



WATER SERVICES
ASSOCIATION OF AUSTRALIA

RENEWING THE NATIONAL WATER INITIATIVE: SECURING THE FUTURE OF WATER FOR PEOPLE AND COMMUNITIES

MAY 2023



Executive summary

The Commonwealth government has started work to renew the National Water Initiative (NWI). We are calling on all state and territory governments to embrace the opportunity this presents.

Our communities want prosperity, jobs, action on climate change, and liveable cities. A new NWI, with an increased focus on water for communities, will be critical to meeting these goals.

To get there, all Australian governments need to work together. They also need to engage openly with the water sector and other stakeholders responsible for implementing the NWI.

The original NWI, agreed in 2004, was Australia's blueprint for water reform. Through public, shared commitment to **Objectives, Outcomes, Actions** and deadlines, it drove early water reform. After recommendations by the Productivity Commission, Infrastructure Australia and WSAA, the NWI is to be renewed:

The Australian Government has committed to work with states and territories to renew the NWI. Renewing the NWI offers the opportunity to better reflect climate change, provide for increased First Nations influence in water resource management, ensure access to safe and secure drinking water and take a strategic approach to groundwater management (i).

Thanks to the original NWI, **customers are now at the heart** of water industry decision-making. They want affordable, sustainable water services, that address climate change, and improve life for people and the environment.

Water utilities strongly support a new NWI. As frontline providers of services to customers we see the opportunities and challenges ahead. We know **the NWI can help galvanise progress and meet evolving community expectations**. It can remove roadblocks, and help us deliver products and services that address population growth and climate change. **Now is the time for governments to be ambitious. In partnership with utilities and stakeholders a new NWI can set the industry up for decades to come.**

In due course, **a revived National Water Commission** will be able to provide robust oversight of the NWI and drive further progress.

It is strongly in the interests of all states and territories to be part of an NWI. Some water issues challenge all jurisdictions, others are critical to only some states. **Taken together, the benefits of a new NWI will accrue to all states and territories as much as the Commonwealth. Benefits like more reliable, equitable and efficient services to our communities.**

Value of urban water sector

The NWI has tended to focus on rural and Murray-Darling Basin issues. While these issues are important, with **turnover of \$24 billion, the urban water sector is many times larger than the rural water sector** (ii). Our services underpin the future of Australian cities and regional and remote communities, and are worth focussing on.

Urban water directly employs over 30,000 people. For every job created in our industry, **another 4 jobs** are created in the wider economy. Every dollar invested in urban water delivers an **increase of \$2.40 in the economy.**

Costs are rising

Interest rates are rising, at the same time as many long-life water assets need replacement. Resourcing and supply chain problems are increasing. **Australia's urban water capital expenditure is expected to grow from \$6 billion per year to a baseline of \$9 billion** (iii).

The low water bills of recent years will rise.

Customers will want to know that governments are actively working to ensure this essential service provides good value.

The Productivity Commission's case for a new NWI

After comprehensive 2017 and 2020 reviews of national water reform, the Productivity Commission recommended a renewed NWI should focus on:

- strengthening the capacity to deal with climate change and extreme weather events
- increasing Indigenous Australians' involvement/influence in water resource management
- improving provision of urban water services, with **'significantly enhanced' NWI coverage on urban water** (iv)
- improving water monitoring, accounting and data
- improving regulatory, governance and management arrangements
- the use of best available information in decision making (v).

URBAN WATER

\$24 billion in revenue

\$6 billion in capital expenditure

Employs over 30,000

30 x the size of rural water

Provides wider health benefits



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This aligns with indications from customers in recent urban water industry engagements (vi).

The Commission's 2020 Inquiry found that:

'[Past] lessons, changes and challenges provide a compelling case for continued reform effort... governments, working together, can provide a forward-looking policy framework... And the NWI, renewed and refocused, could form the basis for this effort.' [B1]

More recently the PC and the Government have highlighted the importance of further reform to improve Australia's poor productivity record.

The urban water sector is ready for reform. We want governments to join us in the momentum that a strong, holistic NWI can deliver.

In March 2023 the Treasurer Jim Chalmers and the Commonwealth Government released '**Advancing prosperity – the 5-Year Productivity Inquiry**' (vii) led by the Productivity Commission. It made 71 recommendations, across 5 themes:

1. **Building an adaptable workforce** to supply the skilled workers for Australia's future economy, through education reform, skilled migration and modern, fit-for-purpose labour market regulations.
2. **Harnessing data, digital technology and diffusion** to capture the dividend of new ideas, focused particularly on the adoption of ideas by the 98% of businesses who are not cutting-edge innovators.
3. **Creating a more dynamic economy** through fostering competition, efficiency and contestability in markets, through a range of levers – from competition policy and sector specific regulation to broad enablers of business entry and investment.
4. **Lifting productivity in the non-market sector** to deliver high quality services at the lowest cost, by changing incentives and culture.
5. **Securing net-zero at least cost** to limit the productivity impact caused by climate change, including by fostering efficient adaptation to a changing climate.

Urban water is a major player in the national economy, and growing. Robust NWI provisions for urban water will not only satisfy communities, but help meet these national productivity objectives.

Engaging with the water sector to deliver the NWI

We also want to see more engagement. The water industry is uniquely positioned in understanding customers and their expectations. Utilities are in close and constant contact with their communities, understanding what they want, and their pain points. The industry has made significant progress in transitioning to being highly customer centric and notwithstanding changing customer expectations, we know water utilities in Australia are now one of the most trusted entities.

The views of customers and communities are vital to shaping decisions around water in communities. **The development of a new NWI needs open and transparent engagement to ensure optimal outcomes for the water sector and the communities it serves.**

A new focus on water for people and communities

Water is constitutionally a state responsibility. Many urban water issues that can be improved without recourse to governments, are pursued through industry strategies. However, as in other high-value sectors like health, education and transport, **some issues should be dealt with collaboratively by governments, nationally**. For example, '...a renewed NWI should be the major policy vehicle for pursuing the water-related goals endorsed as part of the United Nations 2030 Agenda for Sustainable Development' (viii) (SDGs) and Closing the Gap.

A renewed NWI can unlock urban water's potential through:

- A definitive public statement of **shared commitment** between all jurisdictions
- Collective **accountability and transparency** on issues that all governments know matter to their communities
- **Coordination** where needed
- **Efficiency** benefits in developing shared approaches, instead of 8 separate approaches
- Shows **leadership and intent** to communities
- It will crystallise **concrete, achievable steps forward** on issues where changes to government policies, settings, structures and legislation will deliver progress.

On urban water, the Productivity Commission stated that 'A renewed NWI could establish a standard for best-practice urban water system planning, including adoption of integrated management of water supply, wastewater and stormwater services.... **guided by community-driven objectives for water security, service standards, urban amenity and the environment**... State and Territory Governments should also commit to defining and **ensuring access to a basic level of service for all Australians**...' (ix).

Infrastructure Australia found that:

"the [water] sector faces unprecedented risks and challenges... Advances in technology, markets and planning can help to overcome these challenges, but many will require changes in laws and regulations to unlock benefits." [B2]

First Nations water services

Not all Australians can turn on the tap and drink the water without concern. Many First Nations communities still do not have a reliable, monitored water supply. The Commonwealth has put an initial \$150 million on the table to improve this situation. National collaboration is a vital element in Closing the Water Gap. We urge governments to support a human centred program that uplifts the skills of community members and creates opportunities for First Nations businesses in culturally sensitive and affirming ways on a journey to self empowerment.

Evolving role of water utilities

Providing drinking water and taking wastewater away is a complex achievement. Yet today, the role of water utilities has expanded far beyond this. Communities now realise that:

- Water utilities can provide much more than water and wastewater services
- They can help other industries solve broader problems eg carbon emissions, waste management, renewable energy generation
- Investment in water delivers flow-on benefits in jobs, manufacturing, training
- Water services have remained affordable over time (x).

Water has a growing role to play in energy generation including through hydrogen production - without a national water strategy, there is no national hydrogen strategy.

Figure 1 below shows how water services, and city design, have together evolved well beyond basic water and sanitation to deliver **cooling, greening, liveability, repair of environmental damage** and more (xi).

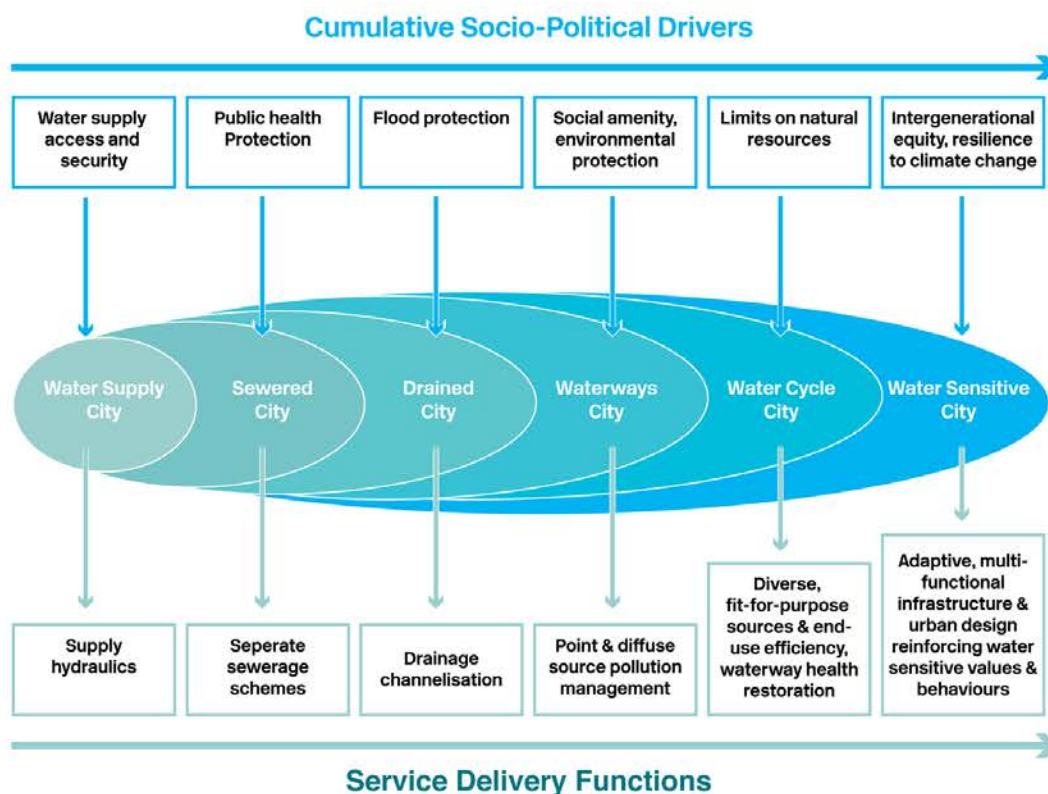


FIGURE 1: TRANSITIONING TO WATER SENSITIVE CITIES, 2020

Today the water industry contributes to a wide range of opportunities and challenges – like recycled water, hydrogen, biochar, waste to energy, and biodiversity. An NWI will unlock the industry’s potential to deliver world-class services and more value, to communities and their governments.

Key opportunities of a new National Water Initiative



1. Water supply security in a changing climate:

- **A national framework and metrics** to measure water security and assist governments make the best investment choices on augmenting water supplies.
- **All options on the table must be the guiding principle**, clearly spelt out within the NWI, with a **national approach to engaging local communities with facts and evidence**, not politics, for sustainable and supported local solutions. This also needs to be reflected in the Australian Drinking Water Guidelines, by incorporating purified recycled water as another source of water, and providing consistent national regulatory guidance and validation protocols.

2. Closing the First Nations water Gap:

- **All Australian communities must have access to safe clean drinking water to meet the Closing the Gap targets and Sustainable Development Goals** – SDG6 in particular.
- Further **funding of culturally affirmative programs in skills and business development for First Nations** on a path to self-empowerment.
- Promote further research and development of policy for **integrated services for First Nations communities including benefits of liveability** through better household plumbing and sanitation.

3. Building productive, liveable cities:

- Ensure **a national and systemic approach to implementing blue green grids and Integrated Water Management**, embed policies for valuing all water investment benefits including public health and ecosystem protection and regeneration.
- **Revolutionise the management of stormwater and drainage** for waterway health, water recycling options and public health benefits.
- **Nationally consistent principles for developer charges** will help deliver cool green cities and help defray growth costs.
- **Nutrient offsetting frameworks** will save costs in infrastructure upgrades.

4. Unlocking circular economy potential:

- **Create policy and regulatory settings** for the urban water industry to lead, support and facilitate renewable energy, green hydrogen, biochar for soil improvement and carbon sequestration, energy from food, garden and liquid waste and recovery of other resources from waste and water.
- **Change product stewardship policies** to avoid the issues that PFAS, microplastics and other contaminants have created for the water industry to fix.

5. Cost recovery and economic regulation:

- **Ensure economic regulation meets best practice principles to protect the long-term interest of customers.**
- **Set out a national framework of minimum standards for price setting and regulation** for each state and territory to enact to enable price smoothing and avoid price spikes for customers.

Key opportunities of a new National Water Initiative



6. A transparent and open industry, using data for improved services and good decision making:

Commitment by all levels of government and across all parts of the industry to:

- **public reporting of performance** including commitment to improving the National Performance Report, and collection of data for Closing the Gap and Sustainable Development Goals to promote transparency of the industry
- the **development of cross sector data ecosystems for diverse and high priority benefits** including water system security, identification and assistance of customers experiencing vulnerability, planning and delivery of infrastructure.

7. Skills and training:

- **A national taskforce** to address the skills uplift and resourcing required for the most essential of the essential services.
- **First Nations peoples to co-design training frameworks**, to empower communities with skills and improve capacity.

8. Research and innovation:

- **Targeted support and co-investment in urban water research.**
- A **national approach to innovation support** to enable the industry to commercialise leading practices that could compete on a global market.

9. Improving water efficiency:

- **Expand the Smart Approved Water Mark certification and related initiatives** to enhance the co-benefits with WELS and to further boost efficient outdoor water use providing more savings of water and money for families and businesses.

10. National supply chain security:

- **Safeguard a secure national supply chain for the water sector** for critical chemicals and assets to ensure public health is always maintained through functioning water and sanitation systems.

Help us unlock the potential

The lack of a functioning NWI is currently holding the industry back. As noted by the Public Interest Advocacy Centre of NSW:

The recent period of extreme scarcity on the east coast and mounting climate change impacts on water system sustainability are stark indicators of the urgent need for continued reform of water policy, planning and management practices. Failing to respond to these challenges invites unacceptable risk to the sustainability and viability of communities, environments and producers across the country (xii).

In April 2022, before being elected, now Prime Minister Anthony Albanese committed to:

'drive ongoing water reform, and future-proof Australia's water resources, bringing national leadership and fairness into water policy.... drive the renewal of the National Water Initiative...better prepare Australia for future threats to water security, including climate change....drive water reform, deliver water security, and uphold the Murray Darling Basin Plan' (xiii).

The urban water industry looks forward to engaging with all jurisdictions in the development of the new NWI.



Elements that communities want state and territory governments to support

It is Commonwealth Government policy to renew the NWI. But it will only succeed with the support and commitment of all states and territories. There are **specific potential benefits** that communities of state and territory governments will welcome.

These issues are here to start the conversation. Other stakeholders have an important contribution. This requires a deep engagement process, particularly now that urban water is to be more fully covered, to generate other areas of common ground. That means talking early to the urban water industry and other stakeholders, before consulting on a written draft.

1. Water security in a changing climate

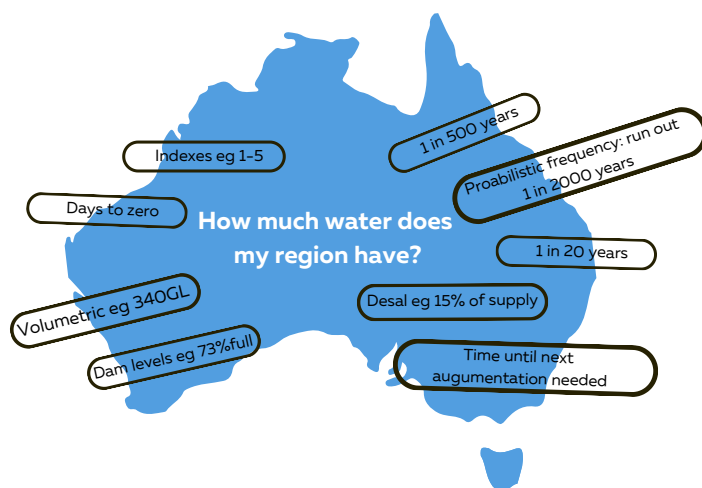
Ensuring we have reliable water supplies is becoming harder in our changing climate. Traditional water sources like rivers and dams are needing to be supplemented by manufactured water sources, like desalination and purified recycled water. Such investments are high cost, high profile infrastructure projects.

1.1 Measuring water security

There is no agreed way of measuring water security across Australia. Water security is 'The capacity of a population to access adequate quantities of acceptable-quality water...' [B3]. States and territories need to plan and engage with communities about saving water and building new water supplies, but a lack of clear, objective metrics makes it hard for communities to understand or trust the process.

It is in the interests of all jurisdictions to develop consistent, transparent measures of the level of water security in a particular city or region, that can provide clear comparisons.

The Australian Drinking Water Guidelines are a national model for water quality. We need a similar national approach to defining and measuring water security.



Many water security metrics are in use, all with pros and cons. Some early Commonwealth work looked at ways to evaluate water security, but fell short of setting a model to implement.

An NWI could establish tangible reporting metrics, to give a clearer picture of water security across the country. A national water security framework with a common definition and reporting metrics would depoliticise water choices, and help places be better prepared for droughts and floods. This will also improve investment rigour and transparency around large scale water infrastructure, and provide a level playing field for national/state funding when it arises. Governments may wish to see urban water security included as an outcome in City Deals.

1.2 All options on the table

Transparency and community engagement are critical to selecting the right water supply options. **All options – dams, desalination, purified recycled water, recycling, using wastewater and stormwater – must be considered** on their merits, and their value shown to communities. This requires a **national approach to engaging with communities** about so-called ‘new’ or ‘alternative’ solutions (which have in fact been in use for decades globally and in Australia), to support the need for them in future.

A national approach will depoliticise a complex issue and allow a non-partisan, consistent, principles-based approach. **Utilities and policy makers must investigate and discuss all available options with their customers and communities. Data on all options must be transparently published so that communities can understand their pros and cons and have input on them all.** All too often, governments assume communities will hesitate over certain options, despite evidence to the contrary, see figures on the next page from the Central Coast Council engagement activities.

Alongside engaging with communities, there is an urgent need to implement validation protocols for new sources of water. The NWI can play an essential role of supporting a national approach to validation, during a planned trial and beyond. This would help communities across the country to support diversification of water sources to increase climate resilience. Updates are also needed to the Australian Drinking Water Guidelines – these should incorporate purified recycled water as another source of water, and provide consistent national guidance on regulatory pathways.

Water quality guidance is a prime area for national progress through the NWI, as the Australian Drinking Water Guidelines are national. The NWI should seek more timely updates on the ADWG, incorporation of purified recycled water as a source water, and validation protocols. Forever chemicals like PFAS and microplastics are rapidly emerging issues that also need attention, through the Guidelines and throughout product value chains. National work on this work be hugely beneficial.

Purified recycled water for drinking and desalination will be critical parts of Australia’s future water supplies. Without an NWI mandate for all options planning, individual jurisdictions face a harder battle to implement these solutions. They can end up choosing options that cost customers more, and have greater environmental impact.

As climate extremes increase, **rainfall-independent water supplies will be critical for inland areas – which have very limited options.** Putting off talking with the community about reliable options, which are also increasingly common around the world, is delaying the inevitable and leading to piecemeal approaches to engagement, which reduces trust, adds time and cost.

EXAMPLE:

Toowoomba is a well-known example of engagement going astray: it held a rushed public engagement in 2006, in which the community voted against a proposal for purified recycled water. This required the construction of a pipeline with a capital cost \$100 million more than the recycling scheme. The key lesson is that governments should not wait until the onset of a water security crisis to start engaging with the public. [B4]

COMMUNITY VIEWS ON WATER SUPPLY OPTIONS - CENTRAL COAST, 2021

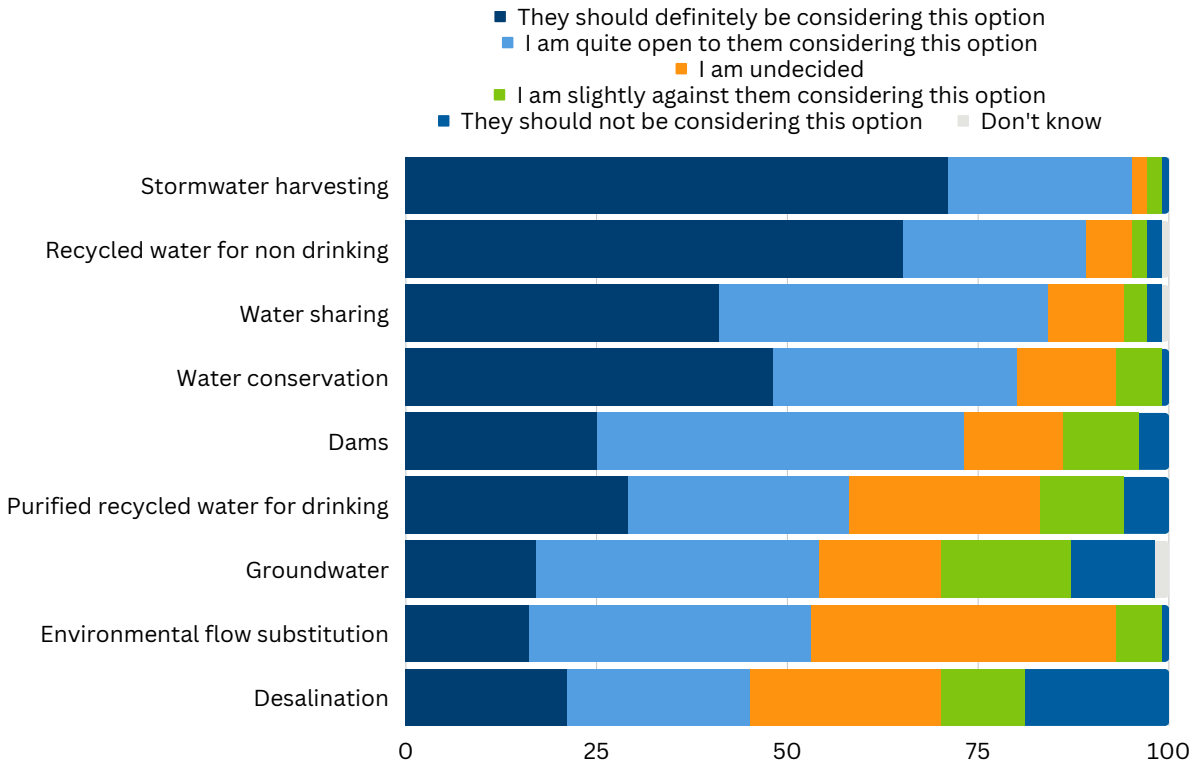


FIGURE 2: PERCENTAGE OF INITIAL OPENNESS TO COUNCIL CONSIDERING EACH OF THE WATER SUPPLY AND DEMAND OPTIONS (BEFORE INFORMATION)

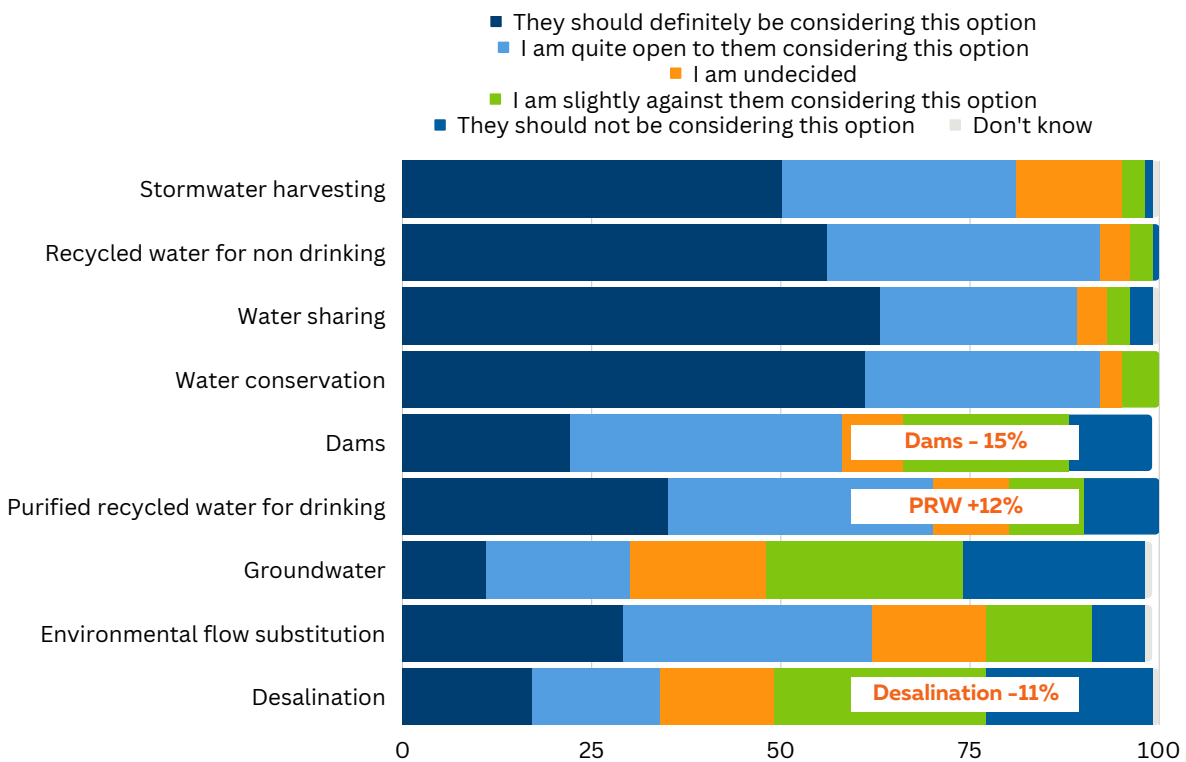


FIGURE 3: PERCENTAGE OF FINAL OPENNESS TO COUNCIL CONSIDERING EACH OF THE WATER SUPPLY AND DEMAND OPTIONS (AFTER INFORMATION)

1.3 Hydrogen and water security

The Commonwealth and some jurisdictions have released hydrogen strategies. More than 90 projects worth A\$250 billion are planned (xv). Green hydrogen is expected to grow rapidly for export and domestic use.

The hydrogen industry has underappreciated the criticality of securing reliable manufactured water supplies. To meet the 2050 ambitions could require more than Australia's current total household water usage.

There are enduring misconceptions that water is cheap and readily obtainable, from rivers, groundwater, or spare capacity in existing desalination plants. WSAA continues to explain that this is not so. There is not enough fresh or recycled water available to meet the hydrogen ambition. Plus, water supply augmentations are not quick nor easy. Australia's National Hydrogen Strategy (xvi) mentions water 83 times, and yet there is no equivalent national water strategy outlining how the intense water needs could be met.

Without a national water strategy, there is no national hydrogen strategy. This alone should motivate all states and jurisdictions to get behind a new NWI.

The NWI should set policy principles on:

- **prioritising water for different needs** (community, industry, hydrogen, environment, cultural)
- prioritising water sources, and what happens in **drought**
- **who pays** for, and owns, hydrogen infrastructure (expanding on the existing pricing principles to ensure that hydrogen does not develop at the expense of other water users)
- projects and water sources that **cross state boundaries**
- incentivising **dry cooling** and other less-water-intensive methods
- ensuring **Guarantee of Origin** settings fairly reflect water source choices and overall sustainability.

A robust NWI will help state and territory governments, and communities, to navigate a low-carbon future in a fair and sustainable way.



2. Closing the First Nations water Gap

Water is a fundamental human right; provision of safe clean drinking water is a first responsibility of any government. Drinking water quality does not meet Australian standards in all too many remote First Nations communities.

Many do not even have a steady water supply, let alone any gauge of their water quality, as there are no monitoring programs. **Just as other Closing The Gap targets are a national responsibility, so too should closing the water quality gap.**

States and territories struggle with different legacy issues. As WSAA outlined in [Closing the Water for People and Communities Gap: A review on the management of drinking water supplies in Indigenous remote communities around Australia](#), **a national coming-together on this issue will enable shared learning, standard-setting, procurement approaches, community training frameworks, and momentum.**

This is also what communities expect. The Productivity Commission noted that 'support for Aboriginal and Torres Strait Islander people's aspirations for greater access to, and control over, water resources has grown' (xvii). Its recommendations were clear – Commit to ensuring affordable access to a basic level of water services for all Australians, including safe and reliable drinking water. Where subsidies are needed, they should be provided as transparent community service obligation payments (xviii).

The Commonwealth Government in early 2023 announced (xix) an initial tranche of \$150 million in new funding available for water services to First Nations remote communities, to be allocated to selected state and territory governments via the National Water Grid Authority. This alone shows that cross-government collaboration is a positive path. It is time for all governments to commit to address this lingering inequity.



3. Building productive, liveable cities

The water sector enables broader liveability outcomes including contributing to green and blue infrastructure to deliver wider health benefits by making our communities cooler, healthier and more attractive places to live, work and play. States and the Commonwealth understand how to improve liveability through good urban design, integrated water management (IWM/IWCM), and effective use of water for green space. This provides amenity benefits and combats 'urban heat island' effect.

What do communities want?

Communities want and value these outcomes. The Productivity Commission noted that, 'Urban water users' expectations of water service providers have extended beyond clean, reliable and affordable water and wastewater services to also include the role of water in creating better urban amenity, for example, through green space and urban wetlands' (xx).

WSAA's 2021 Customer Perceptions Survey asked 8,500 residential customers across Australia what they expect their water provider to do. The top responses relate to affordability and liveability:



Despite this, governments can face challenges between announcing plans for cool, green cities, and delivering them down the track. **'Liveability' investments, if not the lowest cost forms of infrastructure, can be hard to fund through current frameworks.** Without a national vision for water-enabled liveability, states have gone in different directions, and taken up liveability/IWM guidance from WSAA, the Productivity Commission, and Infrastructure Australia/state-based versions to different degrees.

There is a compelling role for national action in this complex area. **The issues cannot be solved by the industry alone; legislative or policy reform is needed.** Governments will gain value from an NWI that enables work across federal and state agencies and departments for the integration of liveability principles, best practice design for water management (i.e. Water Sensitive Cities), and green and blue infrastructure (i.e. nature-based solutions); provides methods to measure and monitor liveability outcomes; and guides funding allocation, noting the benefits accrued to healthcare and economic productivity.

A new NWI should:

- Define **clear terminology** for blue green grids (Integrated Water Management), liveability and urban amenity
- Support a national **authorising and policy environment** for liveability
- Clarify roles and responsibilities across the water cycle
- Set expectations for vertical (strategy, asset, operations) and horizontal (across sectors and portfolios e.g. water and land use planning) policy alignment
- Shift away from input and compliance to an **outcomes-based approach** for regulation (environmental, health and economic) and consideration of IWM/liveability co-benefits (health, tourism, recreation).

Roadblocks to Integrated Water Cycle Management

The Productivity Commission found that IWCM... 'should lead to better decisions and lower cost solutions. However, IWCM cannot be delivered by the water sector alone. Implementing IWCM will require significant, ongoing collaboration between the land-use planning and local government sectors and the water sector, in both policy and planning at a range of different scales.'

Ten key impediments to IWCM being implemented, include a lack of clear objectives or responsibilities; poor linkage between statutory land and water planning, and local-scale and system-wide water planning; policy bans on all options being on the table; environmental regulators being focussed on actions not outcomes. [B5]

NSW Interim Framework for Valuing Green Infrastructure and Public Spaces [xxi]

NSW has made good progress with this guidance on how to value the benefits of liveability investments, in funding frameworks.

2.1 Stormwater

The opportunity for the NWI is to start taking concrete actions to enable stormwater to be more consistently included in urban water management, to achieve full integration of the urban water cycle. For too long there has been tinkering and little support in policy and regulatory settings to unleash the potential of stormwater. The time to revolutionise our approach to stormwater and drainage has arrived.

Facilitating the harvesting and reuse of **stormwater will help deliver liveable cities.**

This need is widely recognised and documented in reports such as the Productivity Commission's 2020 report 'Integrated Urban Water Management – Why a good idea seems hard to implement' [B6].

As climate change worsens, considering all water supply and management options – including stormwater reuse – will help deliver the highest community value.

2.2 Developer contributions

Often the limiting factor for water investment that produces liveability outcomes, is '**who pays**'. A new NWI could set principles for the contribution that existing customers, developers and governments should make. In particular, clear principles for developer charging could promote investment while keeping water bills affordable.

WSAA's work has found that **in most jurisdictions, current developer charges do not recover the costs of providing new development.** This impacts the financial viability of the sector. An agreed set of national charging principles, and measurement values for non-market benefits or externalities provided by water infrastructure, will help gain traction for liveability investment and **help all governments deliver their visions of green, cool, high amenity cities.**

QLDWater noted in their 2020 NWI submission, '*The recommitment to cost-reflective developer charges is welcomed*' (xxii).

There are complex interactions between liveability, developer charges and stormwater. Underlying issues around land tax, infrastructure ownership and waterway health targets can create distortions in the development market, and drive players to go where conditions are more favourable. Without national scrutiny, these issues can be exacerbated and make it harder to find a balance between the objectives of liveability, waterway health and enabling efficient urban growth.

These issues are not easy to fix, but in a context of housing affordability and cost of living crises, plus the environmental degradation as shown in the State of the Environment Report, and greater climate extremes looming, we need to tackle them.

2.3 Nutrient offset regimes

Upgrades to wastewater treatment systems can mean large bill increases. Around Australia, the water industry has trialled projects to achieve the same environmental and river health outcomes, at lower cost – through offsetting treatment plant nutrient discharges, with agricultural or catchment-based nutrient reduction activities.



Kilmore (Vic): Goulburn Valley Water met nutrient discharge requirements at lower cost, improved the health of a degraded waterway, and saved greenhouse gas emissions by fencing stock out of waterways, riparian plantings and erosion rehabilitation.

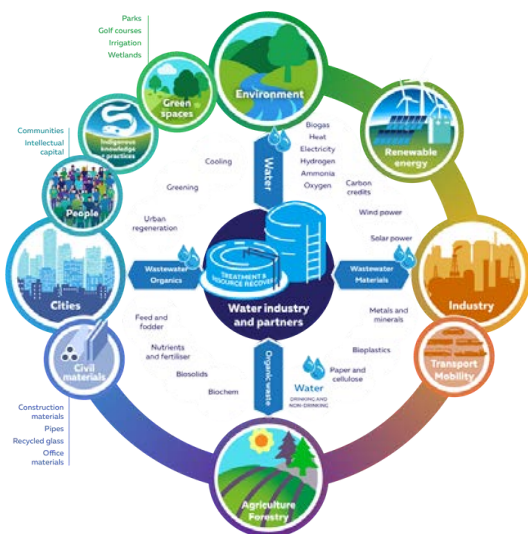
4. Unlock circular economy potential

The water industry has liquid gold running through its hands – fresh water and used water, the treasure trove of a circular world. Our treatment hubs are the powerhouse of the future, where we can **turn waste into valuable resources**.

Through trials and early adopters, the industry is poised to show how we can help solve national problems like **carbon emissions, waste management, renewable energy generation and soil degradation**. Another example is PFAS which has emerged as an international issue and is typically managed by the water sector at treatment plants. In a true circular economy approach, PFAS would be managed by the product manufacturer and not enter supply chains.

A circular economy approach can also generate **new revenue streams** – that can be shared with the communities whose assets are helping produce them. **But this needs to be embedded as core business**. The NWI should recognise this scope and **set targets**, supported by **enabling policy reforms**.

This diagram shows how the water sector can repurpose the resource materials it receives to generate a wide range of valuable products that can form inputs to other industries.



The urban water industry is engaging with the Clean Energy Regulator about biochar, derived from wastewater treatment biosolids, about its amazing potential for soil enhancement and carbon sequestration. **The NWI should support efforts for creation of an ACCU method for biochar.**

Yarra Valley Water is working with partners at Wollert Community Farm (Whittlesea) to grow food, use recycled water and renewable energy, demonstrate regenerative farming and enable First Nations-led land management of endangered grasslands.

The **Goulburn Murray Resilience Strategy Taskforce** has asked the Minister for the Environment to support the water industry's ability to generate biomethane, hydrogen, solar energy, fertilisers like biochar, urea and compost. They sought better policy settings; a renewable energy target for biogas; investment in a pilot and advocacy support.

Icon Water (ACT), through its award-winning No opportunity Wasted circular economy initiative, turns glass bottles and jars back to sand, used for embedding pipes; and sewage treatment biosolids into Agri-Ash, used as a soil conditioner on local farms.

Water Corporation's Groundwater Replenishment Scheme uses purified recycled water to recharge groundwater supplies as part of their drinking water supply. **As well as boosting water supply resilience, purified recycled water reduces water take from the environment and nutrient discharges into waterways.**

5. Cost recovery and economic regulation

WSAA has supported independent economic regulation for urban water and advocated for best practice economic regulation across Australia to protect the long-term interests of customers. Some of the biggest NWI gains were in economic regulation, and putting customers at the heart of industry decision-making. But there is more to do.

As the Public Interest Advocacy Centre noted:

*'Progress has been made in implementing NWI reforms to the provision of urban water services, with more cost-reflective, usage-based pricing. However, these **reforms are not complete and have not been consistently implemented across smaller regional urban utilities.** In addition, the governance, regulatory, policy and operational reforms required to support pricing reform have been inadequately and inconsistently delivered.*

Though the NWI has informed significant progress to date, this has been inconsistent within and between jurisdictions...In some cases positive reforms, such as those in governance and oversight, have been actively unwound' (xxiii).

Over the last five years there have been positive developments in a number of jurisdictions. However, where economic regulation is in place, further improvements are possible to meet best practice. There have been frameworks released to measure financeability, but more work is required. Merits review, which WSAA considers an essential element of the regulatory framework, remains the exception rather than the rule in most jurisdictions. In addition, in the face of strongly increasing capital expenditure, the regulatory framework needs to evolve to enable price smoothing and avoid price spikes.

More broadly, it is also a feature of the urban water landscape that some jurisdictions have not adopted independent regulation. While this has not harmed the performance of the sector in those jurisdictions, WSAA considers that independent economic regulation and price setting is the most appropriate model to protect the long-term interests of customers.

A renewed NWI can pursue the next generation of sensible regulatory reforms.

6. A transparent and open industry, using data for improved services and good decision making

Good decision-making needs good data. The Productivity Commission noted:

'Monitoring and reporting of urban water pricing and service outcomes enable customers to compare their provider with others – promoting questioning from customers that can motivate providers to improve their performance' (xxiv) and

'The National Performance Report is not fit for purpose in reporting service quality...nor is it adequate to assess progress against NWI commitments' (xxv).

Comparative data across the whole water sector can only be progressed at national level. The National Performance Report (NPR) is a critical resource for customers and community, governments, policy makers and the industry. Yet it is almost unchanged since 2004. Despite the best intentions of the Bureau of Meteorology, modernising the NPR has remained a very slow process. A new NWI with a **refreshed governance and reform program for the NPR** is critical for urban water data collection.

WSAA's Report 'Closing the Water for People and Communities Gap' highlighted the lack of data and transparency in water services for remote and First Nations communities. Without data, accurate reporting against SDGs and health outcomes in Closing the Gap will not be adequate. Further, reporting against the 17 SDGs requires more than water industry data and this remains a weak and under resourced area, not supported by clear policy guidance.

The **lack of a mature data ecosystem** is preventing water from being the best it can be on many fronts. For example, the water industry is strongly prioritising improved support for **customers experiencing vulnerability**; yet it is hampered by poor data. Consistent and relevant data helps us identify how our sector performs in this area, if need is increasing, and how we are responding. This information is also valuable for state governments.



7. Skills and training

The urban water industry will not be able to deliver its planned \$9 billion/year of capex – necessary to maintain this essential service – without a functioning labour force.

Building the urban water workforce – the war for talent

The water sector has its own specific challenges but is also affected by the global megatrends disrupting industries across the world. By understanding trends and planning for the future, water utilities can better attract and retain talent and provide greater development opportunities for their people. In a recent survey of WSAA member organisations, just over half had relatively low confidence levels in 6-10 years to deliver business objectives with current skills and capabilities. Around 20% of the urban water utilities staff are aged 55 and over.

The large growth profile of our capital investment programs is creating unparalleled demand for specific roles and a time of competition with other sectors. The unique nature of our assets and the need to promote and foster innovation continues to require specialist and technical skills. Our leaders require new capabilities that centre on cultural and change management, managing diversity and remote workforces, improved communication and a range of critical leadership skills.

In the short term there is a critical need to develop a national strategy for water operator training. This includes culturally affirmative training of operators for and from within First Nations communities following the welcome announcement of \$150 million investment in water infrastructure.

The national implementation of validation protocols outlined in Section 1, to verify new sources of water, would help with these needs as it would include a training and resource centre, and requirements for operator competencies for new water treatment and related processes.

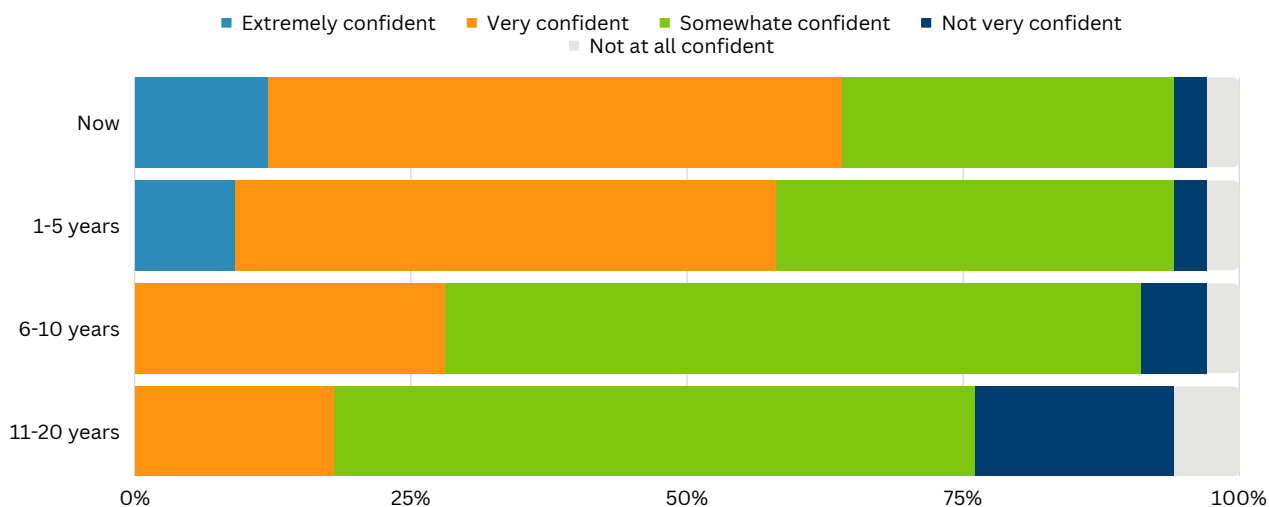
Skills sets synonymous with digitalisation and data analysis are in high demand due to ongoing disruption, and even further ahead as utilities transition to circular economy businesses, focused on First Nations engagement and the Sustainable Development Goals, the diversification and expansion of the workforce to include more engagement specialists, design and innovation talent, and resource recovery and management specialists will be needed. A key change in demographics which has ramifications for the makeup of the workforce is the ageing population. The growth of the labour force is slowing as more people are exiting the workforce than entering. So too, further work on inclusiveness including gender, First Nations and LGBTQI+ is a high priority.

Fragmented RTO market

We have a national labour market where labour can move freely around the country, yet our training of water industry operators is piecemeal and state based. There is an urgent shortage of formally trained water operators of community water and wastewater assets. Many training models – particularly in Queensland and NSW – are close to collapse.

The water industry operator training market is very “thin”. Four providers now operate across Queensland, Victoria and NSW, down from eight in 2018. RTOs face major impediments to enter the market or expand their offerings, such as high cost of developing teaching and assessment materials (xxvi).

In 2019 WSAA asked urban water utilities about their confidence they can deliver business objectives with current skills and capabilities. Their concern for the mid-term is clear:



The NWI can provide coordinated national policy support to:

1. Implement a national, **standardised training program** for Water Industry Operators
2. Better target grant/ **funding opportunities**
3. **Align higher education and enhance the Vocational Education and Training Sector's capacity**, to meet industry needs
4. Improve the water sector's presence in the **VET reform process**
5. Address the market failure of inconsistency and overall quality of **training resources**
6. Explore the merits of regulation on **minimum competency standards**
7. Improve the transparency of critical roles i.e. representation within the Australian and New Zealand Standard Classification of Occupations (ANSCO) Codes.

8. Research and innovation

The urban water industry has huge potential to deliver whole of society goals, including for instance, decarbonisation. Yet there has been a **significant decrease in research and innovation funding across Australia over a decade**. It makes sense to pool resources to achieve the best outcomes and avoid duplication. The NWI should pursue:

- A **targeted fund for urban water industry research**, on issues like water for hydrogen, enabling a circular economy, achieving net-zero, asset resilience to climate change, public health outcomes, national security and resilience.
- Uplift research in partnership with federal agencies, such as the Australian Research Council, using the **Australian Urban Water Industry Research Priorities Agenda**
- Create **frameworks to commercialise world leading water management** into products that could **compete on a global market**
- More focus on **urban water**, where the majority of people live – rather than catchment and river system levels – for greatest gains in energy and water consumption
- Address **inconsistent state government policies and guidelines** which make it hard for water agencies to collaborate and make long term strategic decisions
- Improve weather/rainfall models to make more **informed critical decisions on climate extremes including drought and flood management**.

Knowledge, capacity and capability building

'Knowledge generation has been integral to water reform achievements under the NWI, and will underpin the success of future water reform efforts... This should be recommitted to in a renewed NWI'.

[B7]



9. Improving water efficiency

Despite record rainfall following three years of La Nina on the east coast, the public dialogue has already shifted to El Nino and possibility of drought. We know customers and community look for ways to be more water wise, inside homes and business, and outside. The NWI must clearly reflect the perpetual need to keep improving on water efficiency.

One of the few urban water actions in the 2004 NWI was to develop a **'Smart Water Mark' for household garden products**. In the 20 years since, 'Smart Approved WaterMark' (SAWM) has delivered much of Australia's water demand management jigsaw. A critical component of urban water services of the future is providing an opportunity for customers to make their own choices in water efficiency and SAWM certification meets that need.

SAWM is delivered by The Water Conservancy and helps families and businesses save water and money:

- Outdoor water use is around 50% of all residential use – SAWM only certifies products that are water efficient, sustainable and fit for purpose.
- It complements the **Water Efficiency Labelling Scheme (WELS)** for indoor products like washing machines and dishwashers.
- 85 products are currently licensed, from over 1000 applications.
- **Independent Technical Expert Panel** approves products.
- Government community rebate schemes on water efficient products, use SAWM as the qualifying mechanism.
- Qualifies products that are **exempt from drought water restrictions**.

The NWI should expand SAWM's coverage with new research and products for schools, businesses and home owners.



10. National supply chain security

Covid, natural disasters and the war in the Ukraine have produced significant supply constraints on water. The worst was shortages in critical chemicals for producing clean, safe drinking water. Also, for at least one chemical, there is only a single monopoly supplier. This creates significant risk. Urban water is not recognised at Commonwealth level as an essential service.

This means water does not get priority in laws that ensure service continuity during a national emergency, like the Liquid Fuel Emergency Act (1984).

The NWI should safeguard a secure national supply chain for the water sector for critical chemicals and assets to ensure public health is always maintained through functioning water and sanitation systems.



In summary

Every detailed report on the urban water industry over the last 10 years has recommended renewing the NWI to meet climate change, population and infrastructure challenges.

Under the Commonwealth Government's policy commitment, the opportunity is now here.

All states and territories should come together to develop a new National Water Initiative that unlocks the water industry's potential and positions it for the decades ahead.



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