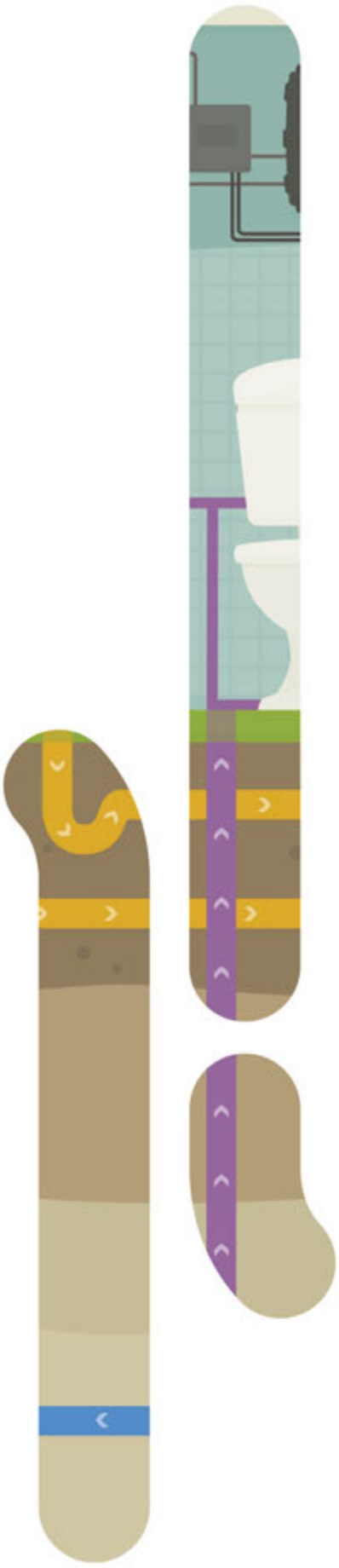
flow

Productivity Commission

National Water Reform

April 18, 2017



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Flow is a multi-utility specialising in the design, operation, management and retailing of local sustainable water, energy and telecommunications utility infrastructure. Flow is a Brookfield company and values the opportunity to comment on the Productivity Commission's *National Water Reform*.

Executive summary

The Productivity Commission's (PC) inquiry is both urgent and timely. Current legislative, regulatory, financial and governance structures support outdated 20th century water management and infrastructure solutions that are not delivering the most efficient and effective outcomes for the community. A competitive, transparent and modern national water market needs to be catalysed to enable a transition to next century water infrastructure and management solutions that will make Australian communities resilient, generate more environmentally sustainable water supplies and put downward pressure on pricing.

While there remain multiple barriers to competition for new innovative water businesses across Australia, NSW has made significant inroads. The NSW Water Industry Competition Act (WIC Act) 2006 is exemplary legislation that has catalysed new market in water innovation and resulted in the development of world-leading projects including Central Park Sydney and Barangaroo. Despite this progress, the lack of national policy and leadership is seeing these benefits eroded and progress stagnate. In other States, water markets lag significantly behind global best practice.

New emergent innovative water business models are extracting value from all water sources at a precinct level. These Integrated Water Cycle Management (IWCM) approaches – or decentralized/ district utilities are enabling land to be released as much as five years earlier and new resilient communities to be built in areas that would never have been serviced by centralised public utilities. They are removing pressures on aging existing centralised water infrastructure, preserving drinking water supplies, putting downward pressure on water pricing and the cost of infrastructure while adding value.

District IWCM schemes are playing an essential role in improving productivity, sustainability and liveability. They are providing new lower cost water sources within communities that enhance greening, environmental flows and resilience, and enabling cheaper smarter infrastructure options for developers.

Without new, more resilient and sustainable ways of generating and managing water, cities will not be able to meet the demands of rapid urbanisation and extreme weather events caused by climate change, or become more productive and liveable.

The current centralised water networks are not equipped to deliver the scale or speed of change required to meet the objectives of growing cities spelt out in State and City plans. Current legislative, regulatory and governance structures support last century utility infrastructure and enshrine in legislation their business models. These models assume 100 percent growth through '*obligations to serve'* and anti-competitive tariff arrangements. Change must occur to ensure future growth is opened to a market of next generation water utility providers and is not exclusive to centralised business models.

Flow welcomes the Commission's focus on the efficient and sustainable provision of water infrastructure. However, new business models based on IWCM are challenging existing definitions and assumptions around *efficiency*. Consideration must be given to the significant economic and competitive benefits delivered by IWCM and new generation district water utilities. These benefits need to be quantified and recognised by the Commission in the creation of a new competitive platform for the water sector.

Centralised water servicing remains the default management approach in new growth areas across Australia. Large barriers remain in place – blocking more efficient and sustainable water outcomes. This submission argues centralised infrastructure is in fact inefficient and needs to be disrupted with new priorities identified by the National Water Initiative (NWI) to promote competition.

Expanding National Water Initiative

Current NWI priorities need to be expanded to catalyse IWCM and recycled water innovation in new growth – urban infill and greenfield developments and establish a competitive fair playing field including:

RECOMMENDATION 1
Ensure the NWI makes specific reference to next generation IWCM utilities and recommends States adopt licensing regimes that promote IWCM such as NSW Water Industry Competition Act (WIC Act).

RECOMMENDATION 2
NWI recognises that new growth homes / communities can be more efficiently, sustainably and flexibly delivered with IWCM utility solutions compared to traditional centralised water servicing.

RECOMMENDATION 3
NWI investigates mandating recycled water in all new developments as a mechanism to catalyse a new IWCM market.

RECOMMENDATION 4
Establish a clear protocol in the NWI for competition around the provision of IWCM and district utility solutions.

RECOMMENDATION 5
NWI to investigate States amending relevant Acts to broaden the definition of "Public Authority" to include licensed IWCM water utilities.

RECOMMENDATION 6
NWI recommends the development of a best practice procurement methodology and framework to ensure State and local governments are able to procure IWCM infrastructure providers in new developments.

RECOMMENDATION 7
NWI to acknowledge the benefits and opportunity for stormwater management to be contestable to IWCM utilities.

RECOMMENDATION 8
NWI to acknowledge the opportunity to make contestable to IWCM utilities, public parks, sporting fields and green amenities- enabling low cost or free watering to green amenities all year round.

RECOMMENDATION 9
NWI to acknowledge IWCM recycled water as low impact not high impact.

RECOMMENDATION 10
NWI to acknowledge high quality recycled water as a high-quality water source to be used in responsible IWCM, for a range of purposes including environmental flows to local rivers and waterways.

RECOMMENDATION 11
NWI recommend all States amend Building Codes to ensure NSW BASIX 60+ or equivalent.

RECOMMENDATION 12
Productivity Commission examine current tariff settings and the potentially negative impacts of State pricing on catalysing new water markets.

Urgent reforms to drive competition

NWI recognises benefits of IWCM

RECOMMENDATION 1
Ensure the NWI makes specific reference to next generation IWCM utilities and recommends States adopt licensing regimes that promote IWCM such as NSW Water Industry Competition Act (WIC Act).

Current regulatory and tariff arrangements fail to take into account and recognise the services provided by IWCM, including the volume of water produced. The NWI gives little consideration to IWCM infrastructure that is critical to unlocking land value and meeting State Governments housing targets. Stronger emphasis needs to be placed on water utility infrastructure as a pathway to delivering growing communities.

Importantly, liveability and sustainability action cannot be achieved with *Business As Usual (BAU)* water utility infrastructure. Australia will not be ready for the next drought if we stick with conventional utility servicing. Smarter next generation decentralised utility infrastructure is capable of achieving higher resilience, productivity, sustainability and liveability outcomes. It preserves natural water resources through significant up to 70 percent water savings within IWCM utility districts. IWCM must be referenced and identified as conduits to these action in the NWI.

State planning regimes need to:

- embrace IWCM utilities as part of concept planning
- ensure the relevant Acts for lot registration process (linen release in NSW, plan sealing in QLD) recognise compliance certificates as equivalent to public authorities certification for lot release
- ensure level playing field of IWCM utilities in terms of access and other rights such as deemed customer contracts etc

New growth can be more efficiently and sustainably delivered by IWCM

RECOMMENDATION 2
NWI recognises that new growth homes / communities can be more efficiently, sustainably and flexibly delivered with IWCM utility solutions compared to traditional centralised water servicing.

The NWI is deficient in addressing the opportunities made available by IWCM utility infrastructure. Greater attention needs to be given to IWCM in strategic planning and how this alternative utility future will drive better outcomes for the economy and customers.

Importantly, IWCM utility approaches are changing the way communities are built. Not only are urban outcomes improved through greater greening, cooler temperatures, greater utility service resilience and demand management, but developments can be sequenced with complete flexibility. This is because district utilities are not reliant on last century trunk infrastructure – significantly reducing and even eliminating downstream and upstream augmentation.

CASE STUDY 1 – Pitt Town IWCM

Flow's local IWCM utility at Pitt Town reduced infrastructure costs by $25M, by eliminating the need for wastewater trunk infrastructure entirely. It reuses 100 percent of wastewater on site. This wastewater is converted into the highest quality recycled water for toilet flushing, washing machine use and irrigation in homes – representing 70 percent of daily needs. The utility brought forward land release by 5 years in a development that would not have been served by Sydney Water under BAU before then.

IWCM approaches are speeding up land release by as much as five years by enabling development ready land to be serviced with technologies that sit within the footprint of the development and are more carbon friendly. This fundamental shift in utility infrastructure solutions must be acknowledged in the NWI.

Mandating recycled water

RECOMMENDATION 3

NWI investigates mandating recycled water in all new developments as a mechanism to catalyse a new IWCM market.

Our recommendation is that the NWI recommend States mandate the implementation of current trusted solutions such as recycled water and encourage emerging IWCM solutions. Resilience and liveability outcomes can be easily achieved by mandating sustainability criteria in States. By mandating recycled water in all new developments (urban infill and greenfields), a new competitive market can be catalysed while sustainability and resilience outcomes are achieved.

Communities of the future will capture the resources that are local and available – sunlight, wind, water and waste are the resources every community has available to it today. The water markets need to support the ability of consumers to become prosumers – to access utility services that allow them to generate their own water supplies and more efficiently and sustainably reuse their waste,

The NWI needs to facilitate the introduction of stormwater into IWCM, further preserving natural resources and enhancing resilience, liveability and sustainability.

Catalyse a competitive next generation market

RECOMMENDATION 4

Establish a clear protocol in the NWI for competition around the provision of IWCM and district utility solutions.

Current legislative, regulatory and governance structures protect BAU utility business models which are based on large inefficient single purpose infrastructure and command and control systems. These business plans are enshrined in legislation and assume all future growth. Growth in new developments must be dedicated to new servicing approaches - opening up the market to competition, integration and innovation.

Planning of new communities needs to include locally produced recycled water to support irrigating gardens, green walls, streets, parks and the green grid and achieve significant temperature reductions – up to 15 degrees lower on a 35 degree day. Traditional water management is totally unacceptable for any 21st century development, and will hamstring actions for creating livable, sustainable communities.

Currently most growth plans are according to centralised infrastructure timing and sequence. The sequence of development can be dramatically improved with IWCM utilities which provide land owners with a cheaper, faster and more sustainable mechanism to develop land.

Amend *'Public Authorities'* definition to include IWCM utilities

RECOMMENDATION 5
NWI to recommend States amend relevant Acts to broaden the definition of "Public Authority" to include licensed IWCM water utilities.

IWCM utilities require equal powers, entitlements and expectations as *Public Authorities*. Currently only registered *Public Authorities* are entitled to participate in planning gateway processes with developers. While some private companies are listed under the *Public Authorities* schedule, IWCM utility infrastructure providers are not. This means alternative water providers are shut out, entrenching BAU utility choices and blocking faster, cheaper and more innovative ways to release land.

Best practice procurement for IWCM & centralised utilities

RECOMMENDATION 6
NWI recommends the development of a best practice procurement methodology and framework to ensure State and local governments are able to procure IWCM infrastructure providers in new developments.

New procurement processes are required to enable councils, government and the private sector to procure next generation water infrastructure where BAU would otherwise prevail. Governments should not continue to rely on solely on incumbent public utility solutions, a fairer market can be established by investigating alternative water infrastructure solutions. By requiring cost/sustainability/liveability comparisons between BAU and district solutions for new master-planned communities it is possible to choose the most suitable servicing strategy. Suitable can be measured by affordability, community benefit, innovation, sustainability, liveability and future-proofing. This would produce a much more holistic best practice infrastructure approach and achieve broader outcomes.

Contestable stormwater solutions – part of IWCM

RECOMMENDATION 7
NWI to acknowledge the benefits and opportunity for stormwater management to be contestable to IWCM utilities.

Waterway health is dependent upon appropriate stormwater management through the treatment process and ongoing maintenance. The health of waterways is enhanced by implementing a comprehensive utility management regime that considers total catchment management. Decentralised IWCM utility providers can participate in this regime contributing to global best practice.

New private district utility business models are available to manage stormwater in a more cost-effective manner.

Management of public parks & green amenities for district water utilities

RECOMMENDATION 8
NWI to acknowledge the opportunity to make contestable to IWCM utilities, public parks, sporting fields and green amenities- enabling low cost or free watering to green amenities all year round.

In new development areas, stormwater needs to be considered as another source for IWCM and stormwater management criteria need to be rational and manageable. State and local government's role is critical to achieving not only cost effective implementation, but on-going maintenance and environmental outcomes. The definition, restoration, ownership and management of riparian corridors has been inconsistently applied.

Both State agencies and Local Government should be involved in determining the design, construction, ownership and management regimes for riparian corridors. IWCM utility providers can provide on-going management subject to appropriate funding arrangements.

IWCM defined as low impact not high impact

RECOMMENDATION 9
NWI to acknowledge IWCM recycled water as low impact not high impact.

Often in State or local government land use tables, water recycling facilities are listed as 'high-impact' and therefore prohibited in residential and mixed use land zones, the very locations that benefit from local, low- impact water recycling technology or IWCM. These types of definitions are barriers to a competitive marketplace.

High quality recycled water not a pollutant

RECOMMENDATION 10
NWI to acknowledge high quality recycled water as a high-quality water source to be used in responsible IWCM, for a range of purposes including environmental flows to local rivers and waterways.

Current legislation requires high quality recycled water discharged into the environment to be licensed as a pollutant. The recycled water produced by Flow is categorised as suitable for *unrestricted irrigation* in accordance with the Australian Guidelines for Water Recycling.

High quality recycled water is not a pollutant and should not be licensed as such. It is an essential part of maintaining a sustainable manageable water balance within a local community that at times stormwater be harvested to provide additional source water for the production of recycled water and conversely that excess recycled water be allowed to responsibly integrate with the stormwater and groundwater systems.

These high water qualities can then be used to improve the quality of waterways and improve environmental flows.

Amend State building codes to deliver BASIX 60+ or equivalent

RECOMMENDATION 11
NWI recommend all States amend Building Codes to ensure NSW BASIX 60+ or equivalent.

In NSW, BASIX has driven greater energy and water efficiencies in homes and the built environment. It has also played a critical role in catalysing greater action around recycled water including establishing a strong business case for the construction of local IWCM/ recycled water facilities.

Unfair tariffs

RECOMMENDATION 12
Productivity Commission examine current tariff settings and the impacts of State pricing on catalysing new water markets.

Tariff structures that favour incumbent water utilities will wipeout emerging IWCM markets and all the benefits of competition, compromising Government objectives across the board and entrenching sub-optimal outcomes for communities, both new and existing. The Productivity Commission must look closer at current tariff settings and the impact of State pricing on catalysing new markets.

CASE STUDY 2: NSW Independent Pricing & Regulatory Tribunal (IPART) proposed retail minus wholesale pricing tariff

Flow and industry are rejecting IPART's proposed retail-minus tariff determination. The industry want to retain the current non-residential tariff setting because it underpins better outcomes:

- for customers
- for innovation
- the environment
- and for industry
- efficiency /competition

The determination fails to take into account and recognise the infrastructure and services provided by IWCM utilities including the volume of water produced. This means the retail minus yields a substantially higher wholesale price.

- In estimating the minus, IPART uses the retail (end user) volume for the purpose of calculating the fixed charge per end-user but the wholesale volume for the purpose of calculating the usage charge.
- This is a manifest error. For this reason alone, IPART's method yields a wholesale price that fails the Efficient Competitor Test.
- This very large error in the volume to which the usage charge is applied needs to be corrected.
- As a result there is a margin squeeze.
- Additionally, IPART's method ignores the substantial infrastructure investment by the IWCM utility within the community leading to a reduction in operational flows to the wider public incumbent network of 95 percent plus (thereby delivering major avoided costs for incumbents and resulting lesser pressure on existing customers through postage stamp pricing)

The retail minus tariff determination does not encourage innovation or competition and will not deliver benefits to water and sewerage customers. It:

- fails to take into account the economic and commercial logic of IWCM and associated market and technology changes (adoption of IWCM) that enable efficient by-pass of existing water and sewerage infrastructure.
- fails to take into account the positive externalities from such by-pass which benefit customers of the wholesale suppliers and also the broader community, like avoided pollution from desalination and sewage treatment /disposal.
- is inconsistent with IPART's stated objective of encouraging competition where efficient (Section 15 of the IPART Act).
- will eliminate existing and future efficient competition and reduce overall efficiency and increase future prices

The retail minus method has been specifically banned in the UK Water Act 2014 and in New Zealand's Telecommunications Act 2001:

- In the UK the ECPR (Efficient Component Pricing Rule) was found to represent an illegal margin squeeze in a landmark 2006 UK Competition Appeal Tribunal decision
- ECPR creates an inefficient barrier to competition and innovation.
- ECPR is inconsistent with protecting customers from abuses of monopoly power, and promoting competition.

Given the early stage of market development, this determination will simply create an insurmountable barrier to entry for IWCM outcomes in servicing major urban growth development.

- The retail minus tariff renders key new projects unviable.
- It is impossible to see how new entrants will be able to bring recycled water and water innovation projects to market as a result of this tariff.

IPART does not justify why it resorts to retail minus. It continues to make reference to postage stamp obligations. Postage stamp pricing is not the same as uniform pricing and is defined in S41(3) of the WIC Act as *'a system of pricing in which the same kinds of customers within the same area of operations are charged the same price for the same service.'*

IPART's fixation with cherry picking indicates a fundamental misunderstanding on the part of IPART as to the purpose of monopoly price regulation.

- Cherry picking is efficient under conditions of market and technology change, because it is symptomatic of inefficiencies in both costs and prices, and is a crucial enabler of competition.
- IPART has not demonstrated any inefficiency from applying cost of service pricing.
- Start-up water innovation projects are not inefficient – because we are actually producing water. They are inefficient in the same way that Waragamba Dam was inefficient.
- There would be no problem if we were allowed a revenue stream for the recycled water scheme – this is out of the calculation.

The proposed retail minus rationale will incentivise the wrong behavior:

- The retail minus tariff is and always will be the wrong tariff to catalyse a water innovation market.
- The best outcome for customers is to have a competitive regulated market where there are innovative options for water supply, management and reuse. Retail minus rewards BAU centralised thinking and outcomes and upward pressure on pricing.
- The NSW WICA market wants more sustainable and efficient water management practices, less infrastructure, more smart technologies.
- Retail minus rewards more infrastructure and inefficient infrastructure operation (for example treating water that is then 'waste') – more kilometres of pipes and duplication of cost.
- The market wants to move towards one bill for all water services in precincts. Retail minus encourages multiple bills from multiple utilities.
- The market wants to deliver Integrated Water Cycle Management (IWCM) – managing all water sources smarter and more responsibly. Retail minus is removing customer choice making the drinking water component not viable in precincts and new developments.
- The market wants to provide sustainable and innovative water solutions and services to all growth areas. Retail minus restricts investment to low growth areas.
- Retail minus kills innovation and new approaches and incentives WICA utilities to build schemes that are just like Sydney Water and Hunter Water, more pipe, more meters, segregating water services (no IWCM)

IPART will finalise this determination in May 2017. Flow and industry are challenging the determination and seeking intervention by the NSW Government to pause the determination pending a broader review into the benefits of IWCM proposed by the NSW Metropolitan Water Directorate.

For more information please refer to Flow's November 2016 submission and public hearing transcripts on the matter.
https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro-Pricing/Wholesale-pricing-for-Sydney-Water-and-Hunter-Water?qDh=3

Conclusion

The Australian water market is in urgent need of reform to catalyse new business models and more efficient, sustainable and flexible infrastructure solutions capable of underpinning growth and resilience.

Creating an open, transparent and competitive market for IWCM is the only way to ensure consumers pay less and get more water from sustainable sources. IWCM is the next generation best practice. It underpins delivery on all Governments' stated objectives relating to liveability, resilience, sustainability, innovation, housing supply, and economic stimulus. Current regulatory, legislative, policy and tariff structures need to be amended to enable this future and ensure new businesses can compete to deliver superior water management outcomes in urban and rural communities.

Flow welcomes the opportunity to contribute to the Productivity Commission's inquiry and would like to meet with the Commission to provide further examples of barriers and opportunities to creating a more productivity water market in Australia.

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