities' core strategy is to improve water and energy resource productivity. Our approach is to deliver adaptive and flexible utility solutions and services, which optimise supply with demand to avoid over capitalisation and development risk.

A key principle is to ensure value for our end users and to strengthen the wider social outcomes of our developments. Living Utilities seeks to be a trusted partner at every stage of the process: adept at sourcing and delivering smart and innovative utility infrastructure and services that provides every stakeholder – from investors and developers to consumers – with a sustainable, reliable and cost-effective outcome.

We have the capability to originate, fund, design and deliver utility solutions in the following areas:

- District cooling and heating solutions
- Localised recycled water plants
- Embedded and distributed energy generation including biomass and biofuel solutions
- Embedded electricity networks
- Large scale renewable energy deployment
- Fibre solutions for telecommunications, and
- Smart distribution networks including integrated metering and demand management.

The creation of localised and distributed solutions can also reduce demand on primary trunk infrastructure, providing for site based redundancy and resilience. Living Utilities is also able to sustain the provision of these services, based on a customer centric operating philosophy.



Through Living Utilities, Lendlease is finding better ways to source, deliver and manage resource productivity, improve economic outcomes and make a profound and positive impact on our places. Living Utilities is practical proof of Lendlease's promise to create the best places for people to work, live in and enjoy.

Further information on our key assets and operations at Barangaroo South and Bingara are attached.

Summary

Lendlease believes that it is necessary to create a dynamic water industry capable of meeting the challenge through improvements in water resource productivity, innovation and collaboration between both government and private participants. This includes adopting integrated water cycle management (IWCM).

Lendlease continues to support the water industry competition and investment objectives of the regulatory framework, and in particular fostering innovative recycling projects and dynamic efficiency in the provision of water and wastewater services.

Yours sincerely,

Scott Taylor
Head of Living Utilities

CASE STUDY: BARANGAROO SOUTH - GREEN UTILITIES

Barangaroo South is a 7.5-hectare mixed-use site that includes commercial towers, residential, retail and dining zones as well as a landmark hotel. On completion, it will be home to around 1,200 residents, 23,000 workers and more than 2.4 hectares of public park space.

Underpinning the commercial precinct is a two-level basement that houses the recycled water plant, centralised chilled water plant for air conditioning and the site's embedded electrical network.

Living Utilities has invested in district cooling, recycled water systems, solar panels, fibre solutions and an embedded electricity network.

These solutions deliver not only basic services such as thermal energy, cooling and water; but they also enable a six star rated community with key features such as being water net positive.

District Cooling Plant

The district cooling plant (DCP) located within Barangaroo South provides chilled water to cool all buildings within the precinct and comprises of three main components:

- Central District-Wide Chilled Water Plant
- Harbour Heat Rejection System
- Building specific Energy Transfer Stations (ETS)

The plant will be capable of providing 72 MW_r of cooling to the Barangaroo South precinct.

The DCP chillers reject heat using a harbour water heat rejection system (HHR). The chillers use sea water directly drawn from and returned to Sydney Harbour without interposing heat exchangers. The HHR system replaces the need for cooling towers enabling zero consumption of potable water, saving 100 million litres of water per year – a key element in achieving the development's water positive commitment.

Chilled water is distributed to the ETS located in the basement of the connected buildings to transfer cooling from the DCP to the individual building systems. The chilled water produced is distributed using a dual chilled water reticulation pipework, designed to minimise pumping energy and system losses.

CASE STUDY: BINGARA GORGE - GREENFIELD WATER RECYCLING

Located at Wilton, south-west of Sydney and at the foothills of the Southern Highlands, Bingara Gorge is the lifestyle and leisure community of the region. This magnificent master-planned community is designed to reflect the stunning natural setting, while at the same time offering residents the latest in modern conveniences.

The project spans 450 hectares, with over 200 hectares dedicated to open space, together with 18 km of interconnected walking and cycling trails, multiple lifestyle and community facilities, including an 18-hole championship golf course designed by Graham Marsh. The project has a number of distinct villages, including a major village centre. At completion, Bingara Gorge will be commensurate to a small country town.



Leading the way in sustainable community living, Bingara Gorge homes will use 50 per cent less potable water than standard homes through an integrated water management strategy that collects and recycles water for use in the community – a 10 per cent improvement on Government requirements.

A recycled water plant will treat sewage from Bingara Gorge, and the neighbouring Wilton Village, and provides homes with recycled water for all non-potable water needs such as toilet flushing and irrigation. All homes and community buildings in Bingara Gorge will be connected to the dual water system comprising both drinking and recycled water. For the community, the recycled water will be used for maintaining parklands, public gardens and the golf course.