The Draft IPART Water Prices for Sydney Water Private submission by Dr Ian Wright, Senior Lecturer, Western Sydney University April 2020

IPART is proceeding with a very tight timeline to implement the new pricing model from July 2020. I believe that this has received very little public debate and the consequences of the new pricing will set many of Sydney's drinking water and waste water outcomes for the next 5 years.

I believe that reform is needed to ensure that Australia's largest city learns lessons from the drought and conserves its invaluable water supplies. The recent searing drought (2018-February 2020) saw Sydney's desalination plant reactivated, as the level in water storage reservoirs steadily fell. The level 2 water restriction that were imposed in 2019 were the toughest for any Australian Capital city. They banned people using hoses and many watched gardens die during a summer of relentless heat and bushfires.

A few of Sydney Waters customers in a few suburbs such as Rouse Hill (see photo below) were immune from water restrictions. They could water gardens at any time, uses hoses and sprinklers. They could wash their car with a garden hose. As they used treated recycled water delivered through 'purple pipes and taps'. These customers also saved drinking water as they flushed toilets with recycled water. Every litre of recycled water they used also meant that treated wastewater was not disposed into Hawkesbury-Nepean waterways.

Why does Sydney not build more schemes like Rouse Hill to distribute recycled water for its customers? In my view the latest IPART pricing makes recycled water a loss-making operation. The price is set at 90% of the drinking water price. This appears to be well below the cost of production. And consequently similar recycled water projects like Rouse Hill appear to not be repeated. The IPART proposal failed to explore how Sydney Water could build a more sustainable and resilient city with greater investment in recycled water schemes, like Rouse Hill. I suspect that the reasons why recycled water appears uneconomic in the IPART pricing proposal are the same reasons that are glossed over for Sydney's growing reliance on desalinated water during drought. Unlike desalination, recycled water (like Rouse Hill) is used all the time. In times of rain and water aplenty compared to drought.

There are so many issues that I think Sydney-siders need to consider in the IPART proposal. It will set the policy framework for how Sydney's water supply and wastewater infrastructure services a growing population in a possibly drying climate. Sydney's metropolitan population is forecast to grow steeply. NSW Government produced a report 'A Plan for Growing Sydney' in December 2014. This promoted expansion of the population and infrastructure of Sydney over the next 20 years, predicting that the population would grow by 1.6 million people, with 900,000 of this population growth occurring in Western Sydney. Every new suburb should have purple pipes distributing recycled water that is highly treated at western Sydney sewage treatment plants. Flush the toilets with recycled water, water the lawn, wash the car rather than dispose into the river, estuary or ocean.

The 'IPART Draft Water Prices for Sydney' is one of the most import policy frameworks for the waterways and water supply of Sydney. It needs to direct investment in the water and wastewater infrastructure to accommodate the extra population in a less reliable and possibly drying climate.

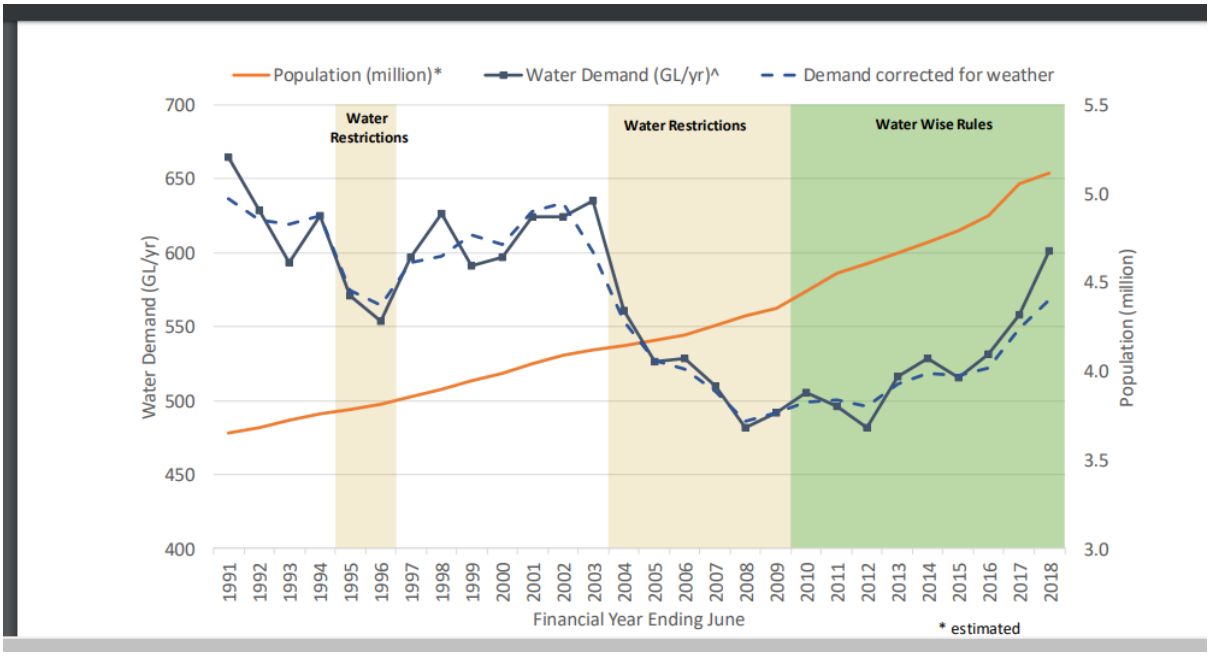
The IPART determination is going to strongly influence exactly what priorities Sydney Water pursues over the next five years. This includes how Sydney Water secures its future water supply, the implementation of water conservation projects, sewerage system investments, recycling projects, stormwater projects, and expenditure to improve stream and river health.

It is my opinion that the IPART Draft Water pricing determination fails to address the wasteful consumption of drinking water by Sydney's customers, and the role that water pricing plays This is evident when direct comparisons are made between the level of consumption of water by customers and the water use charges by other water authorities across Australian capital cities. In particular, the IPART proposal fails to explore how water pricing can influence water conservation. For example, why do Melbourne Water customers use about 30% less water than Sydney Water customers (https://theconversation.com/why-sydney-residents-use-30-more-water-per-day-than-melburnians-117656). I am certain that there is an important linkage between the usage price of water and how this provides a real financial incentive for people to conserve supplies through modification of their behaviour.

This is widely acknowledged using the 'rising block tariff' that the largest Australia water authorities (notably Sydney Water is the only large metropolitan exception) use such a tariff: Melbourne, South-East Queensland, South Australia, Western Australia and Canberra.

The 'rising block tariff' charges more for water consumption (per kL) based on higher water usage levels. Why was this not considered in Sydney? For excessive water users, the higher levels charge up to double the price per kL. Sending a price signal to encourage water conservation. The IPART proposal does not advocate this. It sets a higher drought price for our water, but many would feel that this is too late.

Under 'water wise rules' based on cheap water our collective thirst is increasing quickly. (See below) (Sydney Water Conservation report 2018)



Our collective water consumption in Sydney has risen above the highest use estimated in the Sydney Metropolitan Plan (see below) which predicted that if Sydney would consume water at the middle rate of 'business as usual' then 600 GL collective consumption would happen in 2037. That level was reached in 2018, above the highest estimate.

The current IPART proposed pricing for Sydney water does incorporate a higher water price in droughts, which is very good. But I think it will entrench 'business as usual' under non-drought conditions that will see a waste of our water in the storage dams.

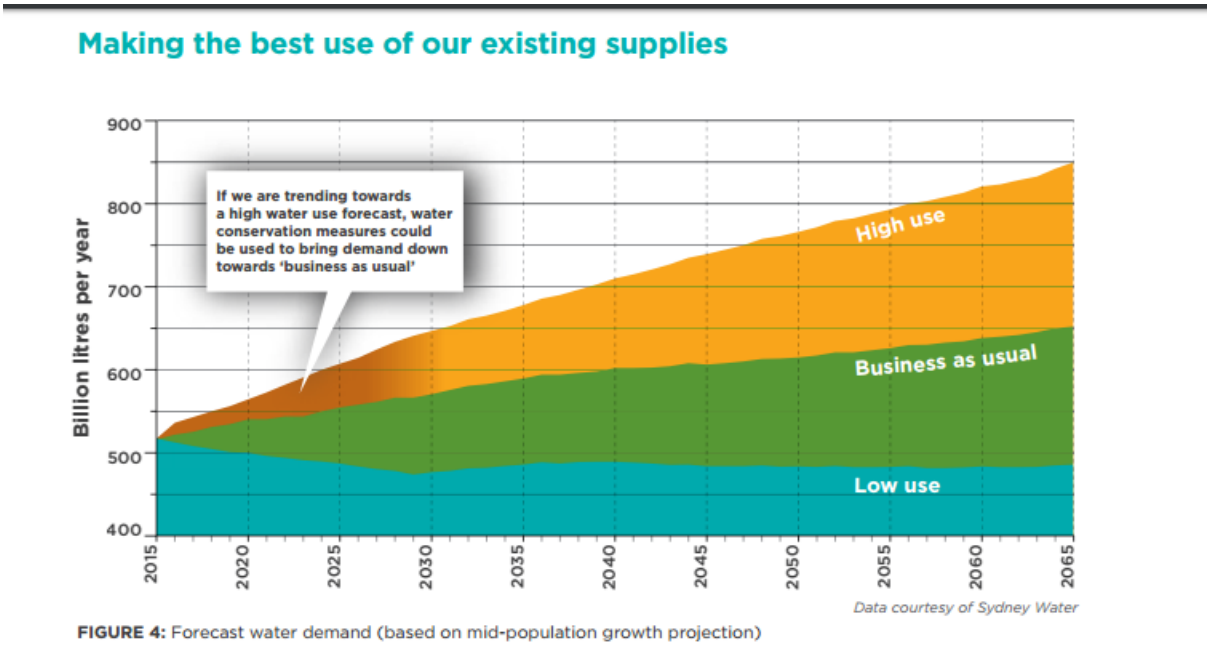


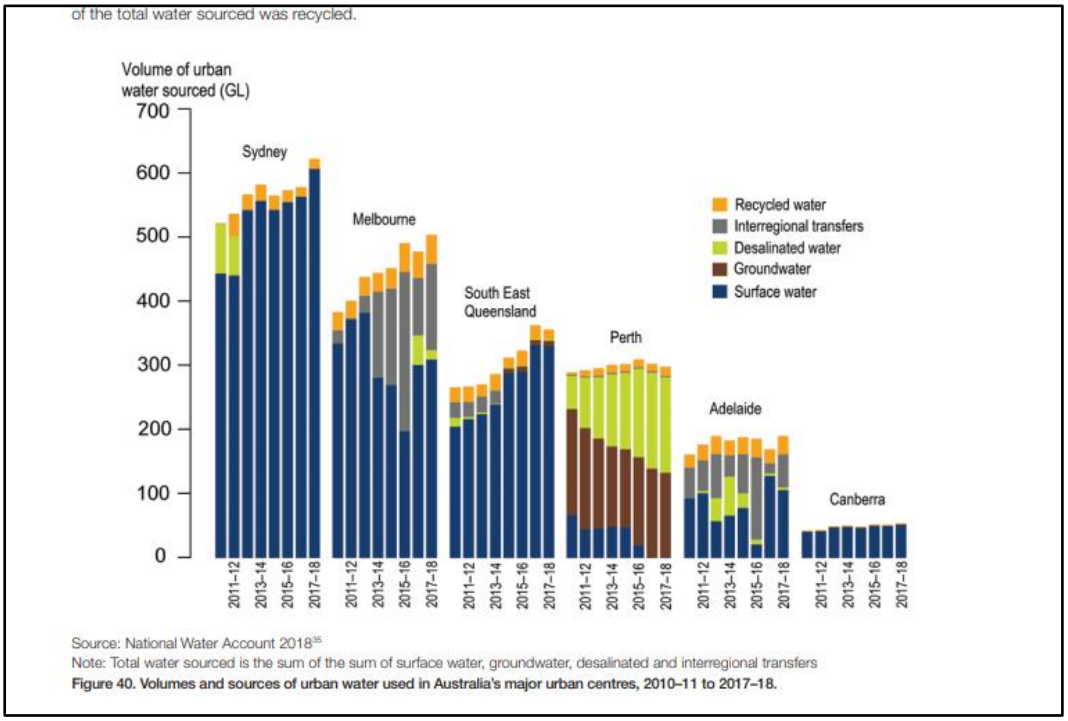
FIGURE 4: Forecast water demand (based on mid-population growth projection)

Melbourne Water and their retail utilities pursue Target 155. (https://www.water.vic.gov.au/liveable/using-water-wisely/target-155-target-your-water-use) This seeks to encourage their customers to use less than 155 litres per person per day. In

my opinion Sydney should look to repeat this and save our water stored in dams, and extend the time before the desalination plant is activated and water restrictions are enforced.

In my own home, we are quite conservative water users, and used 107 litres per person per day last autumn. That was about 20 cents worth of water per day. As Sydney has a flat price, you pay the same amount per unit volume of consumption. I think many people would agree that our water is too cheap. And excessive water users do not get a 'bill shock' for wasteful usage.

Sydney Water recycles very little of its water supply, compared to other metropolitan urban centres (see below from BOM).



The IPART Draft pricing model will continue to waste water from Sydney's water dams with WaterNSW being giving a very small slice of the pie ($217 million) for the bulk of Sydney's raw water. Yet the Desalination Plant will be given a similar sized slice ($200 million) despite it producing a very small proportion of Sydney's raw water supply. The payment for the desalination plant is subsidised by all Sydney residents. Why does Sydney Water not subsidise water recycling schemes (like Rouse Hill) to help us save water stored in storage dams?

Sydney Water's annual report revealed that they produced 44GL of recycled waste water. Yet Sydney Water releases the largest volume of poorly (primary) treated sewage effluent into the Pacific Ocean. This wastewater could be used for recycling for beneficial uses. Why does Sydney continue to use drinking water to flush toilets and water gardens? And flush poorly treated effluent into rivers, estuaries and the ocean. They do this because the IPART pricing determination seeks to entrenches these existing practices.

Western Sydney rivers are awash in partly treated sewage, with sewage wastes from more than 900,000 people dumped into Hawkesbury-Nepean tributaries. The Nepean near Penrith in dry weather is about 30% treated sewage wastes. See https://theconversation.com/more-of-us-are-drinking-recycled-sewage-water-than-most-people-realise-92420

Yet another million people are coming to western Sydney, and the IPART pricing that is proposed will make Sydney Water release even more treated sewage effluent into the rivers.

In my view the imposition of the IPART prices for Sydney Water is going to be a missed opportunity to encourage investment into recycled water. Our new suburbs should all use as much recycled and purified wastewater for garden watering, flushing toilets and washing cars rather than disposes of it into the rivers. Every litre of recycled water used is another litre of drinking water saved. And it delays the start-up of the desalination plant.