



WATER SERVICES
ASSOCIATION OF AUSTRALIA



Submission to the Price monitoring investigation for Unitywater and Urban Utilities 2026-30

October 2026



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Executive summary

WSAA supports the investment programs and modest price increases proposed by Unitywater and Urban Utilities. This submission shows that both utilities are responding to a structural water-sector transition rather than an isolated or temporary cost spike, and that their proposed expenditure is consistent with the direction of the Australian industry.

The national context

From 2027-28 to 2029-30, Unitywater is proposing to invest over \$1.6 billion and Urban Utilities around \$2.3 billion in water and wastewater infrastructure. This represents a significant increase for both utilities on their levels of investment in past years and is necessary primarily to meet the needs of housing for a rapidly growing population and to renew and maintain an ageing asset base.

WSAA is pleased to provide a national context to the price monitoring review. Neither of these utilities is in a unique position. The Australian water industry is at a critical point. Their challenges mirror those of the entire water sector in Australia and the trends across the globe. All Australian utilities are significantly increasing investment.

While price rises for water and wastewater services are inevitable, in the case of Unitywater and Urban Utilities, rigorous efficiency programs mean that these price rises are at the lower end of the spectrum that is occurring across the sector.

The water industry is in transition

All parts of the policy environment need to understand that the water sector is in a transition of the same scale as energy and will need a similarly supportive policy environment if customers are to receive the services they need at a price they can afford. The energy transition receives constant coverage, but the water transition is barely understood.

The immediate drivers of the increase in investment in water and wastewater are set out well in Unitywater and Urban Utilities' submissions. Population growth and housing are the major drivers of investment. Unitywater and Urban Utilities' service regions are among the fastest growing in Australia. The population is expected to increase in both regions by over 30 percent over the next two decades.

However, there is also a more fundamental driver that, in conjunction with an ageing asset base, accounts for the scale of the forward investment requirements. This is best understood as a reduction in the 'free' environmental services that are a core input to the production of water and the management of wastewater. The industry has relied on these inputs for centuries but can no longer do so to the same extent.

Capital and operating expenditure are increasing

To meet the water transition, capital expenditure is expected to double across Australia to \$15 billion a year. This represents a permanent step change, not a temporary increase.

Operating costs across Australia are also increasing. Between 2022 and 2025, WSAA data showed that operating costs increased by 21 percent in real terms compared with growth in properties of 4.5 percent.

Higher investment now avoids even greater costs in the future

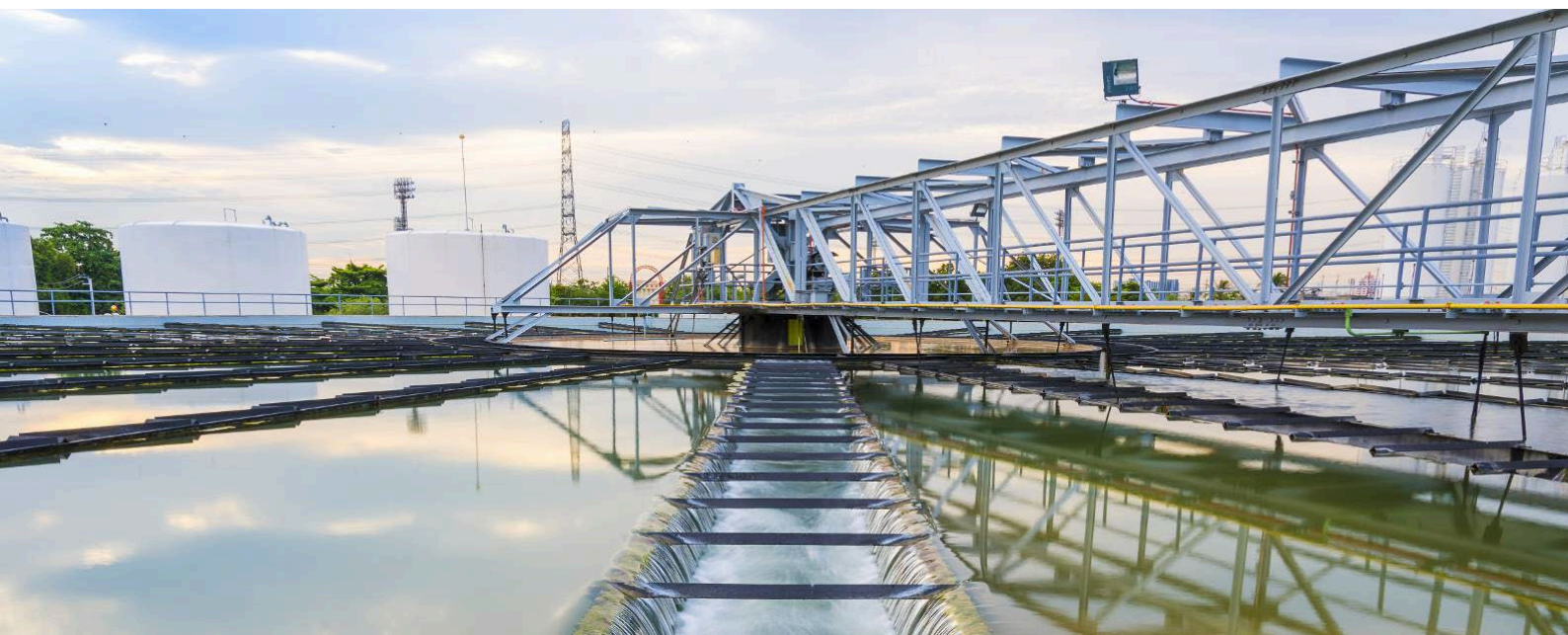
While no one likes increasing prices, deferring critical investment would bring much higher costs in the future. As we have seen overseas, and particularly in the UK, deferring investment carries the real risk of a water crisis.

Unitywater and Urban Utilities are both proposing rigorous efficiency programs to minimise price increases

Unitywater and Urban Utilities' operating costs per property are below the industry median and reflect their advantages of scale. On the other hand, they also face cost disadvantages. For example, each is required to treat wastewater to higher levels than many utilities to protect the environment, which means these structural factors constrain their ability to achieve the low cost levels observed in other jurisdictions.

Both utilities are proposing significant efficiency gains to offset cost increases. Unitywater is committing to deliver a 2.9 percent efficiency target in 2026–27, and 0.7 percent per annum from 2027–28. Urban Utilities is committing to deliver almost \$70 million in efficiencies across the period.

Efficiency gains remain important, but these take place against a background of increasing investment and operating costs and cannot be expected to offset the need for revenue and, without significant changes to cost recovery and funding mechanisms for infrastructure and service delivery, price increases in the longer term. WSAA considers the QCA should support the efficiency proposals set out by both utilities.



1. Introduction

WSAA welcomes the opportunity to provide a submission to the QCA's price monitoring reviews of Unitywater and Urban Utilities.

WSAA is providing a single submission as the two utilities have many challenges in common. Both face significantly higher capital expenditure to service growth and renew ageing assets. Moreover, the expenditure pressures facing Unitywater and Urban Utilities are consistent with broader national industry trends, while the scale and mix of those pressures reflect the particular operating circumstances of each utility.

Urban Utilities forecasts its typical residential bill to increase by an average of CPI plus 2.8 percent a year over FY28-FY30, while Unitywater forecasts a nominal (including inflation) increase of 2.8 percent a year over the four years to FY29-30. This submission supports the case for the investment proposed by both utilities and their forecast modest price paths to fund this investment.

The submission:

- sets out the drivers and dimensions of the water transition;
- shows the scale of the investment in capital and operating costs nationally required to meet the challenges;
- shows that the investment in capital and operating costs by Unitywater and Urban Utilities is aligned with the rest of the industry and they are not outliers;
- sets out the significant risks if necessary investment is deferred to attempt to meet short-term cost of living pressures; and
- discusses the differences in costs across utilities and shows that the operating environment is the main influence that accounts for differences in costs and bills across Australia.

2. The water industry transition

Globally, the water industry is in a fundamental transition of the same scale as the energy transition. WSAA released a major report, [*Water in Transition: Rising costs and the decline of free environmental services*](#), analysing the underlying causes of the transition. That report should be read in conjunction with this submission.

In summary, for centuries the water industry has relied on “free” natural capital inputs or “free” services from the environment (such as healthy rivers and waterways, and natural hydrological processes that replenish water flows). However, increasingly, the water industry must rely less on free environmental services and must produce water and wastewater services using conventional capital, assets and labour. One industry-wide example is the growth of desalination and recycling — manufactured water — to meet water security instead of relying on natural catchments and dams.

At the same time, the water and wastewater assets that were installed many decades ago are ageing and require major upgrades to continue to deliver services. The impact of the water transition and ageing infrastructure has profound implications for the future of the industry.

The economics of the transition are explained in Box 1. Its effects can be observed globally.

- In the United States, the American Water Works Association estimates that drinking water infrastructure needs will reach between US\$2.1 trillion and US\$2.4 trillion between 2026 and 2050. Importantly, these estimates extend beyond asset replacement to include climate resilience, water quality improvements and system modernisation. The Association notes that these pressures represent a 'structural shift' in the cost of providing safe drinking water rather than a temporary increase in expenditure.

- The European Commission has identified a recurring water infrastructure funding gap of approximately €23 billion per year, while Water Europe estimates that €255 billion of investment will be required by 2030 to comply with existing environmental directives, climate adaptation requirements and emerging contaminants such as PFAS.
- In the UK, the Ofwat 2024 Price Review supports a record £104 billion investment program between 2025 and 2030, including a fourfold increase in investment in new water infrastructure and resources. The regulator has explicitly recognised that delivering this program will require substantial new debt and equity funding. This reflects growing concerns regarding water security, environmental performance and resilience to climate change. Consequently, prices are rising in real terms across the UK by an average of 36 percent and up to 50 percent for some utilities. The UK is remaking its regulatory framework to better handle the challenges the water industry faces, following a comprehensive independent review¹.

Box 1 The economics of the water transition

The underlying cause of the water transition was first articulated to explain how natural resource inputs influence the measured productivity of industries, and why conventional measurement does not capture important trends.¹ (Topp, V. and Kulys, T. 2013)

Most industries use capital and labour (as well as intermediate inputs such as energy) to produce outputs. However, there is a class of industries including agriculture, mining, electricity and water that rely to a significant extent on a third input: natural resource inputs or services, provided by the environment for free.

In agriculture, rainfall is the most obvious and variable service provided by the environment. The output of farms will vary with rainfall, even though farmers have not become more or less efficient.

In water and electricity, these free environmental services take three fundamental forms:

“Water catchments and their associated creeks and rivers provide inputs to production in the water industry through their role as sites for the capture, storage and delivery of urban drinking water and rural irrigation water.

Waterways and oceans provide inputs to the water industry through their use as sinks for the disposal of wastewater. Note that the more polluted the wastewater being discharged, the greater will be the effective quantity of inputs (in the form of waste assimilation services) provided by the environment.

The electricity supply industry derives inputs to production from the atmosphere (air) by using it as a sink for the disposal of waste products, most notably carbon dioxide. Again, the more polluted the waste material, the greater the effective quantity of inputs (in the form of waste assimilation services) provided by the environment.

Topp and Kulys pointed out in respect of water that these free environmental services are “just as important to production in the utilities industry as conventional inputs. Without these inputs, production would either be impossible — no dam site, no reliable water supply for example — or would require businesses to incur significant additional costs.”

Right now, the level of free environmental services available to the energy and water industries is diminishing. The existence of an energy transition is well understood.

There is no equivalent recognition in water¹. Yet it is equally important and indeed, the rate of the transition may be much less open to control than the energy transition.

¹ The UK Government commissioned an independent review led by Sir Jon Cunliffe. [Final report](#) June 2025.

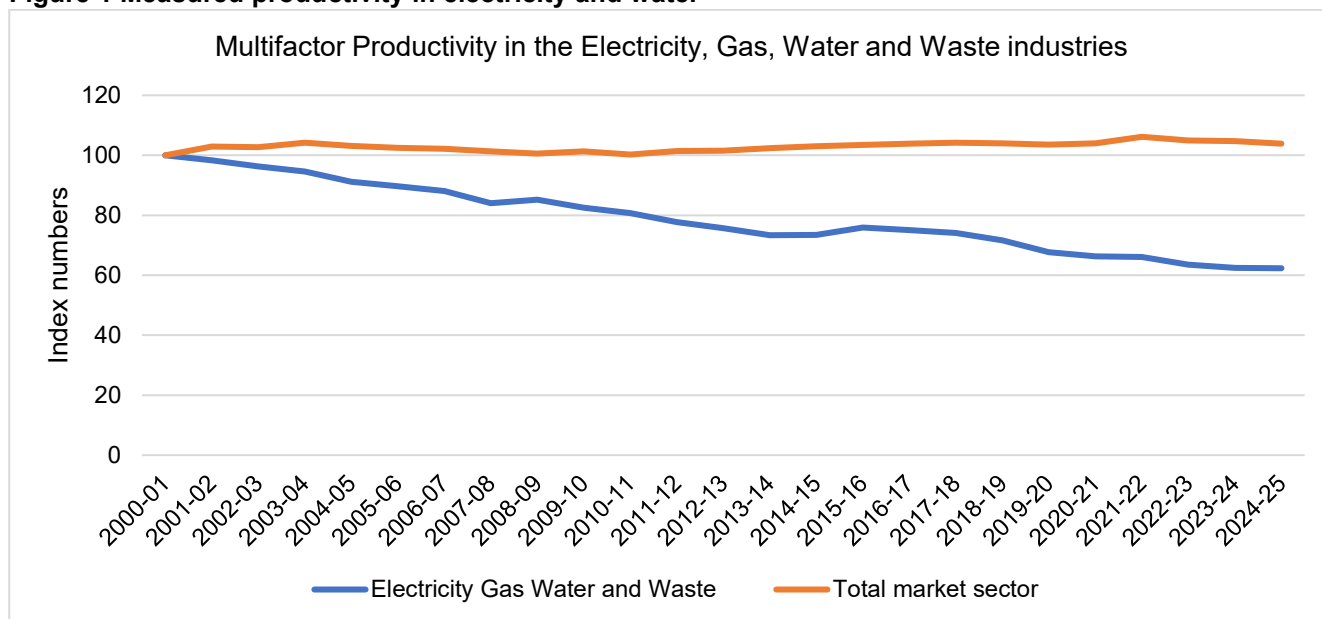
Understanding productivity and efficiency in the water sector

The water transition is driving increasing costs.

As set out in Box 1, the long-term substitution of conventional capital and labour for natural capital or 'free environmental service' has been underway for over two decades. It is important to understand the implications of this for productivity in the water sector and, more importantly, for water policy and regulation.

There is no better illustration of the scale of the transition underway in energy and water than the measured long-term productivity outcome for both industries. Figure 1 shows that since 2000-01, energy and water have been on a materially different path from the rest of the Australian economy. This reflects structural change rather than the underlying performance of each sector.

Figure 1 Measured productivity in electricity and water



Source: 5260.0.55.002 Estimates of Industry Multifactor Productivity, Australia

Consequently, it is critical that all parts of government, including regulators, appreciate this change in the industry to ensure the right policies are in place. The water sector requires a pro-investment environment if it is to deliver the services the community demands. This must include all levels of government accepting that greater investment needs to be supported through higher revenue from a combination of price increases, direct funding and infrastructure contributions.

Misinterpreting the productivity outcome as poor performance and seeking to constrain investment and pricing, as we have seen overseas, would inevitably lead to a water crisis that Australia cannot afford. The problems in the UK have partly arisen because the policy environment sought to regulate the industry as if it was in a steady state, rather than a structural change.

These issues are explored further in Appendix 1. Of particular relevance to the Price Monitoring Review is that utilities can implement significant efficiencies across their businesses yet still face increasing costs.

3. There is a step change in capital investment

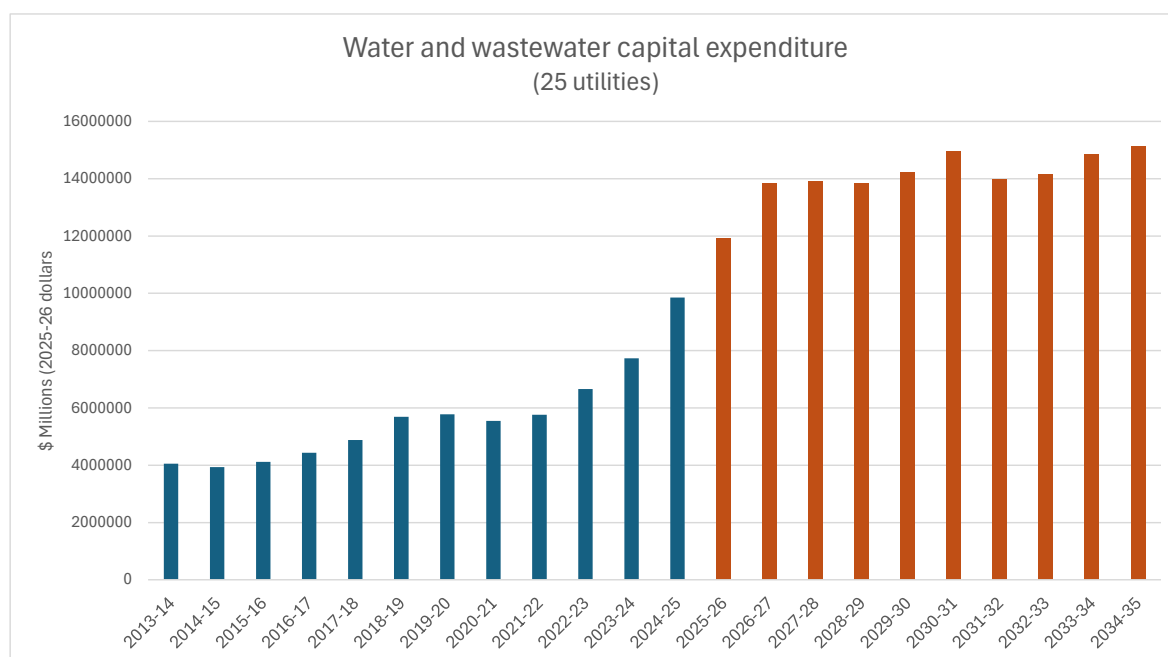
The investment increase proposed by Unitywater and Urban Utilities reflects the same trends that are occurring across the rest of Australia.

In Australia, the transition is manifest in higher expenditure needed to:

- provide water and wastewater for housing and business to support population growth
- provide water security in a changing climate, and for new industries such as data centres
- comply with changing regulations², and
- maintain and renew ageing assets.

The latest data from the National Performance Report shows that capital expenditure in water and wastewater was \$11.2 billion in 2024-25. This has almost doubled from only three years before and, critically, was predicted by WSAA and utilities. Moreover, the latest WSAA data for a subset of major utilities shows that we are only mid-way into the trend. Nationally, we expect capital expenditure to increase to \$14-15 billion a year (Figure 2) and remain there until at least 2034-35. We are experiencing a step change in investment, not a temporary increase.

Figure 2 There is a step change in investment in water and wastewater



Source: National Performance Report data, WSAA projections

Nationally, expenditure is relatively evenly spread across water and wastewater (Figure 3). Capital expenditure for growth is the largest single driver of investment across many utilities. However, renewing ageing assets and complying with environmental and water quality regulations are also significant. In addition, we are beginning to see the next phase of water security expenditure, but this is not fully reflected in the numbers (Figure 4).

Unitywater and Urban Utilities serve some of Australia's fastest-growing service regions. Approximately 57 percent of Unitywater's forecast capital expenditure over the price monitoring period is allocated to infrastructure needed to support and respond to population growth, including \$868.4 million in major wastewater growth projects. Urban Utilities forecasts 35 percent or \$623 million of its program for growth and 47 percent of its program for renewals (\$855 million).

² Examples include changes to requirements for dam safety, security of critical infrastructure, managing the potential impacts of PFAS and other emerging contaminants on water and wastewater systems.

Figure 3 Wastewater and Water Capital expenditure to 2030-31

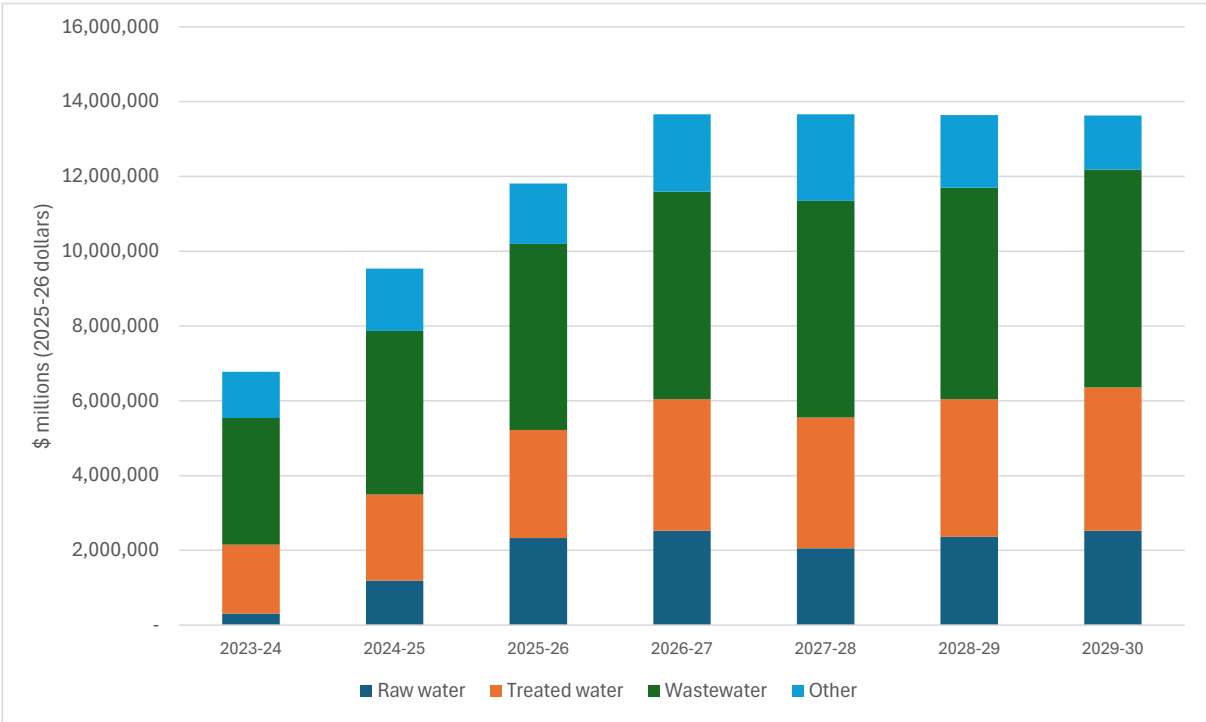
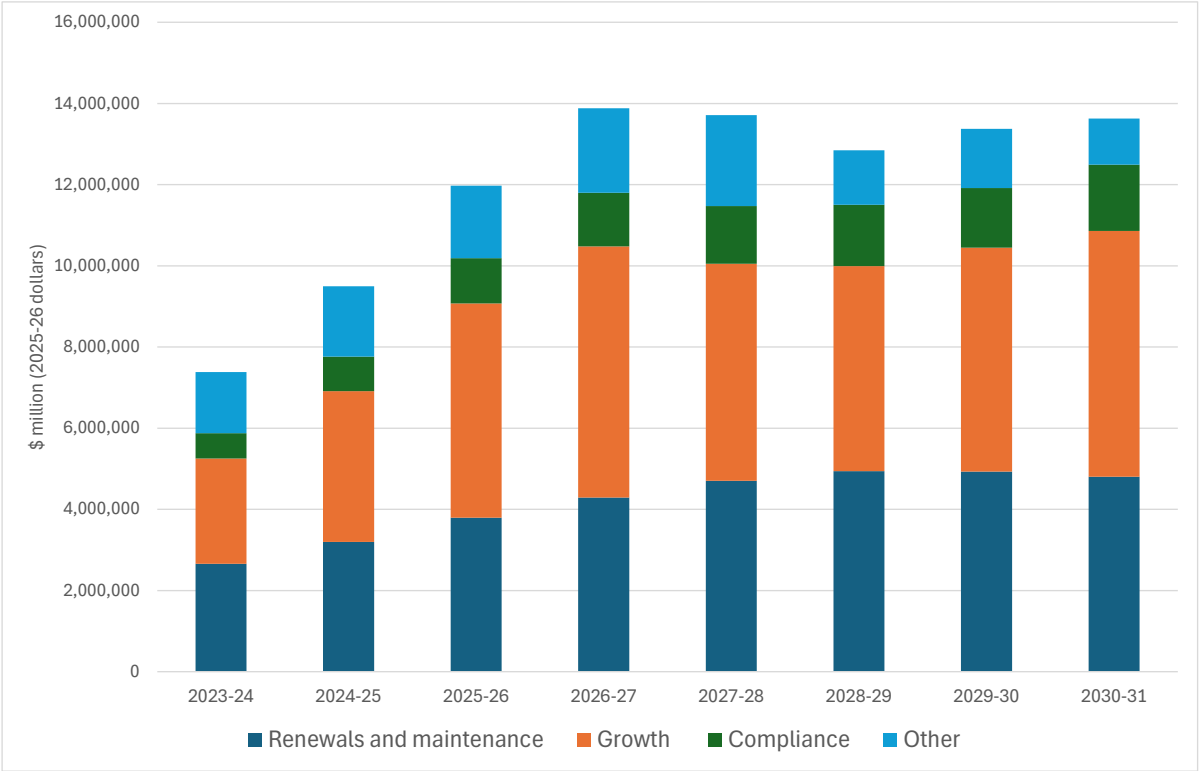


Figure 4 Wastewater and Water capital expenditure by driver to 2030-31



The trends are reflected in recent price determinations

The recent price determinations by the Independent Regulatory and Pricing Tribunal (IPART) for Sydney Water and Hunter Water are both a reflection of the transition drivers across the industry, and confirmation of the forecasts that WSAA and the industry have been making for several years.

For Sydney Water, servicing a population of over 5.6 million people, IPART approved \$13.2 billion in capital expenditure. This is much higher than investment in previous determinations, and IPART approved a real bill increase of more than 30 percent over the five-year period. Underpinning Sydney Water's investment plans is its long-term capital and operating plan. It provides for over \$30 billion in expenditure over the next ten years.

For Hunter Water, serving more than 600,000 people, IPART approved \$1.6 billion in capital expenditure over the five-year determination, or around a 20 percent real bill increase over the period.

Recent further price reviews across Australia are consistent with the national trends:

- Central Coast Water in New South Wales proposed to invest \$578 million. This represented an increase of around 52 percent on the previous determination. Approximately \$324 million is to service growth and \$254 million for renewals and compliance expenditure. The efficiency reviewers for Central Coast found that a greater level of investment could be justified given the identified needs. The full determination has been delayed for 12 months.
- Taswater received an annual nominal price increase of 5.7 percent from 2026-27 to 2029-30.
- North East Water, a regional Victorian utility, proposed capital expenditure of \$279.7 million. The economic regulator approved real price increases of 5.5 percent per annum for the period 2026-31.
- In 2026-27 WA Water Corporation will invest \$2.7 billion. This is part of a wider capital works program of more than \$6.4 billion across Water Corporation, Aqwest - Bunbury Water, and Busselton Water over the next four years, supporting jobs, economic growth and stronger water security across metropolitan Perth and regional Western Australia.

Collectively, investment across Australia constitutes a major industry transition.

The cost of servicing growth

Unitywater and Urban Utilities note that not all additional growth-related costs are funded by developers.

This is consistent with WSAA analysis, which suggests that growth-related infrastructure is becoming more expensive, with the average cost of a new water and wastewater connection estimated at \$40,000–\$50,000 per lot. In many jurisdictions, developer contributions are not fully offsetting these costs, resulting in a widening funding gap that must be borne by utilities and, ultimately, existing customers.

We understand that in Queensland, State Government caps on infrastructure charges limit the ability of water utilities to recover full costs of delivering water and wastewater infrastructure. This cost has increased substantially, but we understand the allowed charge has not been consistently indexed since its introduction in 2011. As in other jurisdictions, there is a growing gap between development contributions and actual infrastructure costs.

For example, the utilities point out that, in common with other major cities, there is strong growth into the peri-urban areas (the Scenic Rim in Queensland). These areas with the highest growth in connections are also the highest cost to serve. In the longer term, this will create more financial pressure on the existing Unitywater and Urban Utilities' customer base.

4. Operating costs are also increasing

The water industry remains focused on business improvement and delivering efficiency programs. However, operating costs are outpacing efficiency gains due to strong increases in the cost of goods and services. National Performance Report data indicates that operating costs for urban water utilities increased on average by 3 percent a year above inflation for the 3 years to 2025. The real increase in operating costs is confirmed in WSAA's own more forensic analysis (Box 2).

Changing market conditions for the purchase of goods and services are a significant driver of rising expenditure across the water industry. Many of these costs, particularly those associated with utility supply chains, are largely outside the direct control of service providers. For example, the cost of treatment chemicals, which are essential inputs to water and wastewater operations, has increased substantially in recent years. In addition to market-driven cost pressures, changes in financial reporting standards have also affected reported operating expenditure.

Unitywater's Part 2 submission cites ABS Producer Price Index data showing that Brisbane construction input costs remain materially above December 2019 levels, including concrete, cement and sand (+50.6 percent), cement products (+48.5 percent) and electrical equipment (+45.6 percent). As Unitywater notes, while these indices do not directly measure water infrastructure delivery costs, they provide relevant local evidence that construction inputs remain elevated in the market in which Unitywater sources materials, works and services.

Since 2021, revised accounting requirements for cloud-based and software-as-a-service technology arrangements³ have resulted in certain information technology costs that were previously capitalised being recognised as operating expenditure. Consequently, a portion of the growth in operating costs reflects accounting changes rather than increases in underlying operational activity.

Higher capital expenditure is also a key driver of increasing operating costs. The doubling of capital expenditure over the past five years reflects the significant growth in activity across the water industry. Increased investment in growth infrastructure to support expanding customer bases, together with the renewal and replacement of ageing assets, has led to a larger and more complex asset base that must be operated and maintained. Consequently, the uplift in capital investment is contributing to higher operating expenditure through increased maintenance requirements, asset servicing costs, energy consumption, and operational oversight.

WSAA's unique insight into water industry cost performance is derived from its extensive national cost benchmarking program. These studies are conducted every two to three years, with the most recent completed in 2025. Participating utilities collectively provide water and wastewater services to more than 80 percent of Australian homes and businesses, making the dataset highly representative of industry performance.

The benchmarking methodology requires participating utilities to allocate operating expenditure across more than 100 standardised cost categories spanning water and wastewater operations, retail services, asset management, and corporate functions. This consistent and detailed approach has enabled WSAA to develop a comprehensive cost database that provides robust evidence of industry cost trends and cost drivers at a granular level. The database supports both cross-utility benchmarking and econometric analysis, offering valuable insights into the factors influencing operating costs across the sector.

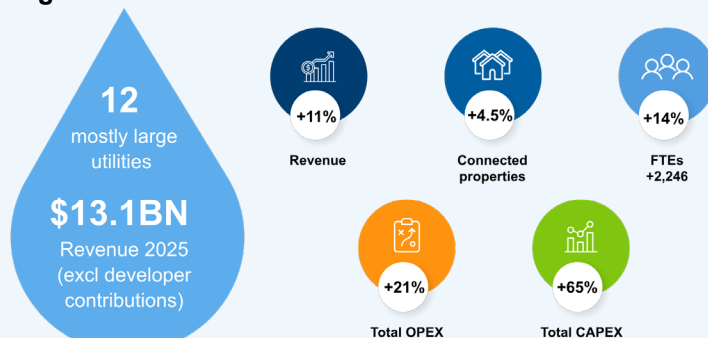
Using this database, WSAA compared changes in costs for 12 mostly large water utilities that completed the 2022 and 2025 benchmarking studies. The results demonstrate that some costs are increasing faster than others. These are highlighted in Box 2.

³ Under AASB 138, standard Software-as-a Service contracts became classified as service contracts rather than intangible assets or leases and have been recorded as operating costs from 1 January 2021.

The significant increases observed in major areas of operating expenditure, such as water network operations, suggest that total operating costs are unlikely to decline in real terms in the foreseeable future. Instead, WSAA's analysis indicates that cost growth is likely to continue outpacing inflation, driven by a combination of asset growth, rising input costs, increasing maintenance requirements, and higher service expectations.

While utilities will continue to pursue operating efficiencies, even rigorous efficiency programs are likely to be insufficient to offset these broader industry-wide cost pressures. As a result, many utilities face real increases in operating expenditure despite ongoing programs to improve business efficiency.

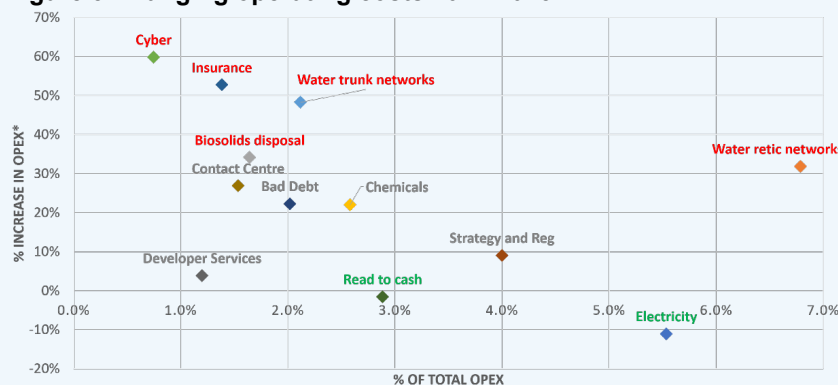
Box 2 Operating cost changes for 12 Australian water utilities 2022-2025



WSAA analysed the operating costs of 12 mostly large Australian water utilities that participated in the 2022 and 2025 benchmarking studies. The results show that the water industry is in a stronger growth phase than has occurred for some decades. Collectively the group of 12 utilities delivered infrastructure to service more than 360,000 new properties over the 3 years to 2025. Revenue from providing water and wastewater services increased by 11% over this period. By comparison, operating costs rose by an average of 21% in real terms. Areas of expenditure with some of the largest cost increases for the 3 years are summarised below. Figure 5 is a visual representation of these and examples of other costs changes across the value chain. Cost changes are expressed in real terms, that is, excluding inflation.

- Water trunk main and water reticulation network operations and maintenance costs make up 9% of total OPEX. These costs increased by 48% and 32% respectively.
- Chemicals costs are a significant for industry and these rose by 22%.
- Information technology accounts on average for 12% of the industry's operating costs. A transition from capital to operating costs for Software-as-a-Service (SaaS) models under changed accounting standards in 2022 continues to drive IT expenditure. SaaS costs were 23% of the industry's total IT expenditure in 2025.
- Cyber security is an example of an emerging cost for the industry. This has increased by 60% in the last three years partly due to new requirements under the security of critical infrastructure (SOCI) Act. Whilst still a relatively small percentage of the cost base it is anticipated that this expenditure will remain in uptrend.
- Insurance costs increased by an average of 53% across the 12 utilities. Despite higher premiums there is evidence that the level of insurance coverage is under pressure. Potentially some utilities face increasing financial exposure to adverse events.
- Biosolids disposal costs increased by 34%. The reasons for this are complex and vary across utilities.

Figure 5 Changing operating costs 2022-2025



As the diagram indicates, some costs have not risen to the same extent or have declined. As many utilities move to e-billing customers some of the traditional costs such as issuing paper bills have declined. Changes in energy costs varied widely across the cohort. Timing of energy contracts and also investment in renewable energy and two factors affecting costs. Each utility has a different path to achieve efficient energy costs.

5. Delaying investment carries unacceptable risks

As set out in the 'Water in Transition' report, underinvestment in water infrastructure inevitably leads to a water crisis. The report sets out the water crisis in the UK water industry that has led to fundamental changes to the regulation of the sector to encourage investment and protect the environment.

UK water crisis

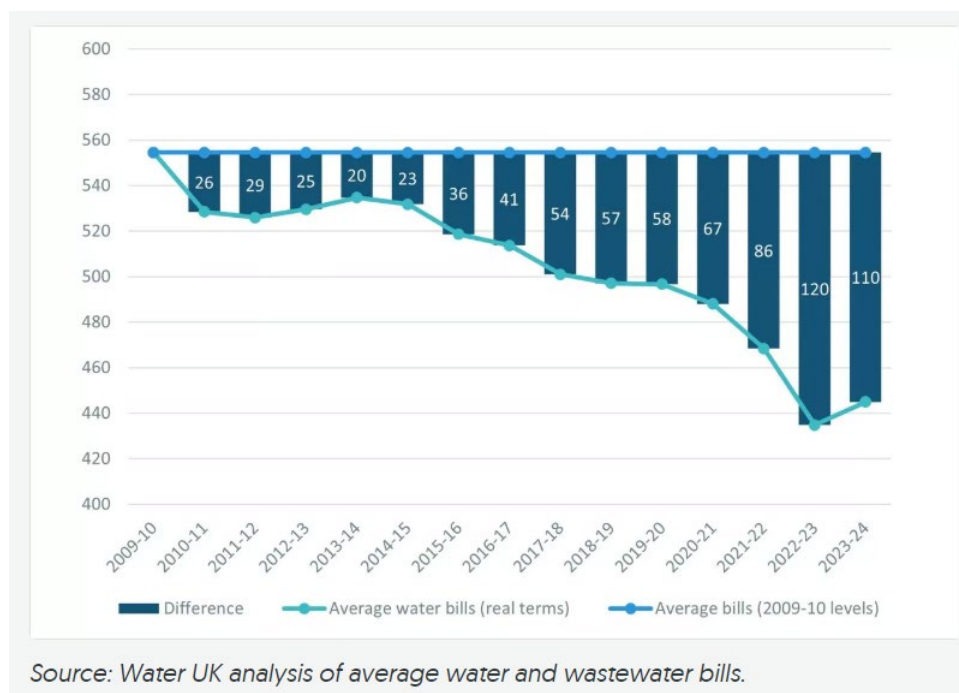
The UK is the most prominent example.

Lack of investment in their combined wastewater and stormwater systems has resulted in high levels of pollution of beaches, lakes and streams from sewer overflows. These levels of pollution are out of step with customer expectations, and trust in the UK water sector has been significantly eroded. This has occurred rapidly since the price determination in 2019. The water system also lacks resilience. The UK has not invested in a new water reservoir for 30 years. Investment is also necessary to provide for an additional five billion litres of drinking water per day by 2050.

Bills have been declining in real terms since 2010 (Figure 6). However, unlike Australia it is now clear that this has been accompanied by a lack of necessary investment. As Water UK says:

“That means customers have paid lower bills than they otherwise could have. But with the benefit of hindsight, this arguably shows a missed opportunity for more investment. Additional money could have enabled the water sector to go much faster in reducing water leaks, eliminating sewage spills and building resilience to drought and extreme weather.”
The real (terms) story of historic water bills | Water UK

Figure 6 Difference between average water and wastewater bills in the UK, and if bills had kept pace with inflation since 2009-10 (pounds 2023-24 prices)



The UK water regulator, Ofwat has announced price rises of over 35 percent to fund greater investment, but much more needs to be done. The crisis triggered the largest review of the legislative and regulatory framework in the UK since privatisation (the Cunliffe review). In announcing the review, the Secretary of State said:

“Our waterways are polluted, and our water system urgently needs fixing. That is why today we have launched a Water Commission to attract the investment we need to clean up our waterways and rebuild our broken water infrastructure. The Commission’s findings will help shape new legislation to reform the water sector, so it properly serves the interests of customers and the environment.”

The UK Government correctly identified a lack of investment as the cause of the crisis. Water UK points out that water bills in the UK have been flat to declining in real terms since 2010. The policy and regulatory framework prioritised low water bills over the long-term needs of consumers and the environment. The UK is yet to fully chart the way forward since the release of the Cunliffe report.

The lesson for Australia from the UK is that deferring necessary investment is a failed strategy. It will lead to a decline in service levels, and to an even greater level of investment and pricing increases to fix broken systems.

New Zealand

New Zealand is also suffering from the consequences of underinvestment in water and wastewater services. Since the major water quality crisis at Havelock North, which resulted in approximately 5,500 illnesses and up to four deaths, New Zealand has recognised that it has a major backlog of infrastructure investment. Estimates put the backlog at \$185 billion for a nation of 5 million people (<https://infrastructure.org.nz/wp-content/uploads/2023/12/Infrastructure-NZ-Policy-Positions-Water-Infrastructure-002.pdf>).

In a recent incident in 2026, on 4 February the Moa wastewater treatment plant on Wellington’s south coast completely failed, discharging millions of litres of wastewater a day into Cook Strait. For two days raw sewage was released 5 metres from the shore at one of Wellington’s most popular beaches. “Discharge was then redirected to a long outfall which continues to release untreated sewage about a kilometre from the Tapeteranga Marine Reserve... the discharge continues at roughly 70 million litres per day” (The Conversation 17 February).

The Mayor of Wellington and the Prime Minister have announced an independent inquiry:

“[the mayor] said the failure of the capital’s wastewater infrastructure, and the impact it has had on communities, the economy and the environment were “completely unacceptable” and an “independent and transparent” inquiry was required to determine the causes.”
(Moa Point sewage failure to be independently reviewed | RNZ News)

System performance (leaks and breaks) has not deteriorated across Australia. However, the ageing of the network is real.

In 2025, WSAA data indicates that Australian utilities replaced 0.14 percent of the water network and 0.18 percent of the wastewater network.

At this rate, the implied asset lives of the networks would need to be hundreds of years.

While there may be limitations to this data, this data hardly supports a view that the Australian water industry is too risk averse in maintaining assets. Yet efficiency reviewers for price determinations are quick to question whether renewal investment is required, while governments are focused on servicing population growth rather than maintaining existing capacity.

6. Unitywater and Urban Utilities' costs are determined by their unique circumstances

The operating cost per property for each of the Queensland utilities is quite close and slightly below the average of the utilities in WSAA's 2025 benchmarking study. The difference in average cost per property is less than \$50, which is to be expected with the utilities sharing many similar characteristics for their water and wastewater operations.

Both utilities are of a size that captures economies of scale in operations. They have similar challenges in topography and other operational factors that drive costs and therefore customer bills. Some of these characteristics vary markedly from other water utilities depending on their location and jurisdiction. There is a view that the water industry is relatively homogeneous and that differences in costs and bills reflect differences in utility efficiency. For instance, regulators are more regularly referring to average bills across Australia to frame their regulatory determinations. As an example, IPART publishes in its executive summary the ranking of NSW utilities bills with those of other Australian utilities.

However, WSAA's data analysis shows that the perception that water utilities are all the same and that utility costs should be the same is not soundly based. Differences in utility costs and bills are driven by a range of factors, and no inference can be drawn between utility water bills and efficiency levels. The most technically efficient water utility in the country may not have the lowest customer bills. Indeed, it is not feasible for many utilities to match the low bills seen in other jurisdictions. Overwhelmingly, differences in costs and bills are driven by geographic characteristics, regulatory settings and the natural environment in which a utility operates.

This section considers the determining cost factors that have a direct bearing on a utility's operating expenditure.

Cost factors impacting customer bills

WSAA's benchmarking database shows the factors most influencing costs are:

- Scale
- Density of customer connections
- Geography
- Water sources and level of treatment
- Level of wastewater treatment
- Ageing assets

Scale

The Queensland Utilities are both of a size that they can gain economies of scale at an enterprise level. This is supported by WSAA's analysis of industry costs that quantifies the benefits of scale across operations, retail and corporate activities.

Although this does not apply directly to the operations of the two Queensland utilities, large dams located within controlled catchments typically provide the lowest-cost source of raw water. WSAA's econometric modelling also quantifies the benefits of scale in water treatment, indicating that average operating costs per megalitre are more than 50 percent lower for large treatment plants than for smaller facilities. These findings highlight the significant cost advantages associated with both large-scale source infrastructure and treatment operations, although the extent to which utilities can realise these benefits depends on their source water quality and treatment requirements.

Applying this insight to South East Queensland, while the region benefits from access to large raw water sources, a relatively high level of treatment is required to produce potable water. As a result, treatment costs would not be expected to align with those of regions that have protected catchments and high-quality source water requiring minimal treatment. This difference is evident in the benchmarking cost data. As the bulk water provider for South East Queensland, Seqwater has a fundamentally different water treatment cost profile from utilities such as Melbourne Water, despite both organisations benefiting from significant economies of scale.

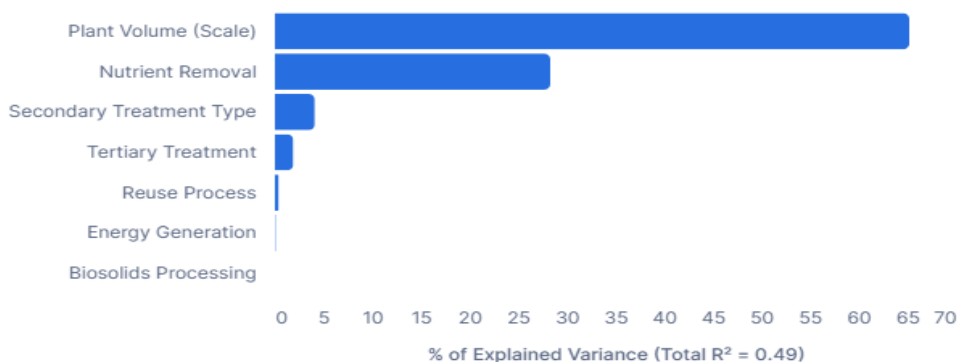
For Unitywater and Urban Utilities, these source-water treatment costs are reflected through the bulk water charge rather than through their own water-production expenditure. Bulk water is a major operating input purchased from Seqwater and passed through without margin or profit.

Directly relevant to the Queensland Utilities are the scale economies found in wastewater treatment. WSAA studies have indicated that operating costs per megalitre for larger treatment plants are about 17% lower than for small plants. The data shows that utilities with small wastewater treatment plants cannot match the lower treatment costs per megalitre achieved by larger-scale operations. The higher costs of running small plants are therefore embedded in the utility's cost base and cannot be easily changed. As an example, in the United Kingdom some utilities have large plants near urban centres, but they also have many hundreds of plants across regional areas servicing small towns and villages. The costs of running many small plants complicate any assessment of operating efficiency.

The Queensland Utilities have a mix of wastewater plant sizes. The larger plants benefit from economies of scale, but the smaller plants are unavoidably more expensive to operate. Urban Utilities operates 26 wastewater treatment plants and 350 pumping stations. Unitywater operates 17 wastewater treatment plants and more than 800 wastewater pump stations, with wastewater transported across multiple catchments to treatment facilities.

Figure 7 indicates that about 50% of cost variability in wastewater treatment can be explained by factors of size and treatment type. This indicates that other factors such as location, number of mechanical assets, asset condition and plant age, remoteness, discharge licence conditions or market conditions play a substantial role in the normalised costs of wastewater treatment plants.

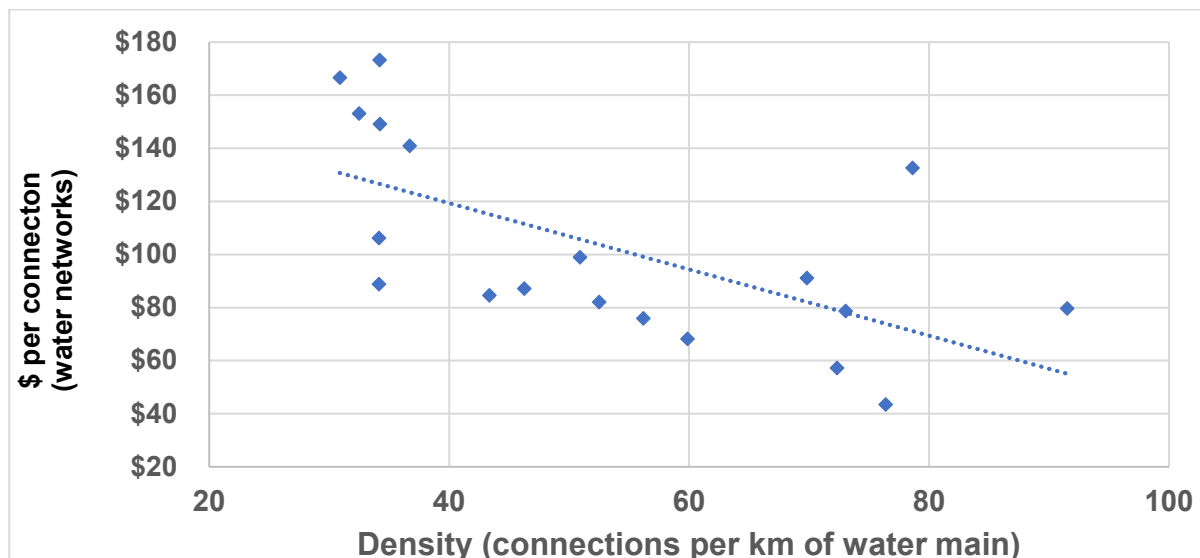
Figure 7 Relative importance of factors explaining cost per ML



Density of Connections

WSAA's analysis demonstrates a strong relationship between customer density and water network operating costs. Utilities serving densely populated areas benefit from a larger number of connections per kilometre of pipeline, enabling fixed network costs to be spread across a broader customer base. In contrast, regional utilities typically serve lower-density communities, requiring longer lengths of pipeline to service relatively fewer properties. As a result, the cost of providing water services on a per-connection basis is generally higher for these utilities. This relationship is illustrated in Figure 8.

Figure 8 Operating cost per connection for water networks v density



The Queensland Utilities costs are mid-range for water main cost per connection. They do not have the highest connection density among Australian utilities, but neither are they amongst the lowest.

Geography

Geography and topography are also determining factors in a utility's cost structure. For instance, utilities operating in hilly urban and suburban terrain have higher energy and pumping costs to supply water to customers.

Similarly, topographic conditions influence the location and design of wastewater systems, thereby affecting the baseline cost of providing wastewater services across different regions. As noted, both utilities have a relatively high number of treatment plants and pumping stations.

Bulk water and water treatment

For South East Queensland distributor-retailers, source-water extraction and potable water treatment are undertaken by Seqwater rather than by Unitywater or Urban Utilities.

Water source quality varies significantly across utilities and is a key determinant of the costs associated with water extraction and treatment. The growing reliance on desalination to supplement traditional water sources has further increased the cost of water supply. WSAA's UK benchmarking studies provide a useful point of comparison, showing that when desalination is excluded, average water treatment costs per megalitre in Australia are broadly comparable to those in the UK. However, the inclusion of desalination assets and operating costs increases average treatment costs for Australian utilities to substantially above UK levels. As investment in desalination plants continues to expand, these costs will increase customer bills.

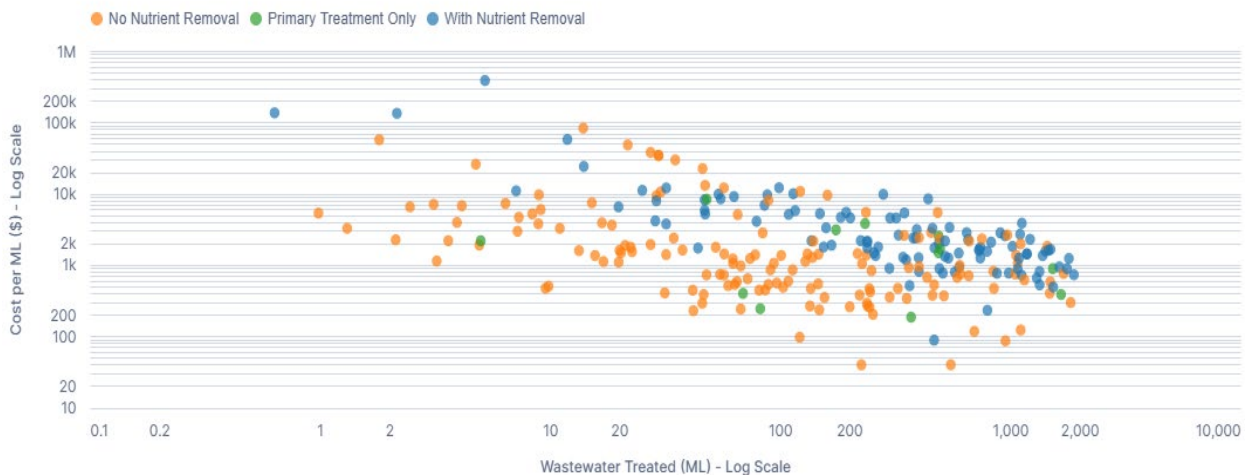
Wastewater treatment

The Queensland Utilities operate tertiary treatment plants to meet regulatory environmental and effluent-quality outcomes. The operation and maintenance of these more complex treatment processes result in materially higher cost structures than plants with low nutrient removal. Rapid development is also increasing pressure on receiving waterways at the same time as environmental requirements are becoming more stringent, contributing to higher wastewater treatment standards and infrastructure upgrades required to protect environmental values and achieve regulatory compliance.

While volume of the plant is by far the biggest factor influencing costs, Figure 9 also shows that the nutrient removal plants (blue) are clustered in a higher cost range than the 'no nutrient removal' plants (orange).

While plant throughput is by far the most significant factor influencing operating costs, Figure 9 also demonstrates the cost impact of nutrient removal requirements. The nutrient removal plants (blue) are generally clustered above the non-nutrient removal plants (orange), indicating higher operating costs. This reflects the additional treatment processes, energy consumption, chemical usage, and operational complexity associated with meeting nutrient removal standards.

Figure 9 Relationship between wastewater plant size, nutrient removal and cost



Analysis of WSAA's 2025 benchmarking database indicates a very high cost per ML treated for small, high nutrient removal plants, that is, for plants with flows of less than 2,000ML per year.

Ageing assets

Asset age and condition are increasing cost pressures for the water industry. While WSAA currently has limited data on asset age profiles and their direct cost impacts, utilities consistently report the challenge of balancing rising maintenance operating expenditure with the capital investment required to renew assets and extend asset life.

The age profile of assets varies across utilities, resulting in differing levels of renewal versus maintenance. Utilities serving major metropolitan areas such as Sydney and Melbourne generally operate networks with older average asset ages than those in more recently developed regions.

The rising cost of managing ageing assets is not a uniquely Australian issue. The experience of the UK provides a cautionary example. A prolonged period of underinvestment in infrastructure in the UK has contributed to declining asset performance and growing public and political scrutiny of the sector, particularly regarding environmental outcomes. By contrast, the Australian water industry has generally avoided the same level of underinvestment. Nevertheless, the importance of maintaining investment in infrastructure cannot be overstated. Should asset condition and performance be allowed to deteriorate, restoring service levels would require significant catch-up expenditure leading to substantial and difficult-to-manage increases in customer bills.

Appendix 1 Understanding productivity and efficiency in water

Unitywater and Urban Utilities have set rigorous efficiency targets. However, as set out in section 4, for most utilities real operating costs are increasing across Australia.

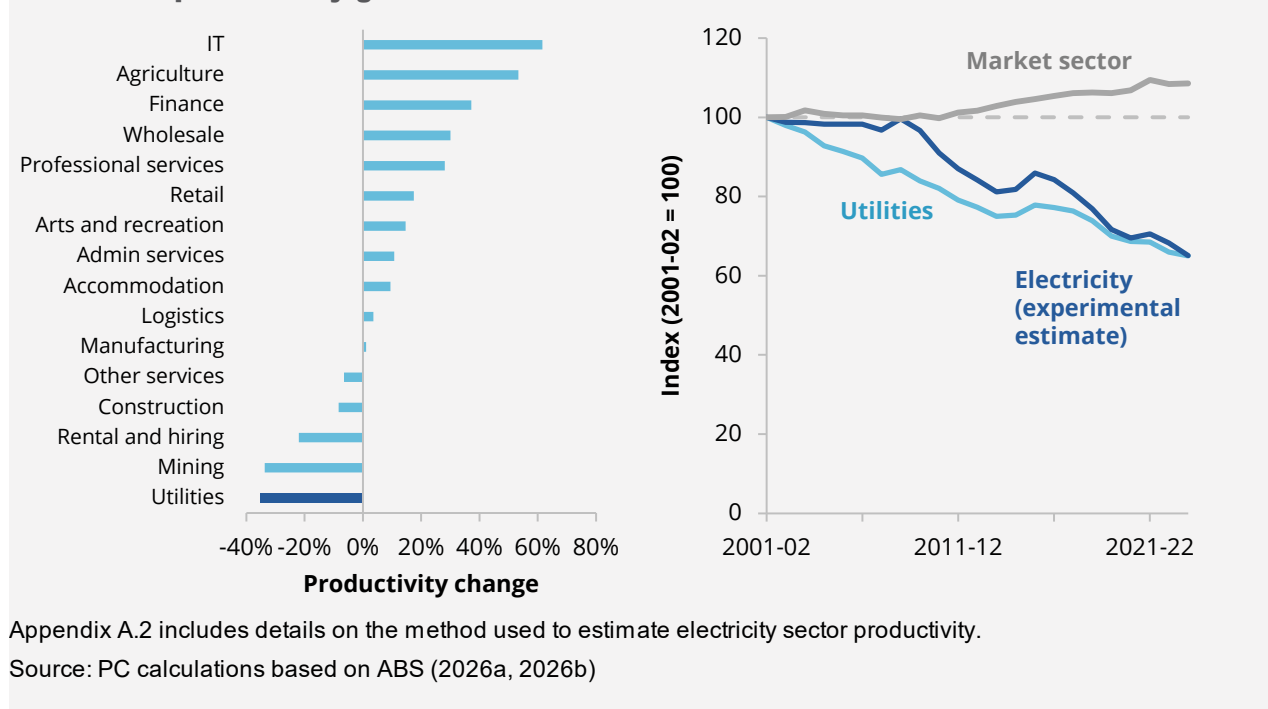
This appendix explains the measured productivity outcomes in the water sector and discusses how efficiency should be considered in the context of rising costs. It shows that attempts to arbitrarily cap operating costs based on past trends or cost-of-living pressure will not be in the long-term interests of customers.

WSAA has set out in detail how the water sector is in a transition of the same scale and magnitude as the energy transition ([here](#)). Policy makers are slow to appreciate the implications of this change.

In June 2026, the Productivity Commission released its Quarterly Productivity Bulletin. The focus of the Bulletin was analysing how the energy transition is having an impact on the *measured* productivity of the electricity sector. Productivity as conventionally measured has significantly declined because of the investment required for the rollout of renewable energy. But the Bulletin pointed out that there is one sector where productivity — as conventionally measured — has declined even more than electricity: the water sector.

The Productivity Commission provided Figure 1 below to illustrate the large decline in electricity productivity.

Figure 1 – Multifactor productivity growth in the electricity industry has been poor
Multifactor productivity growth between 2001–02 and 2023–24



Appendix A.2 includes details on the method used to estimate electricity sector productivity.

Source: PC calculations based on ABS (2026a, 2026b)

The Productivity Commission said:

Our capacity to produce electricity efficiently is critical to our overall productivity. But productivity growth in the utilities industry, of which the electricity sector is a part, has been poor (Figure 1; AER 2025a, 2025b). In fact, from 2000–01 to 2023–24, the utilities industry was the worst performing industry in Australia (figure 1a) [emphasis added]. The electricity sector itself did not fare much better.

The Productivity Commission made clear that the electricity sector is part of the electricity, gas, **water and waste management services sector** (the Utilities sector), and that electricity accounts for 57 percent of value added within the sector. The remainder, referred to as Utilities, is mainly water utilities. The chart in the Productivity Bulletin shows measured productivity declining for Utilities (read: water) in every year since 2000-01, and by nearly 40 percent overall.

As set out in Box 3, the ‘measured’ productivity numbers are the outcome of the profound transition that is underway in the water sector, which WSAA has been highlighting for some time. WSAA emphasises that the measured productivity numbers do not reflect the underlying performance or efficiency of the water sector. **Australia has a world-class water sector.** However, just as investment in the energy sector is influencing its measured productivity, the profound transition and investment required in the water sector is influencing our measured productivity.

These numbers put the spotlight on the importance of water reform to the national economy. Indeed, the importance is even greater than these numbers suggest.

The water sector requires a supportive policy environment if it is to navigate the water transition without succumbing to the crises that have beset countries such as the UK and New Zealand. This type of crisis would have an infinitely greater impact on the Australian community than could be captured in any productivity analysis.

Box 3: What is going on with water sector productivity?

Productivity is outputs divided by inputs. For very good reasons, the water transition is increasing input costs.

Most industries use labour and capital as inputs to produce outputs.

However, the water sector is one sector that has, globally, for centuries relied on three inputs. Labour, capital and ‘free’ natural capital inputs. Natural capital inputs are inputs the environment provides generally free of charge. Rainfall and water catchments are the most obvious. But equally important is that waterways and the ocean have been available as ‘disposal sinks’ for wastewater.

For the last 30 years (at least), the water industry has been augmenting natural capital inputs with conventional labour and capital. There are few remaining dam sites, so desalination and recycling are augmenting our water supply for housing and growth. Wastewater treatment levels have increased to protect rather than exploit our waterways and beaches.

This changing input mix increases the sector’s costs. Higher input costs, all things being equal, end up as lower measured productivity.

On the outputs side, paradoxically, the policy environment has contributed to lower measured output. In the productivity measurement world, output is often measured by a sector’s Gross Value Added – the value of its output. However, the policy environment has suppressed water sector prices in the name of cost of living, which has in turn meant that the sector value of output or Gross Value Added, is not increasing at the rate it needs to. Measured output is therefore lower than it actually is through declining levels of cost recovery.

In short, the productivity performance of the ‘worst performing industry in Australia’ is a consequence of a poor policy environment (reducing output) combined with the profound changes to the input mix required by the water transition, which is increasing costs (higher inputs).

Beyond a crisis, unless the water sector secures the ongoing investment it requires, there will be severe consequences for the national economy. For example, without sufficient investment, it will be difficult to meet national housing aspirations. And in the UK, we have already seen data centres being denied because water is not available to meet their needs.

Reassessing efficiency in water

The same factors that drive the measurement of multifactor productivity suggest we need to re-look at the standard approach for setting efficiency targets in the water sector in the UK, which is also used by some regulators in Australia. This approach involves setting two targets: an 'ongoing efficiency target' and a 'catch-up efficiency target'.

The first target is based on the concept that an efficient firm (operating on the efficiency frontier) should make further efficiency gains over time reflecting productivity and innovation in the sector and the economy generally. The second target is based on the concept that firms which are judged not to be operating as efficiently as possible should also catch up to the (moving) efficiency frontier.

Debate takes place at each price review about what figure should form the basis of the ongoing efficiency target. In the UK, extensive use of econometric models has been typically used by Ofwat to set catch-up efficiency targets.

The use of these econometric models was criticised in the Cunliffe Review. For example:

'The Commission has heard that, in setting allowances and targets for companies, Ofwat relies too heavily on econometric modelling based on (largely historic) sectoral benchmarking. Ofwat uses the concept of a 'notionally efficient company' to assess what companies should be spending. Investors and water companies have said that 'Ofwat's 'one-size-fits-all' approach does not take sufficient account of company-specific conditions and challenges' (for example, current performance level, geography, hydrology, demography and history). The Commission has also heard that, in setting baselines, Ofwat has insufficiently taken into account the realistic level of progress companies can make in-period to support a different approach.

In addition:

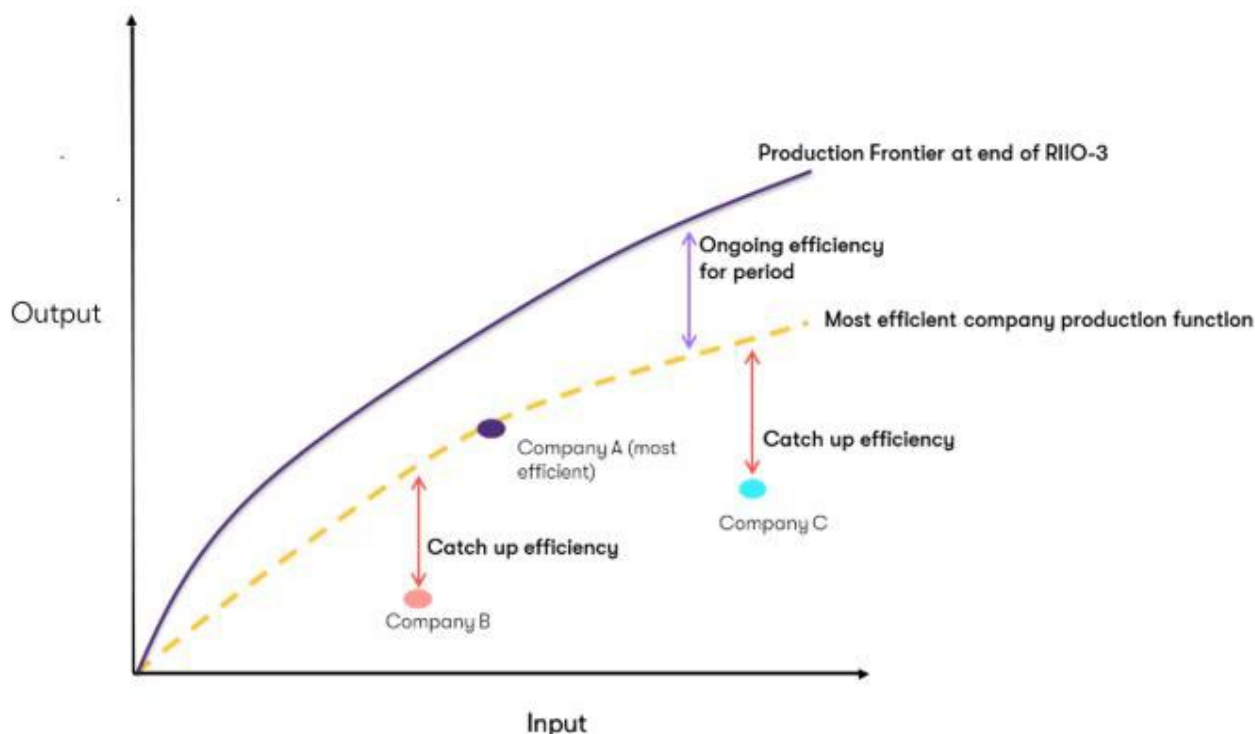
"The Commission has heard that there has also been an 'invisible gap' where companies have been deterred by Ofwat for submitting business plans on what they actually need to spend on infrastructure."
(Final report p.182 of 464)

The Water in Transition report suggested that the whole issue of the notionally efficient firm and the efficiency frontier needs to be reconsidered because of the water transition by which reductions in available (free) environmental inputs need to be funded by conventional capital and labour inputs.

Unpacking the frontier

A graphical representation of the ongoing and catch-up efficiency appears in a paper for the energy regulator Ofgem – reproduced in Figure A.1.⁴ The same framework is applied in water in the UK and by some regulators in Australia.

Figure A.1 Graphical Representation of Ongoing Efficiency and Catch-up Efficiency



Source: Grant Thornton's Analysis

The Y-axis shows output of the sector, while the X-axis shows inputs. Ongoing efficiency is shown by the new efficiency frontier at the end of the determination period.

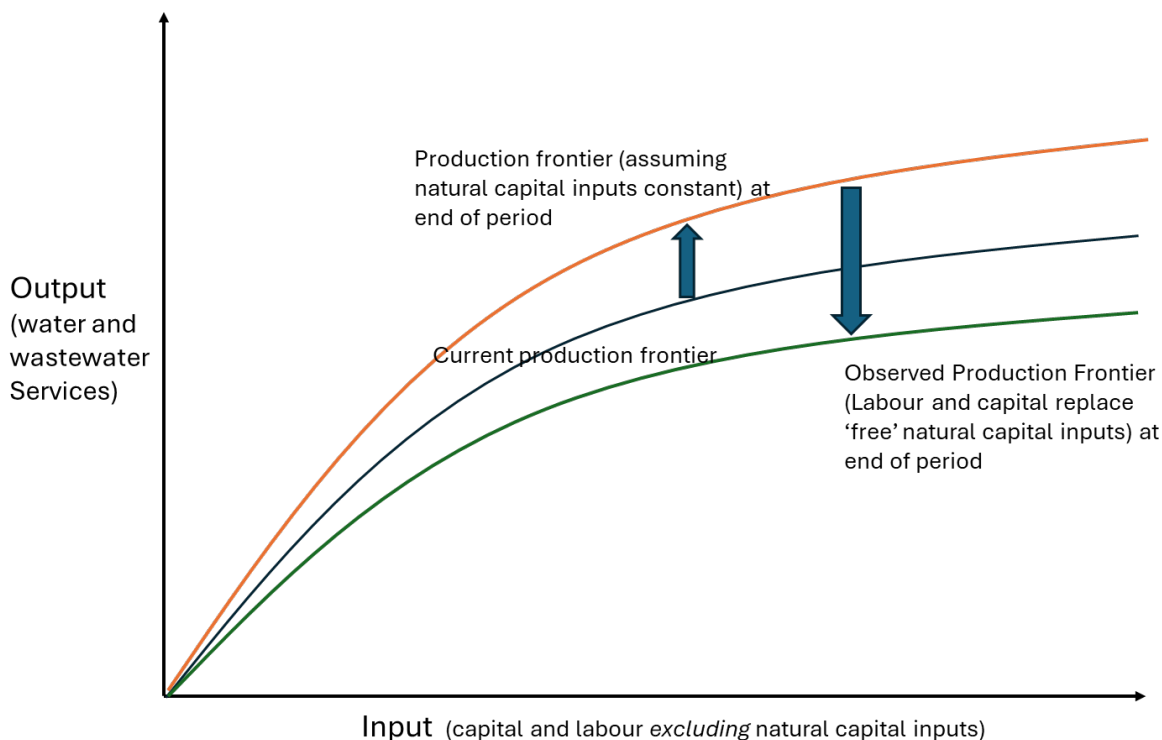
Yet this framework is contradicted by the facts. In Australia, it is contradicted by the official measurement of multi-factor productivity declining for 25 years, and the fact that costs and prices are increasing well above inflation. A similar pattern is evident in the UK. If real costs are rising faster than the growth in volumes of water supplied or wastewater treated, conventional analysis would say that productivity is falling.

In a reconsidered framework, technical efficiency can be improving in the water sector, AND overall costs can be increasing. This is set out in Figure A.2. The axes are the same as those above; however, the input axis explicitly excludes free natural capital inputs. The current production frontier for an efficient firm is shown as the middle curve. If the industry were free to continue using natural capital inputs in the same proportion at the end of a determination, the efficiency frontier would have shifted outward. More output can be produced with the same inputs. However, in practice we are observing more capital and labour inputs to produce the same output. The actual production frontier has therefore contracted – as conventionally measured.

The key point is that the sector is improving the productivity of its existing use of capital and labour, however, this is more than offset by the additional capital and labour necessary to replace 'free' natural capital inputs.

⁴ [Independent Report on Ongoing Efficiency](https://www.ofgem.gov.uk/sites/default/files/2025-06/Independent-Report-on-OE_27-June-2025.pdf) https://www.ofgem.gov.uk/sites/default/files/2025-06/Independent-Report-on-OE_27-June-2025.pdf

Figure A.2 Reconsidering the production frontier in the water sector.



WSAA suggests, albeit from a distance, that this was a missing piece of the puzzle that the water sector was searching for during PR24 in the UK. The frontier shift was a matter of debate during PR24, with several reports from both sides.

A consortium of companies commissioned work to look at the evidence for a frontier shift.⁵ This work correctly reported and analysed the same low productivity trends — conventionally measured — as have been evident in Australia. However, without the explanation we have set out, the industry is forced into some tortuous positions.

'Historical data shows that, factually, over PR14 and PR19 the water industry delivered low productivity, in line with low and flat productivity of the UK'

And more tellingly.

'The water industry is not intrinsically a high-tech industry'

The analysis in this paper suggests that two things can be true at once. The water sector can be a high-tech sector like any other sector; and overall costs can increase. Rising costs in the water sector should not be confused with poor performance. Globally, water is indeed a high-tech industry in terms of water treatment, advanced wastewater treatment, recycling for drinking and biosolids processing, among others. However, that technology involves higher costs than the low-tech alternatives of free catchments or using, say, the oceans as a disposal sink.

⁵ [anh_dd_055-balanced-approach-frontier-shift.pdf](#)

About WSAA

The Water Services Association of Australia (WSAA) is the peak body representing Australian water utilities. Our members provide water and wastewater services to over 24 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises. WSAA facilitates collaboration, knowledge sharing, networking and cooperation within the water sector. The collaborative approach of WSAA members has led to sector-wide advances to national water issues.

Contact

WSAA welcomes the opportunity to discuss this submission further.

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