



Our Plan 2020-24

Working together to sustainably improve water services

Our Plan 2020-24 (Our Plan) is SA Water's regulatory business proposal for the period from 1 July 2020 to 30 June 2024, submitted to the Essential Services Commission of South Australia (ESCOSA), in keeping with the regulatory framework set out under the *Water Industry Act 2012* and *Essential Services Commission Act 2002*.

Along with ESCOSA, the intended audiences of this document are customers, customer representative groups and other stakeholders.

Our Plan provides an overview of the key elements influencing business planning and operation and should be read in conjunction with the more detailed documents appended.

Unless otherwise noted, all dollar figures shown in Our Plan are indicative and in real terms (excluding inflation) expressed in December 2018 dollars and relate to financial years.

Our Plan does not take into consideration the outcome of the Government inquiry into the regulated asset base.

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1.0

Our Plan 2020-24: Working together to sustainably improve water services



SA Water customers across the state will benefit from improved water services as we implement *Our Plan 2020-24* and deliver sustainable change initiatives shaped by customer priorities.

Informed by our most extensive customer research and engagement program to-date, Our Plan outlines the way we will run our business over the next four years.

More than 12,000 people shared their time and insights with us over the past two years, in engagement processes that have set a new benchmark for public participation in regulatory business planning, with the inclusion of direct negotiation on investment plans with customer representatives for the first time.

Through rigorous planning and evaluation processes we have then balanced the regulated responsibilities we must meet to ensure public health, environmental, economic, technical and safety outcomes, while stretching beyond these to deliver the sustainable service and operating improvements that our customers have identified as important to them.

Over the next four years, we will invest \$1.8 billion in capital infrastructure and \$143 million in IT infrastructure and use \$1.9 billion in operating expenditure to meet basic regulated responsibilities, drive efficiencies in the way we do things, and maintain, improve and expand our assets so our customers can continue to rely on the services we provide.

We will do more for less, while delivering a price reduction.

Our customers have consistently told us that low and stable prices are important to them. Through our ongoing focus on achieving sustainable operational efficiencies and smart approaches to maximising the productivity of our assets, we have been able to contain the costs of an expanded capital program that delivers more for our customers, and forecast a bill saving of \$26 for the average metropolitan residential customer.

We will invest in programs that improve the taste of drinking water in Adelaide and the quality of some regional supplies.

Our customers told us they would like to see, and are willing to pay for, water treatment upgrades that improve the taste of drinking water. By upgrading the Happy Valley Water Treatment Plant and completing changes to the vital disinfection processes used across the metropolitan region, we will achieve a significant and sustainable improvement to the taste of tap water.

Our customers also demonstrated a very strong sense of fairness and prioritised measures that would improve the quality of supplies in regional areas that currently have aesthetic challenges like saltiness or hardness, as well as wanting 19 small non-drinking systems to be progressively upgraded to drinking quality. The wide-reaching impact of upgrading these regional water supplies will deliver broad benefits for these communities including their liveability, and population and economic sustainability.

We will continue investing to further reduce the impact of water main breaks and leaks and temporary supply interruptions on our customers.

Our customers value service reliability and efforts that minimise interruptions to water supply. In addition to ongoing investment in the renewal of water reticulation mains, trunk mains and major pipelines, we will increase our focus on smart approaches to managing the network. Expansion of our world-leading predictive smart networks of sensors, installation of more valves to reduce isolation areas, and pressure management techniques, will deliver long-term sustainable decreases to the number of customers who experience multiple interruptions during a 12 month period, at no additional cost to customers.

We will invest to increase the amount of water we recycle for a productive second life, and contribute to economic growth and improved urban liveability.

Our customers told us they value water security, measures that protect the natural environment, and want to see more water recycled. Already the second largest recycler of water in Australia, we are expanding schemes like the Glenelg to Adelaide Pipeline. We will conduct investigations into how we can increase the amount of water we recycle from 28 to 50 per cent. Working together with metropolitan councils to substitute drinking quality water with more fit-for-purpose climate-independent water will help green the city to improve liveability, and enhance the sustainability of our water sources.

We will implement measures that further improve the ways we protect and enhance the natural environment.

Our customers prioritise minimising the impact of our operations on the environment. The sewerage network exists to protect public health and the natural environment by keeping waste material contained and taking it away for safe treatment. We will invest to ensure the sewerage network continues to perform this vital community function and reduce the incidence and impact of sewer overflows by upgrading pump stations and equipping critical locations with back-up power supplies, as well as the expansion of our successful predictive smart network of sensors within the sewerage network.

We will hold ourselves accountable to a new set of commitments that we make to our customers, covering the reliability of our services, the way we respond and resolve issues, and satisfaction with our customer service. These service commitments were shaped around customer feedback and tested throughout our engagement processes to ensure they align with our customers' expectations.

Regular and ongoing engagement with our customers is now business as usual and continuing to work together in this way will ensure we constantly adapt the way we do things to keep pace with changing expectations and needs, and enhance the long-term sustainability of our business.

Our Plan 2020-24

Proposed revenue and prices to be collected from our customers...

Average annual combined water and sewerage bill reduction 2020-21

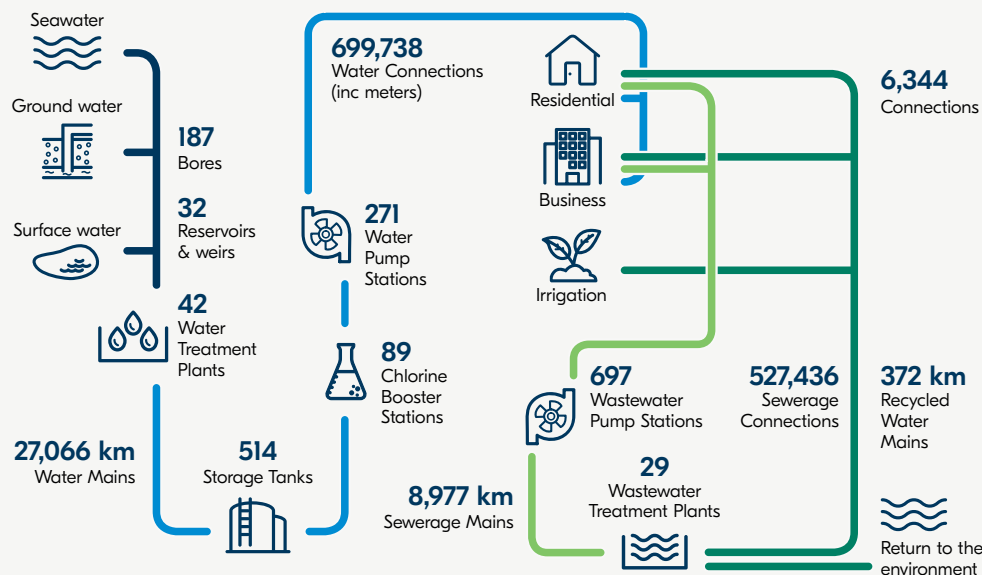
	Residential	Non-residential	Commercial
Metro	✓ \$26	✓ \$325	✓ \$138
Country	✓ \$23	✓ \$299	✓ \$94

Maximum allowable revenue of \$4.63 billion, 2.2 per cent lower for water and 0.5 per cent lower for sewerage than the 2016-2020 regulatory period.

December 2018 dollars

to operate the business...

Operating expenditure of \$1.9 billion, on average \$16 million lower per year than 2016-20.20.



Correct as at August 2019

meet regulatory requirements such as those under the...

South Australian Water Corporation Act 1994

Public Corporations Act 1993

Water Industry Act 2012

Safe Drinking Water Act 2011

South Australian Public Health Act 2011

Work, Health and Safety Act 2012

Environment Protection Act 1993

Natural Resources Management Act 2004

To read more about our legal and regulatory responsibilities refer to Appendix A.

and invest in assets...

Capital expenditure of \$1.8 billion on water and sewerage infrastructure in 2020-24.



\$144 million

Water reticulation network management



\$124 million

Metropolitan water quality improvement



\$91 million

Dam safety upgrades



\$78 million

Eyre Peninsula water security



\$11 million

Glenelg to Adelaide Pipeline expansion

...to deliver reliable, high-quality water and wastewater services to more than 1.7 million South Australians, every day.

Safe, clean water
compliance
with the *Safe Drinking Water Act 2011*

Water service interruption frequency
<1,750 by 2024-25

Water service restoration timeliness
99%
of interruptions restored within required timeframes

Internal sewer overflow frequency
<220 per year

First contact resolution
85%

2.0

Delivering world
class water services
for a better life



2.1 Providing water and sewerage services to more than 1.7 million South Australians

We are South Australia's leading provider of water and sewerage services for more than 1.7 million people. For more than 160 years we have been working together with South Australians to ensure a reliable supply of safe, clean water and a dependable sewerage service.

With the aim of keeping prices as low and stable as possible for our customers, we strive to make smart, long-term investments, and best use of new technologies, and to deliver on our commitment to efficiency.

Of all Australian water utilities, we have the longest water mains supply network at more than 27,000 kilometres. In addition, we manage nearly 9,000 kilometres of sewerage mains and the longest recycled water network in the country, of more than 370 kilometres.

Through this large network of pipes, pump stations and treatment plants across the state we supply around 200 billion litres of water every year and remove and treat used water through our sewerage network.

With a long history of innovation, we continue to improve the way we work and the services we deliver for our customers. The use of smart network technology in our water and sewerage networks is leading the way in the water industry in Australia and internationally, and by embracing new ideas we are supporting the state's economy, such as our support for a trial of molten silicon energy storage. These are just two examples of how we are fostering and developing new approaches and applications of technology for the benefit of our customers and the community.

2.2 We are a corporation owned by the people of South Australia

As a statutory corporation we report to an independent Board and balance the delivery of services in a competitive market with our responsibility to provide a return to our shareholder.

We are included in the portfolio of the Minister for Environment and Water and work closely with a number of South Australian government agencies including:

- Department of the Premier and Cabinet
- Department of Treasury and Finance
- Department for Environment and Water
- SA Health
- Environment Protection Authority
- Office of the Technical Regulator
- The Essential Services Commission of South Australia.

2.3 Robust legal and regulatory frameworks guide our operations

Legal and regulatory frameworks establish the basics and guide the way our business operates, and we remain focused on meeting these responsibilities as well as delivering what is important to our customers. Our regulatory responsibilities include, but are not limited to:

- **Protecting public health** — we ensure our water is safe to drink and our sewerage services are dependable to protect the community from the germs and diseases carried in sewage.
- **Keeping our people and the community safe** — we support our people to work safely so they return home in the same condition they arrived at work. Likewise, we take the safety of our customers and the community seriously.
- **Protecting the environment from harm when operating, including the sourcing of water supplies** — we work to protect the environment for future generations, a value we share with our customers.
- **Meeting technical industry regulations** — for the construction, operation and maintenance of our infrastructure.
- **Revenue and customer service standards** — the revenue a utility can earn in South Australia for water and sewerage services and service standards for customers are set and monitored for compliance by the Essential Services Commission of South Australia (ESCOSA).

Our legal and regulatory responsibilities are summarised in Appendix A.

3.0

Customers are at the heart of our business and have shaped our plans for the future



3.1 Our most extensive customer engagement program confirmed customer priorities

Customer engagement activities undertaken for Our Plan are the most extensive we have ever undertaken, both in the breadth of methodologies we used and reach to South Australians across the state.

From 2017 to 2019, we engaged with more than 12,000 customers online and face to face about what matters most to them when it comes to the water and sewerage services we deliver. This engagement was done over four phases (Figure 1), with the results and feedback gathered through this engagement process informing our business planning.

Two robust willingness to pay approaches have been used to prioritise the services we should plan to improve from 2020, and to identify the initiatives customers are willing to pay for through their combined water and sewerage services bill. Engagement with our Customer Working Group was paramount to validating and challenging our ideas.

Our integrated customer engagement and business planning process is explained in more detail in Appendix B and the engagement activities and their outcomes are detailed in Appendix C along with independent consultant reports on the results.

Figure 1: Our Plan engagement phases as part of the regulatory process



- 1 In phase one we explored the data and feedback we already had and further developed our understanding of the services most important to our customers and the areas we needed to maintain, improve or reduce.
- 2 Phase two gave our customers the opportunity to have their say about certain services we provide and how they would value increases or decreases in service levels. We collected this data through a choice modelling survey, *What matters to you?*
- 3 As part of our internal planning processes, phase three included sharing and discussing with our Customer Working Group the data collected from the *What matters to you?* survey. These discussions centred on how the service level priorities from the survey were being interpreted and used in our business planning. Feedback was also sought on our proposed service standards.
- 4 Phase four involved a contingent valuation survey, *Would you invest in this?*, that gave our customers the opportunity to have their say on five improvement initiatives proposed for inclusion in Our Plan. The findings were used as part of our discussions with the Customer Negotiation Committee, and to prepare Our Plan.

Phases five and six are yet to occur at the time of submission and will form part of the ESCOSA determination process.

Stage 1 customer insights were analysed and, in addition to low and stable pricing, most important to our customers are:



Safe water. Quality water.

The water we provide is safe to drink and the quality of the water is right for their needs.



Reliable water and sewerage services

We provide water and sewerage services that are always available, both now and in the future.



Protecting the environment

We care for the environment in the supply, treatment, discharge and reuse of water, sewage and waste.



Support, fairness and great customer service

We are respectful, we listen, respond quickly, make it easy and communicate about our work.

The *What Matters to you?* survey tested with customers possible changes in level of service and the price impact associated with change. Customers told us they are willing to pay the reasonable costs of:

- reducing the number of sewage overflows to the environment
- upgrading regional properties from non-drinking to drinking water supply
- increasing the volume of recycled water use
- improving drinking water quality for the Adelaide metropolitan area
- improving the taste, smell and colour of drinking water in regional South Australia.

We then tested these in more detail in the *Would you invest in this?* survey.

Based on this feedback from customers, service changes were incorporated into Our Plan.

Customers also told us they did not want any of the service levels tested to be reduced.

3.2 Working with customers

Aligned with requirements of the regulatory determination process and following this significant engagement with our customers, we worked together with the Customer Negotiation Committee to discuss and negotiate our draft plan.

Comprising three customer representatives recruited by ESCOSA, the committee was tasked to negotiate with us and advocate on behalf of all customers.

Former Under Treasurer and ESCOSA Commissioner, John Hill, led the committee. Mark Henley from Uniting Communities provided experience in utility negotiation and customer advocacy, with a special interest in advocating for customer groups with special needs, while Meg Clarke from our Customer Working Group represented all customers.

The Customer Negotiation Committee was extensively briefed on how a water utility operates and our operating environment in South Australia, including economic regulation and the legal framework we are required to work within.

In particular, the committee was tasked by ESCOSA to:

- review evidence of customers' views, priorities and preferences
- review proposed service standards and how we plan to hold ourselves to account
- review any other consumer protections we proposed or which the committee considered necessary

- consider our cost allocation method to understand how this links to allowable revenue and pricing
- review proposed expenditure and whether it is prudent and efficient
- consider what is an appropriate rate of return
- review our proposed demand and customer growth numbers (refer to Appendix D to understand how this links to allowable revenue and pricing).

Where these could be negotiated between us and the Customer Negotiation Committee, ESCOSA decided they did not need to perform a regulatory review. ESCOSA intends to reserve its regulatory review to:

- matters referred by the Customer Negotiation Committee or which could not be agreed between us and the committee
- form of price regulation
- regulated asset values, regulatory depreciation, tax and return on working capital (refer to Appendix D to understand how this links to allowable revenue and pricing).

These discussions with the committee formed an important part of our business planning process and are covered further in Appendix B, including the outcome.

3.3 New service standards were developed together with our customers

We will hold ourselves accountable to a new set of commitments that we make to our customers, covering the reliability of our services, the way we respond and resolve issues, and satisfaction with our customer service.

These service commitments were shaped around customer feedback and tested throughout our engagement processes to ensure they align with our customers' expectations and are outlined in detail in Appendices I and J.

While maintaining our commitment to meeting the existing service standards set by ESCOSA for 2016-20, we propose nine new service standards that we will measure and set targets for:

- the level of customer satisfaction
- resolving issues for customers the first time they contact us
- the number of complaints escalated
- the reliability of our services, including the frequency of temporary service interruptions, water leakage and sewer overflows
- responses to temporary water service interruption, based on priority level.

We propose to work with ESCOSA, as part of the determination process, to finalise service standards that will apply for 2020-24.

Table 1: Proposed service standards 2020-24

Service area	Measure	2018-19 performance against 2016-20 targets	2016-20 target	Proposed 2020-24 target
Customer service	Customer satisfaction	New measure	New measure	93%
	Telephone responsiveness	86% within 30 seconds	85% within 30 seconds	85% within 50 seconds for fault calls
	First contact resolution	New measure	New measure	85%
	Complaint responsiveness	96% (written complaints)	95% (written complaints)	95% (all complaints)
	Complaint escalation	11.2%	New measure	<15%
Reliability	Water service interruption frequency	2,315	New measure	<1,750 by 2023-24
	Water leakage performance	1.97	New measure	<2.06
	Sewer overflow frequency	32	New measure	<29
	Internal sewer overflow incidence	180	New measure	<190
Connections	Connection application responsiveness	97% within 20 working days	95% within 20 working days	95% within 15 working days
	Water network connection timeliness	96%	95%	95%
	Sewer network connection timeliness	98%	90%	90%
Response	Water quality responsiveness	97%	96% metropolitan Adelaide 99% regional	96%
	Water event responsiveness — high priority	98%	New measure	99%
	Water event responsiveness — low priority	New measure	New measure	95%
	Sewer event responsiveness	99%	99% metropolitan Adelaide 99% regional	99%
Restoration	Water service restoration timeliness	98%	99% metropolitan Adelaide 99% regional	99%
	Sewerage service restoration timeliness	96%	95% metropolitan Adelaide 99% regional	95%
	Sewer overflow clean-up timeliness	98%	98% metropolitan Adelaide 99% regional	98%

Our performance against these will be monitored daily, weekly and monthly, and outcomes reported to our Board quarterly. Public performance reports will be published each quarter and if we are not meeting our targets, we will explain why and what we are doing about it.

In addition, we will report quarterly to ESCOSA on our performance. ESCOSA will then prepare an annual report for public release each year.

3.4 Business planning processes reflect customer priorities and our service commitments

Our business planning and budgeting processes have evolved to balance the various legal and regulatory requirements we must meet, with challenges and opportunities that arise, and the insights our customers have shared with us.

These equally important elements are integrated through a structured process that ensures customer priorities are overlayed at multiple stages, detailed in Figure 2.

During this planning process the customer research program outlined in Figure 3 (overleaf) informed our decision making. This process identified the following priorities for the future:

- meeting external responsibilities — our base legal and regulatory requirements
- providing reliable services — keeping our business running and infrastructure performing at current levels of service customers expect
- improving services — where customers have told us it is important to them, and they are willing to pay
- meeting growth — servicing new water and sewerage customers or increasing the services available to existing customers
- becoming more efficient — investing to deliver resource savings which reduce the cost of services over time for our customers.

Figure 2: Planning process

How we developed Our Plan

How customers informed our decisions

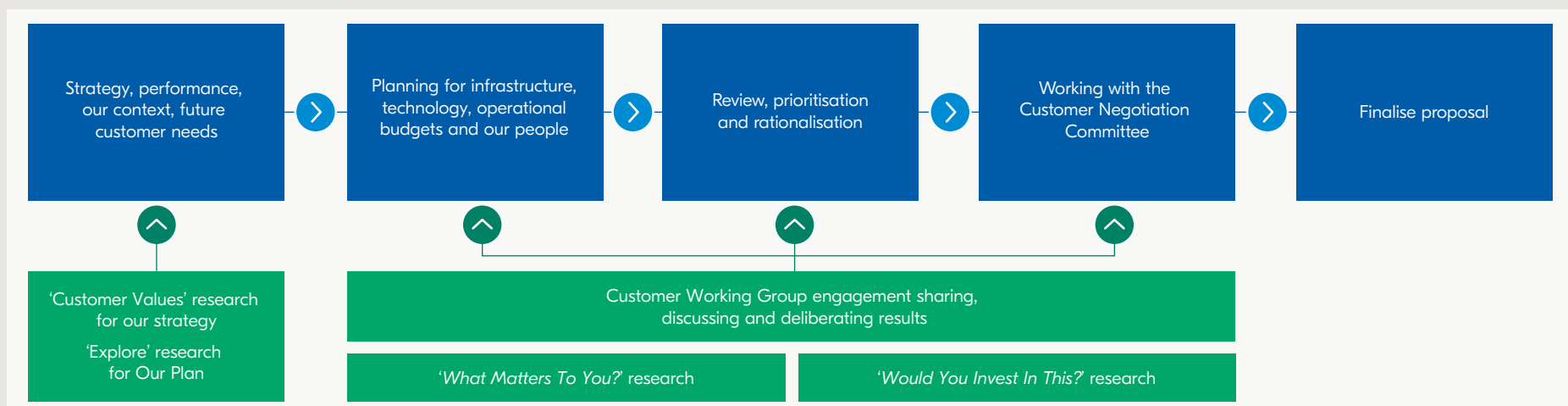




Figure 3: Customer research program

ONGOING	Brand health and perceptions research	<ul style="list-style-type: none"> • Customer survey • 1,600 customers per year • Twice weekly data collection 	<ul style="list-style-type: none"> • Residential and business, regional and metropolitan, customer segments
	Customer experience tracking	<ul style="list-style-type: none"> • Phone, online and paper surveys • 12,000+ customers per year • Daily measurement 	
PROJECT SPECIFIC	Our Plan engagement	<ul style="list-style-type: none"> • Community engagement • Stakeholder engagement • Customer surveys 	<ul style="list-style-type: none"> • Customer workshops and focus groups • Willingness to pay study
	Targeted customer research	<ul style="list-style-type: none"> • Customer journey mapping • In-depth interviews • Customer surveys • Market sizing 	<ul style="list-style-type: none"> • Customer workshops and focus groups • Third party research
	External research		

With a clear idea of what we need to deliver for our customers, and how to manage our risks and create operational efficiencies for our business, the operating expenditure plan, asset management plan, and digital plan were brought together and considered holistically before informing Our Plan. Our draft expenditure proposals and business plan went through an intensive prioritisation and governance process set out in Appendix B.

3.5 Infrastructure and technology plans balance acceptable risk with service outcomes for customers

To determine what we need to spend on our statewide network of assets, we adopted a bottom-up approach assessing the age, condition, growth profile, current performance, required performance and likely impact on service levels and legal and regulatory responsibilities.

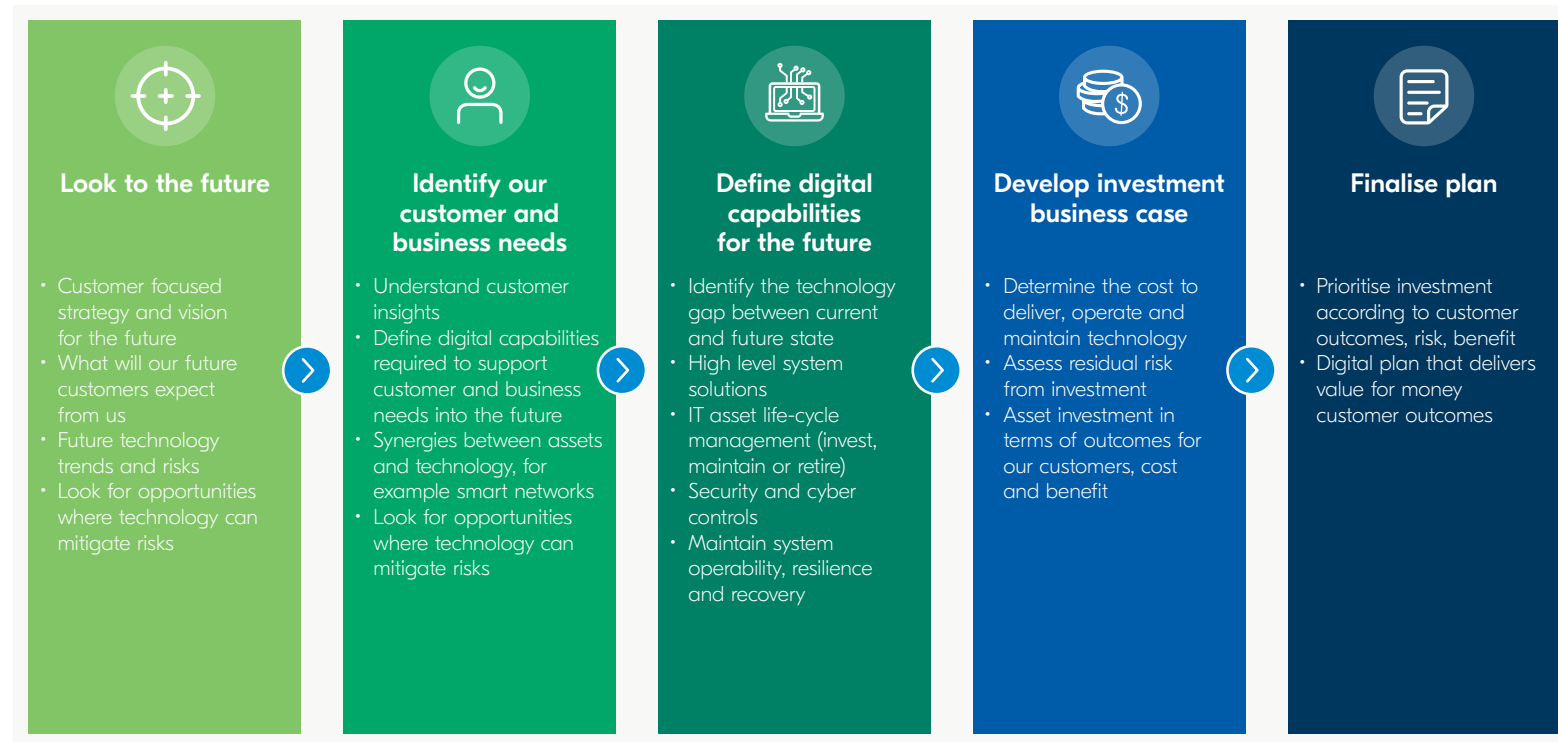
Knowing that low and stable prices are important to our customers, we reviewed our plans to determine where we could take a slightly higher level of risk and save money, where it is unlikely to impact service levels or the environment.

These decisions have not been made lightly or in isolation. Alternatives were considered, such as spending more money on routine cleaning of sewer mains to avoid blockages and breaks that may occur otherwise, which is included in our operating expenditure proposal to ensure we can meet our customers' expectations at the least cost.

By making risk-based trade-offs and using other ways to mitigate infrastructure malfunction, we were able to revise our asset capital plans down from \$2 billion over the four year regulatory period to \$1.8 billion (comprising \$1.220 billion for water assets and \$534 million for sewerage assets).

A comprehensive digital planning process was undertaken to determine the digital services and internal support needed to operate our business and deliver what is important for our customers. This process is outlined in Figure 4.

Figure 4: How we derived our digital plan



The three key drivers for the development of this digital plan were:

- 1 what our customers value
- 2 operational efficiencies
- 3 risk management.

The digital expectations of our customers are steadily increasing and investment is needed to meet customer needs now and into the future (Figure 5).

In addition to delivering for our customers, we actively manage a number of risks including cyber threats, recovery of business critical systems, data loss, and loss of infrastructure control. All the while, our level of risk, cyber threats and wider regulatory landscape continue to evolve.

Digital capabilities have great capacity to generate operational efficiencies and cost savings. This comes in the form of better data, integration, automation and analysis across the business so we can continue to leverage opportunities.

Figure 5: Customer experiences that will be enhanced by improved digital capabilities



4.0

Our business is efficient
and we seek continuous
improvement



Through our ongoing efforts to drive efficiencies across our business, we maintain low operating costs compared with our peers, despite working in conditions more challenging than those faced by like utilities in Australia.

Our statewide water network spans more than 27,000 kilometres, necessitating high use of electricity to pump water vast distances. Being at the end of the Murray-Darling Basin, we often manage challenging water quality in our primary water source, which can increase our chemical and treatment costs.

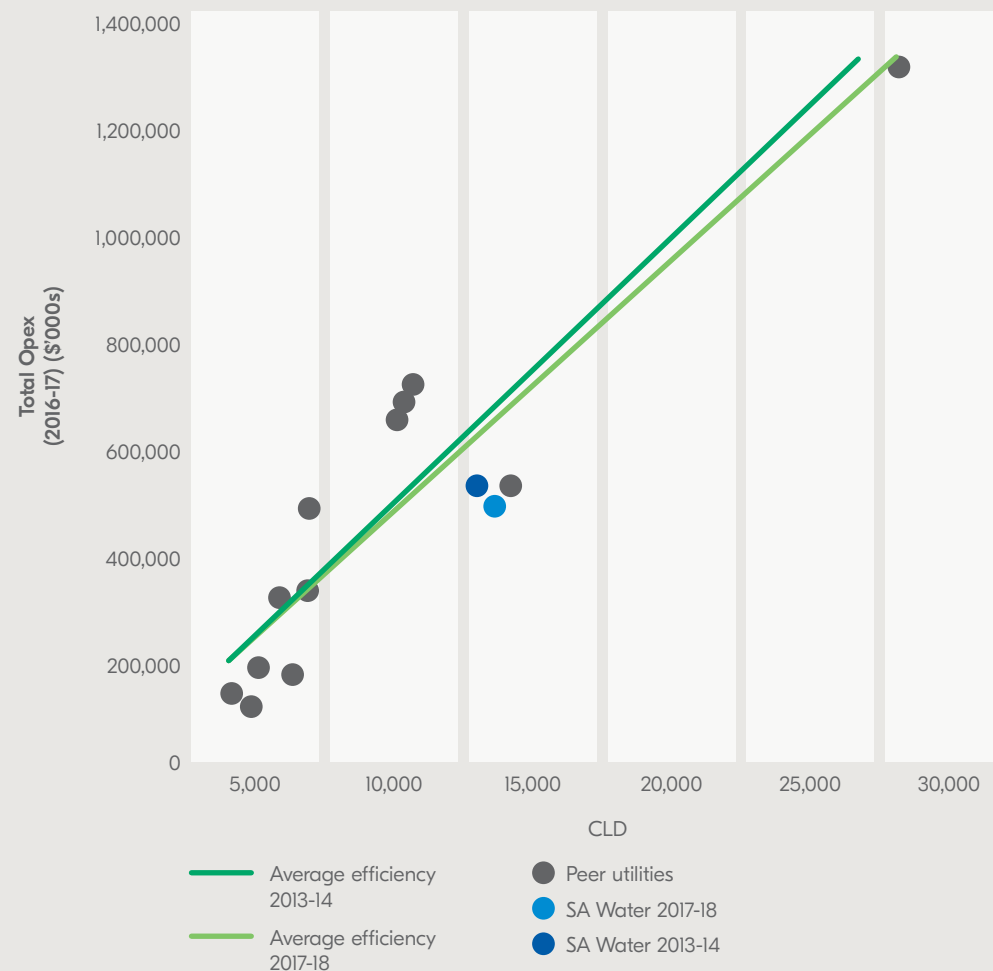
There are some fluctuations in expenditure across the years driven by changing rainfall, temperature and customer demand for water, which increases our operating costs. For example, in 2016-17 we experienced high rain and low water sales, resulting in lower expenditure and in 2018-19 we had low rainfall and high water use which increased expenditure.

To continually assess our performance and improve, our operating costs are independently benchmarked providing a comparison with our peers.

The outcome of the most recent independent benchmarking study conducted by KPMG in 2019 (see Appendix K) is set out in Figure 6, with each of the grey dots representing one of our peer utilities. KPMG used a transparent normalising technique called CLD for a better comparison with water utilities given the differences in the number of customers, size of networks and demand for service. For example, small water networks servicing large numbers of customers will normally be more efficient than large water networks servicing smaller customer numbers. KPMG based its benchmarking on publicly available data from the Bureau of Meteorology's *National performance report*. KPMG's report (Appendix K) shows we compare strongly using CLD analysis, as well as on operating costs per customer.

The benchmarking shows we are leading the efficiency frontier in Australia for total operating costs. This includes all costs to deliver water and sewerage services in South Australia and means we are performing better and with lower operating costs, than expected from our industry. It also shows that since the benchmarking was first done in 2013-14, the average efficiency for our peer group has improved, and we have outperformed our peers by improving efficiency by a greater amount.

Figure 6: Total operating costs benchmarked using CLD analysis



Source: KPMG OPEX Benchmarking report.

Comparing what we spend in operating costs per water customer (Figure 7), we are the fifth lowest cost utility out of the 13 largest utilities in Australia, and we are the lowest when looking at sewerage operating costs per customer (Figure 8). Considering we have a huge network to operate and fewer water customers than the more highly populated states, the benchmarking shows we are successfully keeping our operating costs down.

This efficient operating cost is important as it sets the starting, or base, operating costs which will form part of setting 2020-24 revenue.

Figure 7: Operating costs benchmarking using water operating costs per customer (2014-18)

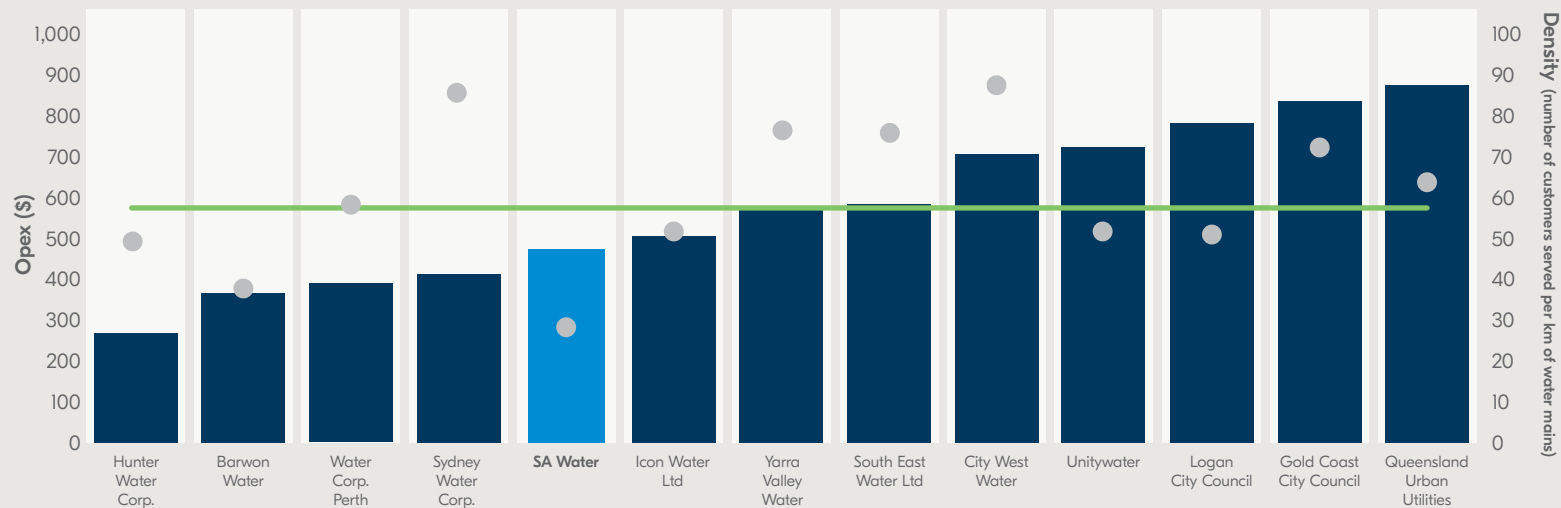
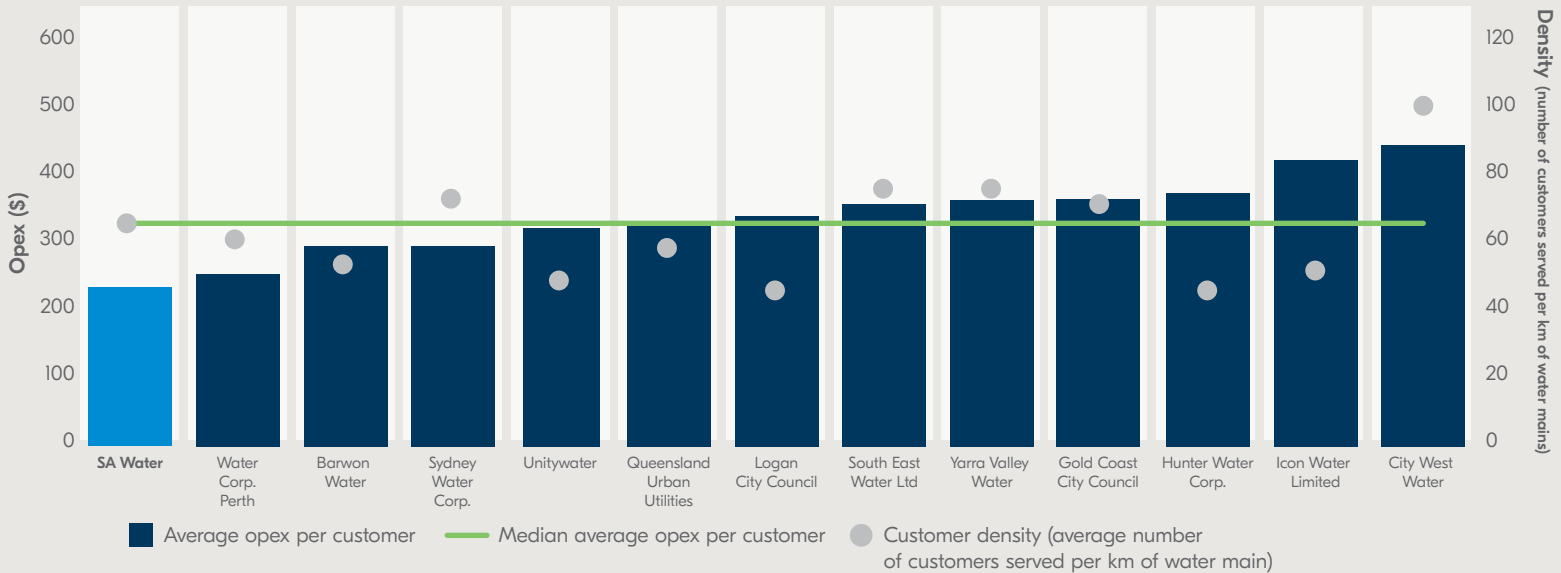


Figure 8: Operating cost benchmarking using sewerage operating cost per customer (2014-18)



Source: KPMG OPEX Benchmarking report.

4.1 Operating expenditure will decrease

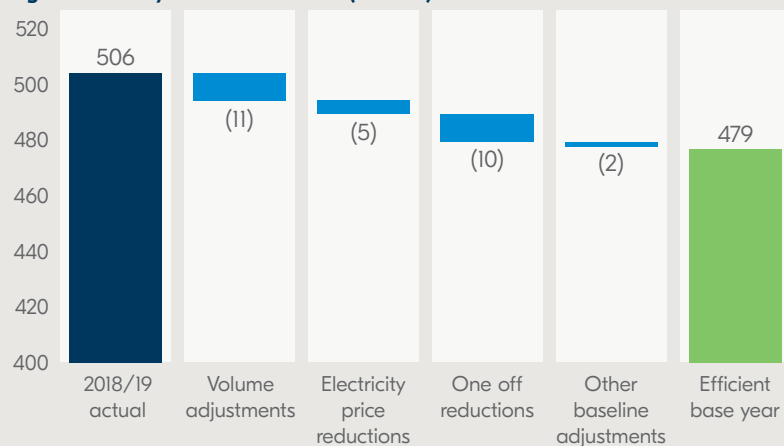
We will use \$1.9 billion to operate our business over 2020-24.

While our operating costs are among the lowest in Australia, we continue to drive efficiency through our business, looking for new ways to decrease costs.

This has resulted in a 2018-19 base year operating cost of \$479 million. This amount has been normalised to adjust for water demand volumes and other abnormal operating, climate and external factors in 2018-19. Climate and market factors resulted in higher than normal electricity volumes combined with higher market prices which led to an extra \$16 million spent on energy costs in 2018-19 compared with our forecasts.

The 2018-19 normalised base year (Figure 9) sets the foundation for our operating expenditure when planning for 2020-24. From this figure, we then add what is needed to achieve outcomes for our customers and subtract the savings we expect to make.

Figure 9: Base year normalisation (2018-19)



As the base operating cost has already been assessed as efficient, the operating expenditure for the 2020-24 regulatory period is set by considering the adjustments to this efficient base cost. Figure 10 details the movement from the base operating cost in terms of increases and savings.

Starting from the efficient base expenditure, additional costs have been allowed to ensure we can meet external regulatory obligations, maintain and improve service levels based on what is important to our customers, and a small allowance for the costs of servicing new customers. This is an average increase of \$40 million per year.

This increase in future operating costs is more than offset by the additional savings we are planning to deliver through our zero cost energy future initiative (energy savings) and planned ongoing operational efficiencies, with an average annual saving of \$56 million (12 per cent). This results in an average net operating cost saving of \$16 million per year on average over the 2020-24 regulatory period.

The proposal adjustments to operating costs are discussed in more detail below.

Expenditure for our infrastructure and operations is presented in five categories:

- 1 Meeting our external responsibilities** — these are the costs of meeting all our legal and regulatory requirements, including compliance for drinking water quality, protecting the environment, safety and many others.
- 2 Investing to sustain reliable water and sewerage services** — maintaining the level of service customers currently receive. This includes operating and maintaining current infrastructure, replacing it when necessary, providing an experienced Adelaide-based Customer Care Centre to answer phone calls with field-based crews able to attend and restore temporary service interruptions.

- 3 Improving to deliver better experiences for our customers** — where customers have told us it is important to them for improvements to be made, and they are willing to pay for them. This includes enhancements to water quality for people currently receiving a non-drinking water supply, improvements to the taste, odour and physical properties of our water and extending our community support model to customers in regional areas.
- 4 Expanding to enable positive growth and change** — these are the costs associated with servicing new water and sewerage customers or increasing the services available to existing customers.
- 5 Investing in efficiency** — these are investments that will deliver savings and reduce the cost to deliver services to our customers.

Figure 10: Average operating costs per annum 2020-24

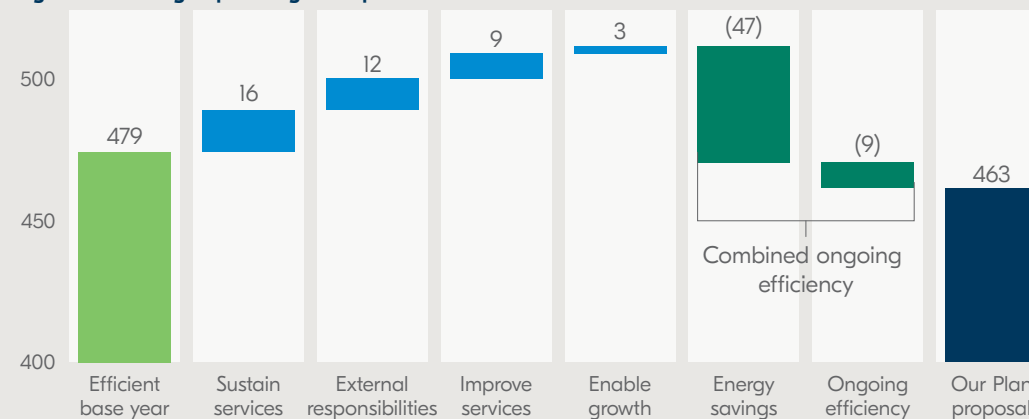


Figure 9 and 10: December 2018 dollars.



4.2 We will seek further efficiency across operating, capital and IT expenditure

Our proposal is to save an additional 0.5 per cent per year of operating costs (excluding external fees), compounding to 2 per cent by 2024. Combining this with planned procurement savings of \$5 million per year, this equates to an additional cost saving of \$37.2 million over the regulatory period.

These savings initiatives, along with other identified savings (below), provide an overall average reduction in our operating expenditure of 12 per cent or \$56 million a year on average, totalling \$224 million over the regulatory period (Table 2).

Having met an efficiency target of 5 per cent in the 2016-20 regulatory period on capital delivery, we have locked in this saving by using lower capital infrastructure delivery costs to estimate a lower unit cost for delivering infrastructure during the 2020-24 regulatory period. To continue saving on the cost of delivering capital infrastructure, we propose a further 5 per cent capital delivery efficiency target for the 2020-24 period.

This additional cost saving will be achieved through a new delivery and commercial model that draws on lessons learnt in the 2016-20 regulatory period and will drive improved customer outcomes.

Key improvements to deliver our efficiency target are:

- early on-boarding of a client organisation partner to support the planning, market approach, evaluation, award and implementation of contracts
- re-evaluation of our supplier agreements for materials, equipment and services
- workforce planning
- scope prioritisation modelling
- improved scope definitions using Front End Engineering Design services
- improved project controls
- improved systems and processes, including competitive target outturn cost development, value for money work practices, work allocation practices, performance management, and reporting and governance.

A 5 per cent capital delivery efficiency target is also proposed for IT investments and will be delivered through:

- consolidating IT systems enabling increased specialisation of internal resources and increasing efficiency
- partnering with our supply chain and establishing common goals for efficiency
- improving our supplier, vendor and contract management
- more efficient delivery methodologies for:
 - increasing and refining use of agile delivery techniques
 - using Scaled Agile Framework to support better coordination across the delivery portfolio
- increasing use of software as service solutions, reducing delivery times and costs by using cloud-hosted solutions.

Table 2: Operating costs savings from 2018-19 base year

Summary of efficiencies	2020-21 \$million real	2021-22 \$million real	2022-23 \$million real	2023-24 \$million real	Average \$million
0.5% ongoing efficiency target	(1.7)	(3.3)	(5.0)	(6.6)	(4.2)
Procurement contract savings	(5.1)	(5.1)	(5.2)	(5.2)	(5.1)
Energy savings (including revenue)*	(46.7)	(47.2)	(47.2)	(45.8)	(46.7)
Total annual savings	(53.5)	(55.7)	(57.4)	(57.6)	(56.0)
% of total annual operating costs	(12%)	(12%)	(12%)	(12%)	(12%)
Total opex less efficiencies	445	461	470	476	463

December 2018 dollars
*Zero Cost Energy Future

5.0

Investing to sustainably maintain reliable services, improve customer experience, and enable economic, social and environmental outcomes



We will invest \$1,220 million in our water infrastructure, \$534 million in our sewerage infrastructure and \$143 million in information technology over 2020-24.

- This expenditure has been grouped in five categories:
- 1 meeting our external responsibilities
 - 2 investing to sustain reliable water and sewerage services
 - 3 improving to deliver better experiences for our customers
 - 4 expanding to enable positive growth and change
 - 5 investing in efficiency.

The level of capital expenditure by these categories is summarised in Figures 11, 12, 13 and 14 and discussed in more detail below.

Our planned efficiency initiatives in water and sewerage will be carried out in 2020-21, after that our efficiency targets of 5 per cent per year for capital delivery and 0.5 per cent for operating expenditure (rising to approximately 2 per cent) will deliver further efficiency savings in the remaining years.

Figure 11: Water investment by category

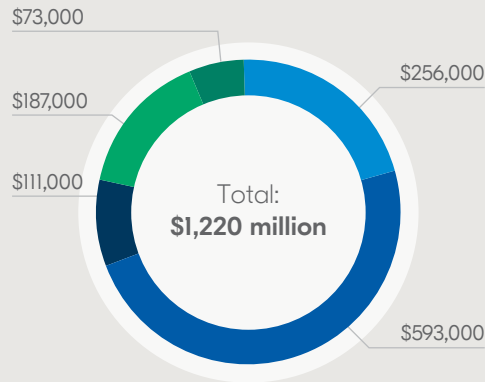


Figure 12: Sewerage investment by category

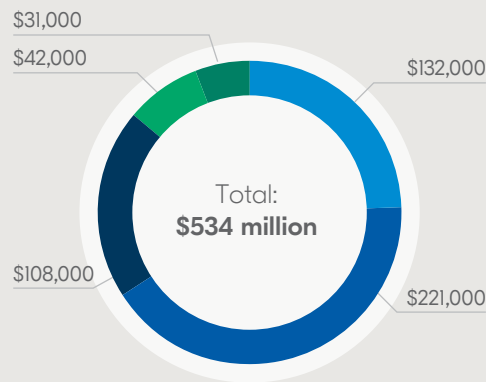


Figure 13: Information technology investment by category

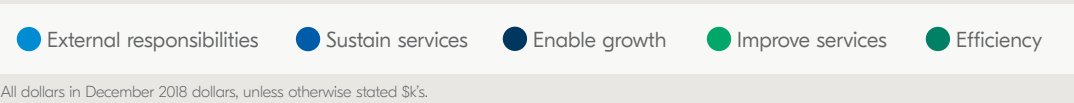
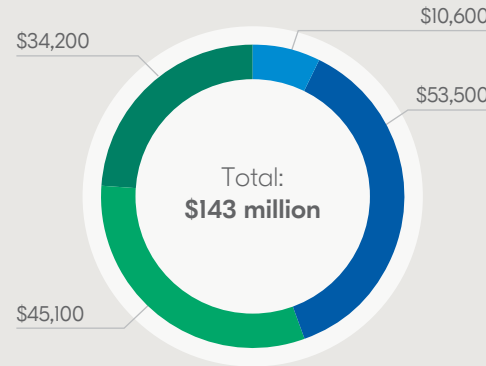
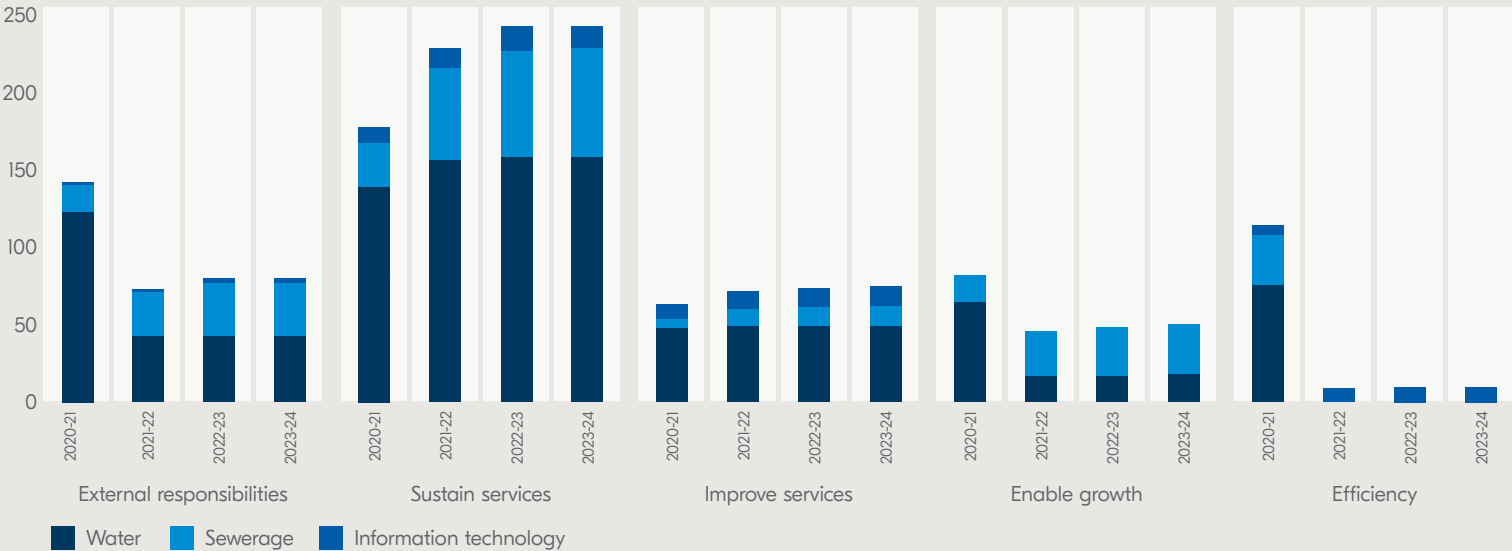


Figure 14: Capital expenditure by year and category





5.1 Meeting our external responsibilities

As a responsible water utility, we invest to meet our legal and regulatory responsibilities.

Dam safety

Dam safety guidelines set by the Australian National Committee on Large Dams will see us upgrade structures at Mount Bold, Baroota and Hindmarsh Valley. This work will further protect downstream communities by reducing the likelihood of dam structure failures from floods or earthquakes. In 2020-24 there is an investment of \$91 million in capital expenditure and \$0.4 million per year in operating expenditure. By spreading the upgrades across several regulatory periods the impact to customers' bills has been partially mitigated.

Water quality risk management

To meet our external responsibilities in 2020-24 we will invest \$29 million to manage potential water quality risks through required upgrades to tanks, treatment plants and network stations. This work will ensure we meet our responsibilities set out in the Australian Drinking Water Guidelines (2011).

Safety

The safety of our people and the community is a critical priority across a wide range of work environments, infrastructure and equipment. To ensure our people and community are safe, we assess safety risks and prioritise investment to achieve best effect. In 2020-24 we are investing \$29 million in our water infrastructure and \$32 million in our sewerage infrastructure to enable safe working environments and outcomes. To ensure we meet new requirements for asbestos removal, we are budgeting an additional \$0.7 million per year in operational costs.

Water licences

Working together with the Murray-Darling Basin Authority and Department for Environment and Water, we ensure water resources are used sustainably. This includes holding the appropriate licences and allocations to extract water from underground and surface waters such as rivers and reservoirs. We will spend \$14 million to meet these requirements.

Eyre Peninsula water security

To address water security and supply issues on the Eyre Peninsula and protect the long-term viability of groundwater resources in the Uley Basin, we will construct a seawater desalination plant. This investment also supports liveability and economic potential for the region. The capital expenditure to complete construction in the 2020-24 period is \$78 million of a total investment of \$95 million. Ongoing operating costs are budgeted at an additional \$5.1 million per year on average over the regulatory period.

Sewage treatment plant licence compliance

To manage the environmental impact of our operations, a \$22 million investment is necessary to upgrade sewage treatment plants and networks, and an additional \$1.2 million per year in operating budget to improve sewage treatment plant performance. Our responsibilities are set out in the *Environment Protection Act 1993* and in regulations and licences issued by the Environment Protection Authority (EPA).

Reliable power supply

An investment of \$8 million will increase the reliability of our sewage treatment plants through power supply redundancy. Most of this investment will be at Bolivar, which receives and treats 60 per cent of the sewage from the Adelaide metropolitan area.

Odour reduction

To reduce the impact of odour for the community we will invest \$20 million in priority areas of our sewer network. An additional \$1 million per year will be spent in operating costs to optimise this investment and/or fund operational solutions where they will be more effective than an infrastructure solution.

Environmental improvement plans

Where it makes sense to do so, we look to treat used water for reuse as recycled water, providing a valuable, climate-independent water resource that reduces discharge to the environment. Recycling water is a cost effective way to reduce our impact on the environment, while bringing additional customer benefits of water security, and supporting development and economic growth in the state. Working together with the EPA, we identify and implement environmental improvement plans as needed. The priority locations in 2020-24 are sewage treatment plants in Hahndorf, Millicent and Port Augusta East at a cost of \$11 million in capital expenditure and an additional \$0.8 million in operating expenditure. Where feasible, we will recycle water.

Northern Adelaide Irrigation Scheme

This scheme is designed to reduce discharge by redirecting 12 gigalitres of clean, treated used water to support food production. By reducing releases, we decrease the environmental impact.

In partnership with the Department of Primary Industries and Regions South Australia, an innovative irrigation area has been created and will transform the Northern Adelaide Plains into a national leader in intensive, high-tech food production. This development enables South Australia to be competitive in the export market, and drive employment growth, attracting new skills and talent to the state.



An investment of \$150 million (with \$51.6 million of this provided by Federal government funding) is being made to construct this scheme, most of which will be complete before the 2020-24 regulatory period. During 2020-24, we will invest \$24 million in capital expenditure and \$2.8 million per year in operating expenditure to complete the scheme and deliver the service to our customers. The operating expenditure will be offset by revenue generated as customers connect to this climate-independent water source.

Sewer network infiltration management

To reduce the amount of stormwater and groundwater that enters our sewer network, known as infiltration management, we will invest \$10 million in our sewer network infrastructure. This will help reduce the number of sewer overflows to the environment from our network. Improved infiltration management enables more reliable plant performance and reduces the amount discharged after treatment. As an additional benefit, we can use this extra capacity to service more customers, deferring upgrades.

Accommodation

With a large number of owned and leased facilities supporting the delivery of services to customers across the state, we are investing \$9 million to establish and maintain these to the regulated standards. This ensures the safety of our people, contractors, customers and the community.

Security

For the safety of communities and our people, and to reduce temporary service interruptions, we will invest \$11 million in physical security such as fences, CCTV and alarms. Unauthorised access to our facilities has the potential to cause damage and lead to the contamination of water supplies or the environment, risking the safety of our people, customers and the community. In addition, intruders can be exposed to hazards present at our sites.

Water industry licence saving

Offsetting the cost of these investments is a \$2.4 million per year saving in operating costs as a result of a reduction in our water industry licence fee.

Table 3: Proposed expenditure to meet external responsibilities

	CAPEX water (four years)	CAPEX sewerage (four years)	Average additional OPEX (per year)
Dam safety	\$91 million	-	\$0.4 million
Water quality risk management	\$29 million	-	-
Safety	\$29 million	\$32 million	\$0.7 million
Water licences	\$14 million	-	-
Eyre Peninsula desalination	\$78 million	-	\$5.1 million
Sewerage treatment plant performance for licence compliance	-	\$22 million	\$1.2 million
Reliable power supply	-	\$8 million	-
Odour reduction	-	\$20 million	\$1.0 million
Environmental improvement plans (including recycling)	-	\$11 million	\$0.8 million
Northern Adelaide Irrigation Scheme	-	\$24 million	\$2.8 million
Sewer network infiltration management	-	\$10 million	-
Accommodation	\$7 million	\$2 million	-
Security	\$8 million	\$3 million	\$0.1 million
Water industry licence fee reduction	-	-	(\$2.4 million)
Total	\$256 million	\$132 million	\$12.1 million
Total OPEX saving			(\$2.4 million)
Net OPEX			\$9.7 million

December 2018 dollars

5.2 Investing to sustain reliable water and sewerage services

To provide and sustain reliable services for our customers, we plan ahead and invest where needed.

Ongoing investment in our network ensures:

- delivery of safe, clean drinking water
- minimal interruptions
- environmental protection
- great service and support for our customers.

Water network management

In 2020-24, we are proposing to spend \$144 million on our water reticulation networks which is approximately the same amount as the 2016-20 regulatory period. Customers value minimal interruptions and have a small willingness to pay for an improved level of service for customers who experience multiple temporary interruptions in a 12-month period. Through innovative planning and new technologies, we are looking to achieve this outcome for customers without any bill impact. By investing in targeted upgrades, installing more valves to isolate smaller areas, and using predictive technologies and pressure management, we expect the number of customers interrupted more than three times in 12 months will decrease from the current 2,758 to <1,750 by 2024. With an innovative approach and sound planning, will aim to achieve this reduction of 37 per cent without putting pressure on customer bills.



Major pipelines and trunk mains

Major pipeline and trunk main renewals require a \$128 million investment. This work includes parts of the Morgan to Whyalla pipeline, a critical supply network for many regional communities. To ensure we are investing wisely in our pumping mains, we are investing \$0.4 million per year in operating expenditure to conduct condition investigations and refurbish valves and other ancillary assets as required.

Water network and facilities renewal

An investment of \$172 million will enable renewal of our water network and associated facilities, including pipes and connections, bores to extract groundwater, pump stations, tanks and controls.

Water treatment plant renewal

To ensure the ongoing efficient operation of water treatment plants, we will invest \$63 million on renewals including mechanical and electrical components and upgrades, as well as chemical treatment systems to ensure efficiency and performance.

SCADA

SCADA is a system used to control our assets, monitor performance and resolve issues before they affect customers. To keep this system performing, we will invest \$14 million in capital to renew and install components where needed to maintain quality, reliability and dependability of water and sewerage services. Our investments in the digital support for this system is included under integrated operations digital capability.

Third party works

At times, we bring forward investment in our infrastructure to better coordinate with other government departments or organisations, and we expect to spend \$45 million to achieve these outcomes. An example is major road construction where we may replace pipes sooner than planned or we may be required to move our infrastructure. Costs are shared with the third party.

Major and minor plant

Our people use a wide range of equipment and machinery to do their job, such as earth moving machinery, mobile pumps and testing equipment. Making sure we have the right plant and keeping it in safe working order will cost \$34 million.

Cathodic protection

Cathodic protection reduces corrosion of infrastructure in particular soil types and we will be investing \$12 million to install and upgrade where needed.

Asset inspections

An increase of \$3.2 million per year in operating costs for inspections and major maintenance on our water infrastructure will enable us to better understand asset condition and performance so we can maintain service levels and make prudent investment decisions.

Adelaide Desalination Plant

The Adelaide Desalination Plant is critical state infrastructure providing a climate independent source of water. It guarantees water security for the Adelaide metropolitan area and supports regional areas, where connected, while also providing us with significant operational flexibility to respond to water quality in Adelaide and the ability to defer capital expenditure in other network areas. The operating contract allows for a slight increase in costs during the regulatory period to replace parts that are ageing.

Sewer network and facilities renewal

An investment of \$79 million and an additional \$0.5 million per year in operating costs will renew our sewer network and associated facilities, including pipes and connections to reduce blockages and the risk of collapses, as well as structures at pump stations, siphons, access chambers, vents, covers, connections and valves.

Sewage treatment plant renewal

Sewage treatment plants will be supported with a \$115 million investment, including for mechanical and electrical components, filtration and aeration systems, concrete structures, tanks and walkways, including replacing the membranes at Glenelg.

Recycled water network renewal

Renewal of our recycled water network will be supported with \$2 million for pipes and connections, network ancillary renewals, and reliable and flexible services for customers through access to more than one water source.

Technical training

Our skilled and professional field-based teams will continue to attend and safely restore services with the same timeframes customers experience now, with additional investment of \$1 million per year to ensure our people are trained in technical disciplines and to build capabilities, particularly to support the adoption of new and emerging technologies.

Wage increases

Wage increases across Australia continue to rise at greater than 0.5 per cent above CPI and this is a long-term trend. Facing the same cost pressures as other business, we need to allow for wage increases. This will be offset by the 0.5 per cent efficiency measure we will apply to our operating cost each year so we effectively allow for wage increases aligned with CPI.

Support for customers in financial hardship

Support for residential customers experiencing short or long-term financial difficulty will continue with no additional cost impact to customers. We will continue to provide:

- a payment matching program to help customers reduce their debt
- free home audits that help find ways for customers to safely reduce their water use and costs
- referrals to independent financial counsellors to help customers over the longer term.

Our ongoing customer research program will continue to grow our understanding of what is important to our customers, and what they expect from us into the future.



Information technology operating and licencing costs

To support ongoing costs of our current information technology capital program, and to accommodate where software licencing rises above inflation, we are investing \$3.8 million. These costs are independent of proposed technology investments.

Table 4: Proposed expenditure to sustain reliable services

	CAPEX water (four years)	CAPEX sewerage (four years)	Average additional OPEX (per year)
Water network management	\$144 million	-	\$0.4 million
Major pipelines and trunk mains	\$128 million	-	\$0.4 million
Network and facility renewals	\$172 million	\$79 million	\$0.5 million
Treatment plant renewals	\$63 million	\$115 million	-
SCADA	\$11 million	\$3 million	-
Third party works	\$37 million	\$8 million	-
Major and minor plant	\$23 million	\$11 million	-
Cathodic protection	\$10 million	\$2 million	-
Other	\$5 million	-	-
Investigations for major non-pipeline assets (bores, tanks, wells)	-	-	\$3.2 million
Adelaide desalination plant contract	-	-	\$4.4 million
Recycled water network renewal	-	\$2 million	-
Technical training	-	-	\$1.0 million
Wage increases	-	-	\$2.1 million
IT operating cost uplift (current capital program)	-	-	\$3.2 million
IT licencing cost above inflation	-	-	\$0.6 million
Total expenditure	\$593 million	\$221 million	\$15.8 million

December 2018 dollars

5.3 Improving to deliver better experiences for our customers

Customers told us they would like, and are willing to pay for, a number of improvements to current services:

- the supply of drinking water quality in regional communities currently receiving non-drinking water
- improved drinking water quality in regional communities where the water is safe yet has an unpleasant taste or affects household appliances
- improved drinking water quality for the Adelaide metropolitan region
- reduced environmental impact through fewer overflows from our sewer network
- additional support for extended temporary service interruptions in regional areas.

All the expenditure in this section is supported by customer willingness to pay for the improvements.

Regional non-drinking water quality improvement

There are 19 non-drinking water systems serving 650 customer properties in regional communities. Customers use this water for irrigation, stock, washing clothes, bathing and flushing toilets, and they rely on other sources such as rainwater or groundwater for drinking water.

Our customers have a strong sense of fairness, consistently telling us they value safe, clean water for all South Australians and are prepared to pay for providing drinking water to these 650 regional properties that currently receive a non-drinking water supply.

Some of the challenges involved in providing drinking water to these areas include:

- extreme climate conditions
- unprotected water catchments or groundwater sources that have high levels of bacterial or heavy metal contamination
- remote locations
- small populations.

In determining the best solution and approach, we will work together with each affected community to understand what they want, and how this can be sustainably and cost effectively achieved. For example, installing a pipeline, treatment plant, point of use treatment or carting water.

To contain the impact of this investment on customer bills it has been staged over several regulatory periods with 340 services addressed in 2020-24 requiring an investment of \$37 million for infrastructure and an additional \$1.2 million per year in operating costs.

Metropolitan Adelaide water quality improvement

Changes to improve water quality in the Adelaide metropolitan region will be implemented, including better management of the protective network disinfection residual, decreasing disinfection by-products, and improving the taste of drinking water. This requires an upgrade at the Happy Valley Water Treatment Plant plus changes to how we disinfect drinking water across Adelaide. To achieve this, we propose to spend \$124 million for infrastructure and \$0.1 million per year in operating costs.

Regional water quality improvement

To improve the aesthetic water quality in regional supplies, we are addressing issues such as the saltiness and hardness of water, which can be unpleasant to taste and affect appliances such as washing machines and hot water systems. Upgrade plans, costing \$25 million for infrastructure and \$0.2 million in operating costs per year, include changes to our Morgan to Whyalla pipeline to augment supplies in Wilmington and Melrose, as well as changes to treatment in Quorn and Naracoorte. A prioritisation tool is used to identify target areas and look for cost effective ways to improve the quality of the water suppliers in the regions.

Reduce environmental overflows

An investment of \$31 million for infrastructure and \$2.2 million in operating costs per year will be made to reduce the effect of sewer overflows on the environment by:

- renewing and upgrading sewage pump stations
- ensuring critical locations have backup power to operate in the event of blackout
- modelling our sewer network and installing sensors through our smart sewerage network program to ensure our efforts are targeted to the highest risk areas
- cleaning more sewer mains to prevent overflows caused by blockages.

Expanding recycled water

Our customers value water reuse so we are investing \$11 million in capital and budgeting \$0.1 million in additional operating costs to expand recycled water available through the Glenelg to Adelaide Pipeline scheme. Working in partnership with local councils, this investment will contribute to improved liveability and we will investigate ways to further expand our production of recycled water from 28 per cent to 50 per cent.

Regional community support

Community support will be expanded to regional areas providing help and advice for customers experiencing temporary service interruptions or property damage. This expands the program established in 2016 to increase support for metropolitan customers, and we can deliver this improved customer service for less than customers said they were willing to pay.

Our new regional community support teams will be based in central locations, ensuring they have the right skills and resources to provide timely assistance across the state as needed. Due to the area the team will cover, the level of service may be different to that received in metropolitan areas for example, drinking water casks will be delivered to a central location for collection rather than delivered door to door as they are in the metropolitan area. We propose to spend \$85,000 in capital for purchasing trailers (included in our major and minor plant program) and an additional \$0.7 million in operating costs per year.



GIS data quality improvement

To improve our ability to accurately assess customers affected by planned and unplanned asset sustainment and improvement works, we will invest to audit and align data in our Geospatial Information System (GIS). This system has information including the location of customer meters and the water main they are connected to, and investment of \$0.1 million per year will enable improved communication with customers affected by temporary service interruptions, whether they are planned or unplanned.

Reconciliation Action Plan

To lead the way in reconciliation, we plan to increase the amount we spend on Aboriginal support services by \$0.3 million per year. This will include two dedicated positions for Aboriginal university graduates, additional engagement with Aboriginal communities and a permanent, ongoing role for our Reconciliation Action Plan Coordinator.

Table 5: Proposed expenditure to improve services

	CAPEX water (four years)	CAPEX sewerage (four years)	Average additional OPEX (per year)
Regional non-drinking water quality improvement	\$37 million	-	\$1.2 million
Metropolitan water quality improvement	\$124 million	-	\$0.1 million
Regional water quality improvements	\$25 million	-	\$0.2 million
Reduce environmental overflows	-	\$31 million	\$2.2 million
Recycled water expansion	-	\$11 million	\$0.1 million
Regional community support	-	-	\$0.7 million
GIS data quality improvement	-	-	\$0.1 million
Reconciliation Action Plan	-	-	\$0.3 million
Total	\$187 million	\$42 million	\$4.9 million

December 2018 dollars

5.4 Expanding to enable positive growth and change

As our state grows and develops, we plan for the availability of future services and ensure we have the capacity to support new customers and the pursuit of new business opportunities.

Customers value our work to enable growth in South Australia and we plan and make infrastructure decisions with this in mind.

The cost to expand our networks, provision of services to new areas and upgrades to increase capacity is offset in part by contributions from new customers who connect, or existing customers looking for increased capacity, as well as the revenue collected once these customers are connected, or the service is expanded. As assets are renewed and upgraded, we look for opportunities to meet customer expectations as an enabler of growth.

Network growth

To enable more customers to connect to our sewerage services, and ensure existing pipes and pump stations can manage increased flow, we are investing \$70 million to grow the network, and have budgeted \$1 million a year for operating costs.

To deliver safe, clean drinking water to new customers and ensure we can reliably supply our existing customers, we are investing \$65 million in growing our water network. This includes upgrades to our major pipelines that provide water across the state and in specific locations needing more water, such as the Barossa Valley, Murray Bridge, Mount Gambier, Middleton, Goolwa and Port Elliot.

Sewage treatment plant capacity

An investment of \$38 million will increase the amount of sewage our treatment plants can process, including an increase to the amount that the inlet to Bolivar can manage. This prepares us to support population and business growth.

Upper Spencer Gulf capacity upgrade

To support the substantial economic growth expected in the Upper Spencer Gulf and wider northern region, we need to ensure we have enough water to meet emerging demands. Currently the best option is to increase the capacity of the Morgan to Whyalla pipeline by installing booster stations and additional water storage. This complements existing maintenance investment proposed for the pipeline detailed in chapter 5.2. At a cost \$23 million for infrastructure and \$1.6 million per year in operating costs, this investment is dependent on customer contracts being in place. Our position and the investment amount needed will be revised once negotiations have progressed. As with other growth projects, these costs will be offset by contributions from new customers for the capital upgrades and additional revenue once the new capacity is operational.



Kangaroo Island desalination plant

To support anticipated growth for Kangaroo Island we propose to bring forward planned investments aimed at achieving greater water security aligned to the Kangaroo Island Long-Term Plan. The plan was developed in 2009 and updated in 2018 following extensive engagement with customers as we worked together to explore a range of options.

Based on planned development on the island and the resultant increase in water demand, there is a need to invest \$26.7 million to build a desalination plant. Of this we expect to invest \$23 million during 2020-24 and an additional \$0.8 million in operating expenditure. The timing of this investment is dependent on having customer contracts in place. This will be updated as contracts are finalised. As with other growth projects, these costs will be offset by contributions from new customers for the capital upgrades and additional revenue once operational.

Table 6: Proposed expenditure to enable growth

	CAPEX water (four years)	CAPEX sewerage (four years)	Average additional OPEX (per year)
Network growth	\$65 million	\$70 million	\$1.0 million
Sewage treatment plant capacity	-	\$38 million	-
Upper Spencer Gulf capacity upgrade	\$23 million	-	\$1.6 million
Kangaroo Island desalination	\$23 million	-	\$0.8 million
Total	\$111 million	\$108 million	\$3.4 million

December 2018 dollars

5.5 Investing in efficiency

Several initiatives will reduce the cost of our operations or stabilise our costs. These are in addition to our 5 per cent efficiency target for capital delivery and 0.5 per cent per year (approximately 2 per cent by 2024) efficiency target for operating expenditure.

Through continual improvement, our people are always looking to improve efficiency. An ongoing program encourages innovation, seeks ideas and supports implementation to improve the services we offer and how we deliver for our customers.

Procurement contract savings

To provide efficiencies and savings to our customers we have elected to undertake a different contracting mechanism with some of our suppliers, which results in an average saving of \$5.1 million per year and a total saving of \$20.5 million over the next regulatory period.

Zero cost energy future (energy savings)

Treating and pumping water requires a lot of energy and represents a significant ongoing cost. Our existing investment to achieve a zero cost energy future is designed to control these costs and work towards a \$0 net energy cost future. This saving of approximately \$47 million per year on energy – subject to electricity market prices and use – has been built into our budgets for 2020-24 and beyond. We are completing implementation in 2020-24 as we invest the remaining \$104 million of the total \$379 million project cost.

This approach further protects our customers through energy price stability in a market that has constant and dramatic electricity market price fluctuations. Our investment is part of an overall approach to energy management which has five components:

- 1 demand scheduling – to control when we use energy, reducing when electricity market prices are high and increasing when electricity market prices are low
- 2 energy efficiency – to reduce the amount of energy we use to deliver services to our customers
- 3 energy storage – storing energy for our own use or to sell to the grid when prices are high, avoiding costs and generating revenue
- 4 own generation – generating electricity for use in our operations or to sell to the grid, for example from solar panels and biogas engines
- 5 energy market – participation and making operational decisions that will save costs, including network charges.

Table 7: Investing in efficiency

	CAPEX water (four years)	CAPEX sewerage (four years)	Average OPEX saving (per year)
Procurement contract savings	-	-	(\$5.1 million)
Zero cost energy future (energy savings)	\$73 million	\$31 million	(\$46.7 million)
Total	\$73 million	\$31 million	(\$51.8 million)

December 2018 dollars



5.6 Improving our digital services

Digital capabilities are a key enabler to achieve efficiencies and meet customer expectations now and into the future.

Our digital investment includes work to meet mandatory requirements as well as delivering improved services and efficiencies. This investment has been grouped into seven themes.



1 Digital presence

(capital expenditure \$26.3 million, operating expenditure \$0.4 million a year)

With a single view of our customers using our Customer Relationship Management system we will be able to provide more relevant, timely and accurate information during temporary service interruptions and improve our ability to resolve issues the first time customers contact us, one of our new service standards.

Investment in our existing digital channels will continue, and we will co-design new channels with customers. By working together and responding to customer preferences, we will provide more intuitive and diverse services, increased accessibility, more choice for customers to self-serve, and our people will be enabled to provide personalised service with improved management of complex interactions.

2 Smart infrastructure

(capital expenditure \$6.2 million, operating expenditure \$0.3 million a year)

To enable data-driven decisions, we propose to install sensors on our critical infrastructure and invest in data analytics platforms. This will provide a clear picture of the condition of our infrastructure so we can predict, detect and respond quickly to issues in the network. This will be paired with automated dispatch and shut downs for our maintenance teams which will reduce the length of temporary service interruptions for customers.

3 Integrated operations

(capital expenditure \$16.3 million, operating expenditure \$1.2 million a year)

By centralising our monitoring and control functions, implementing new tools and increasing automation, we will improve service reliability, reduce costs, minimise temporary service interruptions and reduce odour impacts for the community.

For example, tools are being implemented to collect and analyse customer complaints about services including the taste of drinking water and odour from our sewer operations which will provide us with information to identify root causes and then find the most cost effective solution to fix the problem. Our response times to issues will be improved by combining the analysis with automated alerts.

Treatment costs will be reduced and the taste of our water improved by implementing online analysis of water quality as it goes into our treatment plants and using control systems that automatically adjust our chemical dosing.

4 Workforce collaboration and mobility

(capital expenditure \$13.8 million, operating expenditure \$0.9 million a year)

This investment will enable our people to be more efficient, technology-enabled and better connected in their day to day work and with our customers. This supports our ability to respond quickly when needed, reduces safety risks and the cost of our operations, while improving our culture and customer service.

Customers will benefit from improved service through the efficient allocation of work to the nearest and best equipped people, ensuring relevant safety information is available, and improved management of hazards and incidents in the field.

Investing in enterprise mobility will improve efficiency, productivity and response times, and optimise our accommodation. Mobility enables our people to do their work from anywhere, on any device, giving them improved information about what facilities are available to them and access to administrative tools bringing the retrieval, capture and analysis of data to the field.

5 Data intelligence and integration

(capital expenditure \$9.3 million, operating expenditure \$0.9 million a year)

The way we generate, record, retrieve, share and analyse data about our business and our customers is a key enabler for making sound, evidence-based decisions. This will help us improve service, reliability and cost, maximise the benefits from other digital capability investments, and meet our responsibilities for data management and security.

6 Corporate systems

(capital expenditure \$13.8 million, operating expenditure \$0.7 million a year)

Our corporate IT systems are important for managing day to day operations, helping our business run smoothly. The investment approach is to improve efficiency, avoid cost and meet our regulated responsibilities.

There are changes to rules set by the Australian Energy Market Operator and we are required to upgrade our energy systems. Participating in the national electricity market ensures we can continue to save costs by operating our network to take advantage of low electricity prices and reducing activity when the electricity prices are high. This investment plays a key role in delivering our zero cost energy future.

Systems we use for strategic sourcing in procurement will be improved to make them more resilient and enable better value from our procurement activities and management of awarded contracts.

The flexibility of our billing system will be increased to provide tailored levels of services that our customers expect, and to support customer focused changes over time. Improvements will be made in stages, targeting separate functions of our billing system, rather than replacing the entire system at once. This investment will make our system more customer-centric, for example improving the ease of managing bills across multiple properties.

7 IT risk management

(capital expenditure \$57.8 million, operating expenditure \$1.2 million a year)

Our day to day operations are supported by approximately 120 business systems and nearly 700 applications. An investment in IT risk management will ensure reliability of these assets in a cost effective manner so we can deliver the services our customers value while also meeting our legal and regulatory requirements.

Included in our asset refresh program is ongoing costs for software upgrades, replacing devices when needed plus ensuring our systems and hardware are working properly.

Cyber security is increasingly important and we are investing to keep pace with emerging cyber threats and ensure we have controls in place to reduce the risk of security breaches and disruptions to our operations. This includes our ability to ensure data privacy for our customers.

Summary

Overall, we are proposing to marginally increase spending on information technology services in 2020-24 compared with 2016-20. This approach is aligned with our peer utilities and other industries. Across most industries there is increasing investment in technology to improve customer service and business operations. This expenditure will also support our ability to meet our ongoing operating efficiency targets.

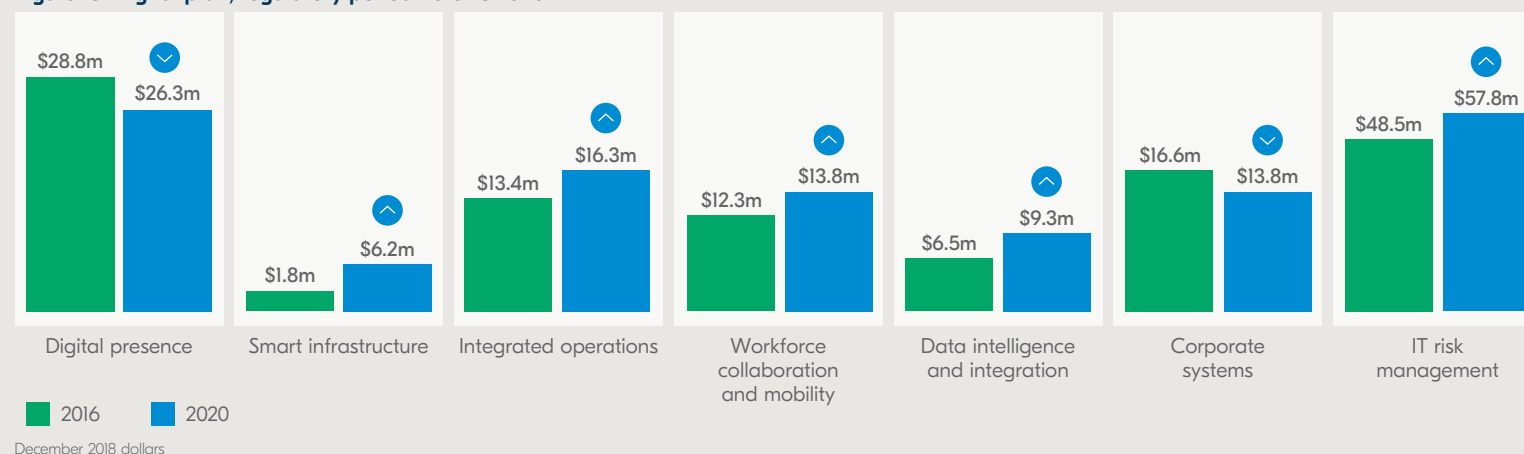
KPMG provided an independent review of our digital plan (Appendices L and M) which confirms we are aligned with our peers and targeting the right outcomes, at the right costs.

Table 8: Summary IT capital and operating expenditure

	CAPEX (four years)	Average additional OPEX (per year)
Digital presence	\$26.3 million	\$0.4 million
Smart infrastructure	\$6.2 million	\$0.3 million
Integrated operations	\$16.3 million	\$1.2 million
Workforce collaboration and mobility	\$13.8 million	\$0.9 million
Data intelligence and integration	\$9.3 million	\$0.9 million
Corporate systems	\$13.8 million	\$0.7 million
IT risk management	\$57.8 million	\$1.2 million
Total expenditure	\$143 million	\$5.6 million

December 2018 dollars

Figure 15: Digital plan, regulatory period 2016 vs 2020



6.0

Our Plan will help keep
prices low and stable



6.1 Customers will see a price decrease

In developing Our Plan we have sought a balance between the services we provide and the price impact for our customers.

Our proposal will deliver an average water price reduction of 1.8 per cent from July 2020 and an average sewerage price reduction of 3.2 per cent. This is equivalent to a real decrease (that is the decrease you would receive without the impacts of inflation) of 3.3 per cent for water and 4.7 per cent for sewerage.¹

By passing on price reductions early in the regulatory period, our customers will receive the lowest and most stable prices possible with price changes in remaining years forecast to be in line with inflation (subject to rounding).

As shown in Table 9 and Figure 16, in real terms prices have reduced by 18 per cent for water and 22 per cent for sewerage between 2013-14 and 2020-21. This means in real terms prices are lower than they were at the beginning of economic regulation in 2013.

Our tariff structure has evolved over time in response to a broad range of environmental, social, financial and economic policy considerations. A decision for the South Australian government is whether to apply price changes evenly across existing tariff structures, or in a targeted way to stimulate statewide economic development, balance short and long-term affordability outcomes, and provide simpler price structures for customers.

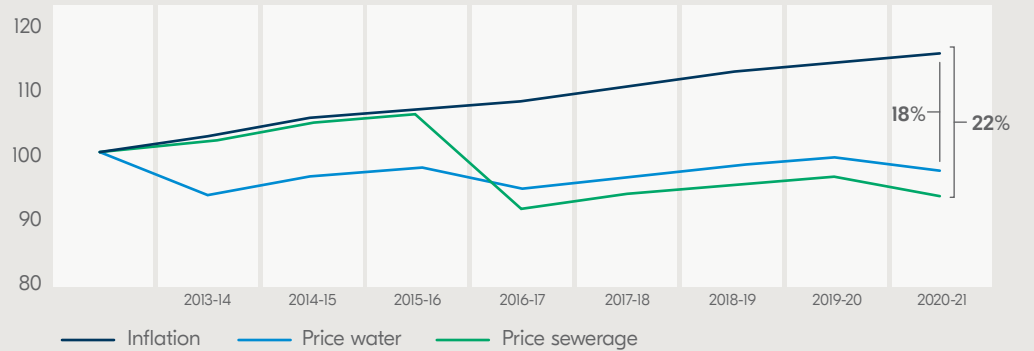
The government continues to consider its preference for passing price reductions onto tariffs in a way that balances various priorities. This choice, along with ESCOSA's final determination, the impact of financial market movements, and implementation of recommendations from the pricing inquiry may alter the indicative bill impacts presented within Our Plan.

Table 9: Change in nominal prices over time*

	2020-24 regulatory period				Change over regulatory period*	Change since the start of economic regulation to 2020-21**
	2020-21	2021-22	2022-23	2023-24		
Inflation	1.5%	1.5%	1.5%	1.5%	6.1%	15.8%
Water price	(1.8%)	1.5%	1.5%	1.5%	2.7%	(2.4%)
Sewerage price	(3.2%)	1.5%	1.5%	1.5%	1.2%	(6.7%)

* Based on forecast inflation of 1.5 per cent consistent with regulatory rate of return.
** Based on actual inflation for 2013-14 to 2019-20 (March to March, ABS, CPl: All groups – weighted average eight capital cities, 6401.0).

Figure 16: Price change over time



¹ The bill impacts detailed here are indicative and final figures will be provided following ESCOSA's assessment of our detailed expenditure proposals, and when the final rate of inflation and inputs to the rate of return are available. In addition, South Australia's Treasurer is yet to determine how recommendations of the Independent Pricing Inquiry will be implemented.

To demonstrate changes for our customers from the proposal in Our Plan, we have assumed tariff structures remain unchanged and that revenue reductions are applied against the second and third tier water use tariffs and evenly across property-based sewerage charges. Based on the proposal in Our Plan, this would see the second and third water use tariffs reduce by 13.6 cents per kilolitre and property-based sewerage charges decrease by 3.9 per cent.

Bill impacts vary across customers depending on water use and property value. The average residential customer in metropolitan Adelaide will, on average, save \$26 per year on their combined water and sewerage bill compared with their 2019-20 combined bill. Impacts for average business and country customers are included in the Table 10.

Most of the revenue received through customer bills is invested in providing water and sewerage services as detailed in Figure 17. The government receives marginal returns.

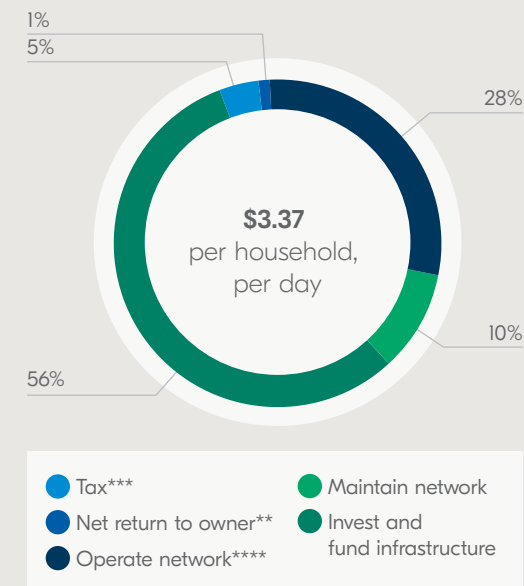
Table 10: Indicative combined bills for average customers*

Region	Customer characteristics		Combined bill		
	Water use	Property value	2019-20	2020-21	Change
Average residential**					
Metropolitan	180 kL	\$467,000	\$1,258	\$1,232	(\$26)
Country	180 kL	\$251,000	\$1,169	\$1,146	(\$23)
Average non-residential**					
Metropolitan	1,680 kL	\$1,976,000	\$8,492	\$8,167	(\$325)
Country	1,680 kL	\$966,000	\$7,831	\$7,532	(\$299)
Average commercial**					
Metropolitan	409 kL	\$1,692,000	\$4,687	\$4,549	(\$138)
Country	409 kL	\$525,000	\$2,740	\$2,647	(\$94)

* Based on 2018-19 property values from the Valuer General.

** Residential properties include houses, maisonettes, home units, retirement homes, flats and strata/community title residences and vacant land. Commercial properties include retail trade and wholesale trade. Retail trade includes shops, shopping centres, department stores and general stores. Wholesale trade includes distributors and warehouses where goods are purchased and stored in large quantities, then on-sold to retailers or sellers. Non-residential properties are properties not defined as either residential or commercial land.

Figure 17: What customer bills pay for, combined water and sewerage



* Based on 2020-21 bill of an average residential metropolitan customer using 180 kL of water per year and property valued at \$467,000 (nominal \$).

** Net return to owner is net of Community Service Obligation payments from the South Australian government.

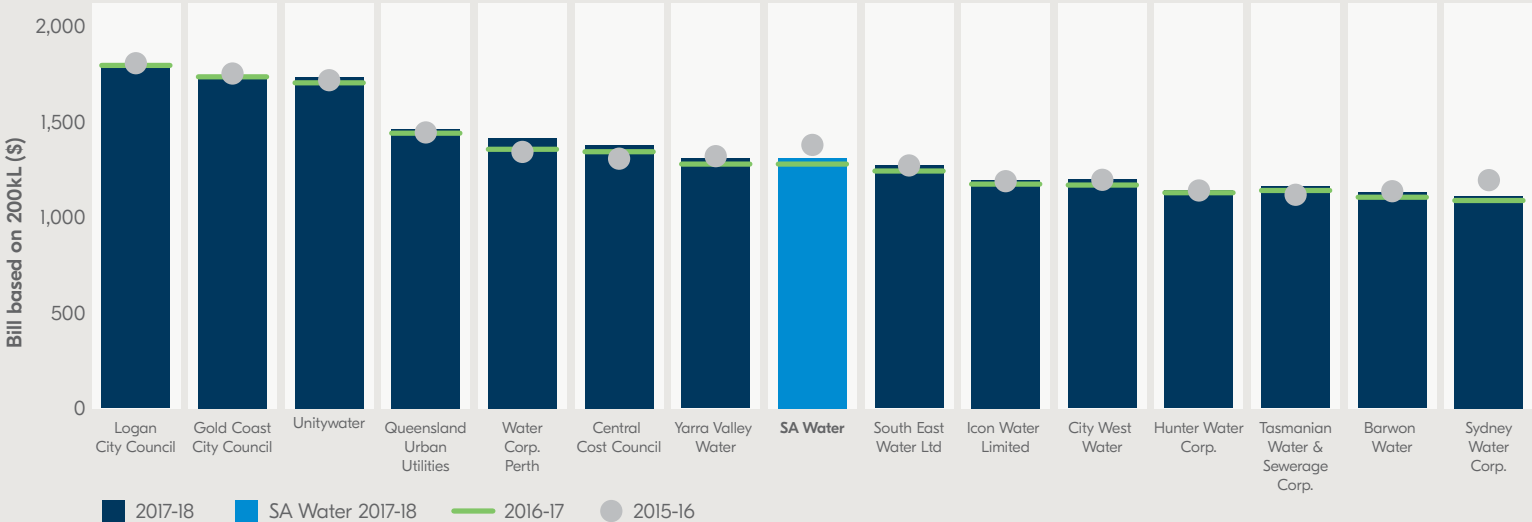
*** Tax is based on accounting values as paid to the South Australian Government as a tax equivalent.

**** Operate network is net of recycled water revenue.

Using the latest publicly available data for comparison, in 2017-18 our combined water and sewerage bill was around the average of our peer group (see Figures 18 and 19).

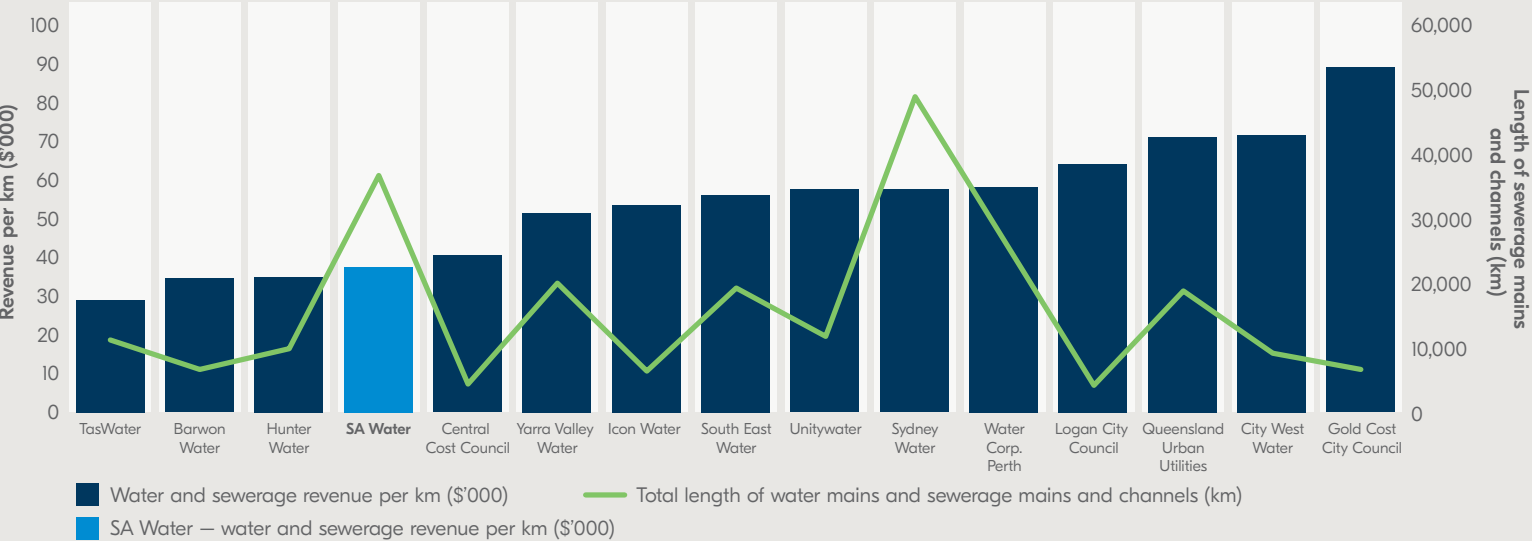
More benchmarking on water and sewerage bills is provided in Appendix K to demonstrate how we compare with our peers.

Figure 18: Comparison of combined water and sewerage bill with peer utilities



Source: Bureau of Meteorology's National performance report

Figure 19: Water and sewerage revenue per kilometre



Source: Bureau of Meteorology's National performance report

6.2 The revenue required to deliver Our Plan

ESCOSA uses a building block method to set the maximum allowable revenue we can recover through customer bills in exchange for the services we provide. Separate maximum allowable revenues are set for water and sewerage services.

In simple terms, into this model goes:

- the capital and operating expenditure set out above
- a calculation for a return on the investments made in previous years as customers do not pay for water and sewerage assets all in one go, a small portion of the cost is paid over every year of their useful life which can be up to 100 years for some of our assets
- an allowance for depreciation of assets, pass-throughs (the costs for events unforeseen at the last regulatory determination) and tax
- any payments by government to us to achieve certain outcomes for our customers – known as Community Service Obligations these are subtracted because this money is funded by government rather than customer bills.

These technical inputs are detailed in Appendix D.

The regulatory rate of return we have used is 3.59 per cent (using June 2019 inputs), post tax real, based on a slight change in methodology from that used for the 2016-20 regulatory period.

The methodology used previously is highly susceptible to fluctuations in market parameters and therefore does not meet one of the core objectives of the *Essential Services Commission Act 2002* of maintaining the financial viability of regulated entities and the incentive for long-term investment.

Using this methodology and applying market data as at June 2019, we forecast a rate of return of 2.52 per cent (post-tax real). This rate of return does not meet financial viability requirements, nor does it meet the other criteria noted in Appendix E, Figure 1.

We have proposed amendments to the current methodology and based on our proposed method, we forecast a rate of return of 3.59 per cent (post-tax real and applying market data as at June 2019). This better aligns with interstate water utility peers and provides a return that maintains our financial viability at a minimum level of acceptance.

Using all the required inputs, which are explained in more detail in Appendix D, the allowable revenue calculation for water and sewerage is shown in Table 11.

For water, the allowable revenue is 2.2 per cent lower on average than the current regulatory period and 0.5 per cent lower for sewerage.

The lower allowable revenues will result in lower water and sewerage prices and lower bills for customers.

We propose to pass the full saving through to our customers from July 2020 and then keep prices stable for the following three years, rising only with inflation and aligning with customer priorities around sustainable low and stable prices.

Table 11: Proposed allowable revenue third regulatory period (December 2018 real \$'million)

	Water				Sewerage			
	2020-21	2021-22	2022-23	2023-24	2020-21	2021-22	2022-23	2023-24
Return on asset*	348.1	332.9	319.0	303.8	164.3	154.6	148.4	141.9
Regulatory depreciation**	200.2	208.3	214.1	219.9	110.9	114.4	118.2	122.3
Operating expenditure	320.5	333.5	338.9	340.1	124.3	127.9	131.4	135.6
Tax	19.6	19.1	19.2	19.8	8.0	7.0	6.5	6.4
Working capital***	1.4	1.3	1.3	1.2	0.5	0.5	0.5	0.5
Community service obligations	(74.9)	(74.2)	(73.4)	(72.6)	(51.7)	(51.4)	(51.0)	(50.8)
Other revenue	-	-	-	-	(9.0)	(8.5)	(8.7)	(9.9)
Regulatory adjustments	(4.5)	(4.5)	(4.5)	(4.5)	-	-	-	-
Allowable revenue	810.4	816.4	814.6	807.7	347.3	344.5	345.3	346.0
Smoothed***	807.0	810.6	814.3	818.0	341.1	344.3	347.5	350.8
Smoothed total				3250.0				1,383.8

* Calculated on mid-year asset values.

** Discounted to mid-year values.

*** Calculated as a net present value. Smoothed allowable revenue increases slightly each year in line with growth in demand and customer numbers.

7.0

ESCOSA reviews Our Plan to ensure our expenditure is prudent and efficient



ESCOSA will review Our Plan to ensure it is prudent and efficient, and in the best interests of our customers.

To support their review, ESCOSA will publish Our Plan and supporting materials on their website for public consultation, ahead of making a draft decision in February 2020, and a final opportunity for comments from us, our customers and our stakeholders before ESCOSA's final determination is published in May 2020.

We will then set prices in line with the determination.

From July 2020 we will begin to deliver on our commitments and we will keep you up to date on our progress.

Our ongoing customer engagement and research will continue to inform our operations and planning as we look further to the future and refine our 2020-28 business plan.

Figure 20: Next steps



