15 April 2020

Adam Wilson
Chief Executive Officer
Essential Services Commission of South Australia
GPO Box 2605
Adelaide SA 5001

Dear Adam

SA Water Regulatory Determination 2020 – Draft Determination: Statement of reasons

I refer to the draft SA Water Regulatory Determination 2020 and, in particular, to the Draft Determination: Statement of Reasons published by the Commission on 4 March 2020.

We thank the Commission for the opportunity to make a submission as part of its 2020 regulatory process, and enclose the attached report setting out SA Water's response to the matters raised in the Draft Determination.

We also have appreciated the Commission's willingness to engage with SA Water in a range of working groups and meetings over the last six weeks to clarify aspects of the determination and to seek to align our understanding. As there are areas where we have yet to form a common view, we welcome this engagement continuing.

I would be pleased to discuss our response with you and, should you require additional information, please do not hesitate to contact SA Water's Senior Manager Regulation and Planning, Richard Cawley.

Yours sincerely

David Ryan
Chief Executive

Regulatory determination 2020

SA Water response

15 April 2020

Government of South Australia

Executive summary

We thank the Essential Services Commission of South Australia (the Commission) for this opportunity to make a submission as part of the 2020 regulatory determination process.

This report sets out SA Water's response to the Draft Determination released on 4 March 2020.

It also considers the impacts of the global COVID-19 pandemic and SA Water's role in responding to this unprecedented situation. SA Water is required to maintain an essential service, support customers experiencing hardship and support economic recovery for the state.

In Our Plan 2020 (Our Plan) SA Water put forward a plan that it is confident provides the best balance between delivering the service levels customers said they want while still delivering low and stable prices, noting that due to market movements prices would be even lower today than at the time Our Plan was submitted for review.

SA Water notes the Commission supports a substantive proportion of Our Plan. However, there are still a number of important elements where SA Water and the Commission do not agree. This response seeks to address these differences to ensure a better balance between low and stable prices, and the services SA Water's customers expect.

The Draft Determination has negative impacts for customers, services and South Australia.

The Draft Determination delivers a revenue reduction for SA Water of $140 million (18 per cent) per year for water and $54 million (16 per cent) for sewerage services, compared to Our Plan (in present value terms).

It reduces SA Water's proposed operating expenditure by $60 million (12 per cent) per year (excluding Zero Cost Energy Future), to an average of $452 million per year. This is $29 million per year lower than the allowance set by the Commission in 2016.

Capital expenditure has been reduced by $269 million (excluding Zero Cost Energy Future and capital contributions) from $1,740 million to $1,472 million.

Table 1 Revenue cap per year, real $2018/19 $m

	Draft Determination	Our Plan	RD16	Variance to Our Plan	Variance to RD16
Water	622	762	758	-140 (-18%)	-136 (-18%)
Sewer	276	331	317	-54 (-16%)	-41 (-13%)
Total	**898**	**1,092**	**1,075**	**-194 (-18%)**	**-177 (-16%)**

Table 2 Operating expenditure per year, real $2018/19 $m

	Draft Determination	Our Plan (without ZCEF)	RD16	Variance to Our Plan	Variance to RD16
Water	320	367	347	-47 (-13%)	-27 (-8%)
Sewerage	131	145	132	-14 (-10%)	-1 (-1%)
Total	**451**	**512**	**479**	**-60 (-12%)**	**-29 (-6%)**

Table 3 Capital expenditure 2020 – 2024 real $2018/19 $m

	Draft Determination	Our Plan (without ZCEF)	RD16	Variance to Our Plan	Variance to RD16
Water	1,024	1,204	786	-181 (-15%)	237 (30%)
Sewerage	448	536	502	-88 (-16%)	-54 (-11%)
Total	**1,472**	**1,740**	**1,288**	**-269 (-15%)**	**183 (14%)**

*Net of capital contributions

The reductions as they stand will significantly impact customer service levels, SA Water's cash flows and financial viability.

The Zero Cost Energy Future (ZCEF) initiative costs and benefits have been ringfenced to non-regulated business by the Commission, which removes approximately $20 million per annum of savings for customers. Additionally, the allowance for electricity has been reduced by $15 million per year.

The rate of return has been calculated to generate an average of 2.36 per cent per annum in comparison to the 3.59 per cent included in Our Plan (post-tax real). When contributed/gifted assets are excluded, SA Water's regulatory profit is negative.

Some of these negative impacts are created by relying on incorrect reports and these need to be corrected.

The Draft Determination relies on the recommendations of the Commission's consultant Cardno in the review of capital and operating expenditure. There are both errors and misunderstandings of facts within the Cardno report which negatively impact the Draft Determination. These include:

- Inaccurate adjustments to the starting, or base level, of operating expenditure
- Double counting of efficiencies for both capital and operating expenditure
- Inaccurate or insufficient justification for the removal of capital and operating expenditure
- Decisions which are out of line with established regulatory practice across Australia.

The Commission should reinstate or adjust expenditure allowances as detailed in Table 4 and Table 5 below. These issues are addressed throughout this report.

Table 4 Proposed adjustment to Draft Determination for capital projects

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination	Adjustment required
Wastewater Mains Renewal	$67.6 million	$45.1 million	$22.5 million
GAP Recycled Water Investment	$10 million	$0 ($10 million on contingent projects list)	$10 million
Happy Valley Water Quality Slow Down of Program	$122.2 million	$80.8 million	Timing adjustments to be made plus Happy

			Valley Chlorine Tank allowance may be required
Regional Towns Water Quality	$24.8 million	$0 million (contingent project)	$24.8 million
Regional Non-Potable Water Supplies	$37.7 million	$0 million (contingent project)	$37.7million
Kangaroo Island Desalination Plant	$22.8 million (plus $0.8 million pa opex)	$0 million (contingent project)	$22.8 million (plus $0.8 million pa opex)
Upper Spencer Gulf Augmentation	$22.8 million (plus $1.6 million pa opex)	$0 million (contingent project)	$22.8 million (plus $1.6 million pa opex)
Reticulated Water Mains Management (mains replacement)	$112 million	$88 million	$24 million
Reticulated Water Mains Management (Smart Network, Pressure Management and Isolation Valves)	$32.2 million	$19 million	$13.2 million
Water Tank Structures	$19.7 million	$13.9 million	$5.8 million
IT asset refresh and cyber security	$57.8 million	$48.2 million	$9.6 million
Efficiency targets	5 per cent of total capex already applied to figures submitted	-$54.1 million on top of capex program already reduced by 5 per cent	$54.1 million
TOTAL	**$529.6 million**	**$240.9 million**	**$247.3 million**

*Excluded adjustment for Zero cost Energy Future
**Excludes ex-post adjustments water mains replacement ($22 million) and Western Adelaide Wastewater Network Growth Upgrade ($600,000)

Table 5 Proposed adjustment to Draft Determination for operating expenditure

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination adjustment (per year)	Amount to be reinstated (per year)
Electricity base costs	Included in base year expenditure	-$5.8 million	$2.6 million
Labour base costs	Included in base year expenditure	-$4.1 million (actuarial adjustments of $2.3 million and capitalisation $1.5 million).	$1.5 million

IT savings from 2016 -20	Included in base year expenditure	-$1.6 million	$1.6 million
Murray Bridge WWTP new plant	Included in base year expenditure	-$1.0 million	$1.0 million
Allwater contract base costs	Included in base year expenditure	-$3.0 million	$3.0 million
2019/20 efficiency	Savings already committed	-$6.9 million	$6.9 million
Electricity additional adjustment	Additional opex adjustment	-$8.8 million	$8.8 million
IT savings	Included in 0.5 per cent ongoing efficiency	-$5.6 million	$5.6 million
Metro contract further adjustments	Additional savings imposed	-$5.4 million for 2021/22 onwards	$5.4 million for 2021/22 onwards
Water networks management further adjustments	Additional opex savings imposed	-$0.4 million	$0.4 million
Adelaide desalination plant contract further adjustments	Additional opex required	-$2.0 million	$2.0 million
IT operating cost uplift (2016 - 20 capital program)	Additional opex required	-$2.7 million	$2.7 million
Regional community support	Additional opex required	-$0.4 million	$0.4 million
Asset maintenance	Additional opex required ($0.7 million)	-$4.1 million	$4.1 million
Technical training	Additional opex required ($4.1million)	-$0.8 million	$0.8 million
TOTAL		**-$52.6 million**	**$46.8 million**

*Excluded adjustment for Zero Cost Energy Future

Benefits from the Zero Cost Energy Future program should be passed on to customers.

The Zero Cost Energy Future program was designed and implemented with the explicit aim of shielding customers from volatile electricity prices and network charges. The central purpose is to lower operational costs and deliver savings for SA Water customers. SA Water proposed a $20 million a year net cost saving to be passed on to customers through lower prices.

SA Water does not agree with the Commission's position to exclude the program's assets from the regulated business. This is because the Zero Cost Energy Future program uses regulated infrastructure to generate electricity (or reduce net energy costs) for regulated activities for the benefit of customers of SA Water's regulated business.

By disallowing the value of the assets built as part of this program from the regulated asset base, SA Water customers will no longer receive the long-term benefits intended for them.

And it becomes increasingly more difficult for SA Water to meet operating efficiency targets in this area.

If the Zero Cost Energy Future project is excluded from the regulated business, reasonable electricity allowances must be included in the final determination to fund the energy procurement expenses an efficient utility would incur. The incorrect allowances made in the Draft Determination do not reflect reasonable costs for grid charges and the wholesale market, amounting to $15 million per year less than SA Water could procure this for.

Expenditure to minimise water service interruptions must reflect customer and stakeholder priorities.

The performance and reliability of SA Water's water network is a high priority for customers. Our Plan reflects customer willingness to pay, community sentiment, the expectations of the South Australian Government, and the Commission's own expressed priority. In Our Plan SA Water proposed to improve the level of service while maintaining levels of investment, in line with customer feedback. The Draft Determination proposes a reduction in the level of investment which will impact service levels. To rectify this, the Commission should reinstate:

- $37 million of proposed water network management expenditure including:
    - $24 million removed from the water mains renewal program, and
    - $13 million removed from the Smart Networks, Pressure Management and Isolation Valve program.
- $22 million of 2016-20 additional water main renewal investment to the regulated asset base from 2020.

Without the reinstatement of this investment in water service infrastructure, SA Water will not be able to meet current service levels or the improvements it has proposed for water interuptions as part of Our Plan. These improvements include recommendations from the SA Water Board's independent review into water main management undertaken by international asset management specialists, AMCL.

An effective contingent projects mechanism will add benefit to the regulatory process.

SA Water supports the introduction of a contingent project mechanism to manage potential asset investment triggers that are likely but not certain. While supportive of the initiative, it requires further develoment before it can be useful. The process for approving contingent projects needs to be cost effective, straightforward and facilitate timely asset responses to emerging service needs or economic drivers. It should not delay progress of projects.

Since the release of the Draft Determination SA Water has been working with the Commission to provide additional information on two particular projects – details for approval of the regional water quality improvement program and an updated business case for the Kangaroo Island Desalination Plant with respect to external funding. This additonal information, as well as customer support and linkage to state economic growth, provide strong drivers for these projects to proceed.

As noted above and detailed elsewhere in this document, the following five projects have been demonstrated as prudent, based on customer support and/or their contribution to state economic growth, and should be moved from the contingent list to be included in the final determination:

- Regional water quality improvement

- Expanding the recycled water network
- Upper Spencer Gulf capacity upgrade
- Kangaroo Island Desalination Plant
- Regional non-potable supply upgrades.

Customer feedback must be valued more consistently.

An understanding of a diverse cross section of customer priorities and feedback is essential for an effective and sustainable contemporary business and should inform ongoing business planning, and the approach of a regulator. At present the Draft Determination does not consistently consider customer feedback, nor do some of the decisions align with customer values and willingness to pay.

Some feedback has been more heavily weighted than others. SA Water expects that, based upon the Commission's previous support for SA Water's extensive customer engagement program, which involved over 12,000 customers and was assessed as leading practice in the Australian water sector, there should have been much greater consideration of it. This would seek to better balance the inputs gathered from different stakeholder segments during the regulatory process, to ensure the fair representation of customer voices in decision making and prevent undue emphasis being placed upon single sources.

Service standards must reflect allowed expenditure.

SA Water supports well considered service standards that provide assurance to customers on the quality and reliability of their water and wastewater services and the way SA Water responds to and resolves issues. The development and structuring of service standards should be consistent and recognise that adequate capital and operating costs are required to meet them.

In addition, SA Water has modelled the performance required to meet the service standards proposed in the Draft Determination and SA Water would only meet them in two out of the four years of the regulatory period. Even less if the cuts to expenditure contained in the Draft Determination are maintained. The Commision should adjust the targets to a level that can be met, and ensure any required expenditure to meet them is allowed. If expenditure is not reinstated, service levels will need to be reduced. This is out of step with customer expectations.

Changes to the Water Retail Code are positive for customers.

Proposed changes to the Water Retail Code will deliver positive outcomes for customers and SA Water supports this. However, in setting the final determination, the Commission should recognise the additional costs and time required for implementation that these changes will require.

Price reductions must be balanced with ongoing financial viability.

Savings from lower global interest rates and financing costs should be passed through to customers, but the burden of a loss-making corporation arising from an inappropriate regulatory methodology must not be passed to taxpayers.

The Draft Determination indicates a near $nil profit from the consolidated business when excluding gifted assets and contributed assets (Table 6 below). This is despite the South Australian taxpayer's approximately $13 billion investment in the business, and SA Water's actual gearing ratio of 53 per cent being much lower than the regulatory benchmark of 60 per cent.

Table 6 Forecast profit before tax excluding non-cash revenue based on Draft Determination

Nominal ($m)	2020-21	2021-22	2022-23	2023-24
Profit Before Tax excluding non-cash revenue	-13.87	-0.78	4.71	11.18

The reduction in revenue due to the regulatory rate of return methodology proposed in the Draft Determination (2.36 per cent) is approximately $180 million per year (including tax adjustment), compared to the rate of return proposed in Our Plan (3.59 per cent). Further revenue reductions are expected before the final determination is released as a result of market factors.

Long standing errors in the methodology have been exposed by unprecedentedly low rates of return. To ensure the ongoing financial viability of SA Water, the methodology must change. Without a change in methodology the reliable, cost effective provision of essential water and sewerage services that protect public health, enable modern lifestyles and contribute to economic recovery and growth is at risk.

The Commission's approach to regulatory rates of return is out of step with emerging regulatory practice. The errors embedded in the Commission's methodology need to be corrected, as its peers are doing. Table 7 below provides comparative rates of return from three recent decisions of the NSW Independent Pricing and Regulatory Tribunal (IPART) and the Essential Services Commission of Victoria (ESCV).

Table 7 Published Post-tax Real Rate of Return of IPART and ESCV

Regulator	Rate of Return	Date	Determination
IPART	3.20 per cent	24 March 2020	2020-24 Draft Determination for Sydney Water[1]
IPART	3.20 per cent	24 March 2020	2020-24 Draft Determination for Water NSW Greater Sydney[2]
IPART	3.20 per cent	10 March 2020	Draft Determination for Hunter Water[3]
ESCV	3.68 per cent	24 Feb 2020	2020-23 Draft Determination for South Gippsland Water[4]

The changes required to the current methodology include:

1. Adopting an approach and key measures for the financial building blocks that generates a rate of return that ensures SA Water remains financially viable.
2. Consideration of alignment with the rate of return outcomes for other jurisdictions.
3. Reconsidering the method for estimating the inflation adjustment to provide a more balanced approach and one which is more closely aligned with general regulatory practice for similar water businesses.

[1] 2020-24 Draft Determination – Sydney Water
[2] 2020-24 Draft Determination – Water NSW Greater Sydney
[3] 2020-24 Draft Determination – Hunter Water
[4] 2020-23 Draft Determination – South Gippsland Water

4. Making a retrospective correction for inflation, as well as reforecasting the long-term inflation estimate as part of any annual updates.
5. Reassessing the equity beta to reflect an average of regulatory outcomes across Australia (0.68).
6. Using a 60-day average (previous two periods) for the forecast years in the calculation of the 10-year trailing average of the cost of debt.

The impact of the COVID-19 pandemic on the global and local economy.

Impacts of the global COVID-19 pandemic are reaching all corners of modern day life.

SA Water's expertise in planning and incident response, coupled with its continual focus on efficient work practices, has seen SA Water successfully implement social distancing measures appropriate for different areas of the business. This is helping slow the rate of transmission within the community, while still enabling SA Water to maintain reliable services.

While earlier operating expenditure to position for these work practices has been successful, the unprecedented impacts of mobilising an entire workforce in this way at one time may bring new investment requirements. In addition, if even greater social or workplace restrictions become necessary, SA Water's ability to maintain all customer services at regulated target levels may be compromised.

Looking ahead, SA Water will play an important role in the state's recovery from COVID-19, both socially and economically. Not only will SA Water be maintaining essential services, but also supporting customers as they deal with debt and hardship. SA Water is already expanding its support program to manage many more customers experiencing hardship and offering extended payment terms for customers who are unable to pay their bills. SA Water will also play a key role in supporting the state to recover economically. Over 4,000 South Australians are employed either directly by SA Water or for companies who provide services for SA Water. It is vital that SA Water maintains these important roles in delivering essential services. SA Water is also bringing forward planned expenditure, where reasonable, on infrastructure to support local businesses at a time when they most need work.

As mechanisms designed to provide structure and rigour, the regulatory process and final determination are almost at odds with the flexibility and agility now required across the economy and everyday life. It is likely that decisions and processes suited to normal times may need to adjust to reflect the unusual temporary measures required of an economy-wide recovery effort, or even a permanent 'new normal'. How this will contribute to and facilitate a post-COVID-19 recovery effort, and if existing processes and approaches will enable this, need to be considered for the final determination.

As they stand, the proposed expenditure and financing cost reductions in the Draft Determination will inhibit SA Water from providing the assistance the state needs during the recovery from COVID-19 and this should be taken into consideration in the final determination. While savings from current low interest rates should certainly be passed on to customers, errors in regulatory methodology must not be allowed to threaten the long-term financial viability of SA Water and create a burden for South Australian taxpayers.

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1 Reliable, affordable and sustainable water and wastewater services are vital now, and in the future

An effective regulatory relationship fosters constructive challenge to deliver the best long-term outcomes for customers.

This report sets out SA Water's response to the Essential Service Commission of South Australia's (the Commission) Draft Determination for the SA Water 2020 regulatory determination.

Providing feedback on the Draft Determination is the latest stage in a regulatory process underway for more than two years, which includes and values the role of stakeholder challenge and feedback in truly achieving the best long-term outcomes for customers.

As well as preparing this report and associated documents, SA Water has spent the last six weeks engaging with the Commission across a range of working groups and meetings to improve our understanding of the Commission's approach to key issues and to help bridge identified information gaps.

SA Water believes in Our Plan and the sustainable outcomes valued by our customers.

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

Our Plan outlined the ways SA Water proposed to deliver reliable services to customers and the revenue needed to ensure the water and wastewater networks are equipped to do this.

SA Water included initiatives in Our Plan because it believes they will deliver positive outcomes for customers, and because customers supported them through engagement processes. Our Plan was informed by our most extensive customer engagement program to date, which heard from more than 12,000 customers through a range of mechanisms and was assessed by the Commission's independent expert consultant as aligning with best practice in the modern Australian utility sector.

An open and inclusive regulatory process is important, and equally important is an outcome that achieves balance and outcomes that are sustainable and in the long-term interests of customers.

The final determination must strike a better balance between headline price reductions and long-term sustainability. The Draft Determination delivers adverse impacts for customers, and for SA Water.

Expenditure savings and reduced financing costs from lower global interest rates should be passed through to customers, but the burden of a loss-making corporation arising from an outdated rate of return methodology must not be passed to taxpayers.

The Draft Determination has revealed long standing errors in the rate of return methodology exposed by unprecedentedly low market rates. The methodology must be corrected to ensure the ongoing financial viability of SA Water. The reliable provision of essential water and sewerage services that protect public health, enable modern lifestyles and contribute to economic recovery and growth is at risk with this outdated methodology in place.

While it may be attractive to make a decision to get the lowest possible price, this will result in under investment which will ultimately result in lower service levels, future cost burdens and price spikes for customers.

This impact will be seen directly in an area of the business that customers, the community and the South Australian Government prioritise the performance of water networks. While the performance and reliability of SA Water's water network is strong, continued investment at current levels is required to maintain this level of performance and achieve sustainable improvements that minimise the impact of service interruptions on customers.

The final determination must recognise the impact of the COVID-19 pandemic on the global and local economy.

Impacts of the global COVID-19 pandemic are reaching all corners of modern day life.

SA Water's expertise in planning and incident response, coupled with its continual focus on efficient work practices and a transition to activity based working introduced around three years ago, has seen SA Water successfully implement distancing measures appropriate for different areas of the business to help slow the rate of transmission within the community, while maintaining reliable services. While earlier operating expenditure to position for these work practices has been successful, the unprecedented impacts of mobilising an entire workforce in this way at one time may bring new investment requirements.

As mechanisms designed to provide structure and rigour, the regulatory process and final determination are almost at odds with the flexibility and agility now required across the economy and everyday life. It is likely that decisions and processes suited to normal times may need to adjust to reflect the unusual temporary measures required of an economy-wide recovery effort, or even a permanent 'new normal'.

How this will contribute to and facilitate a post-COVID-19 recovery effort, and if existing processes and approaches will enable this need to be considered for the final determination.

A strong SA Water will be essential to South Australia's economic recovery.

As well as providing essential services that protect public health and maintain modern lifestyles, reliable water and wastewater services support and promote economic growth. SA Water's investment in operating, renewing, improving and augmenting water and wastewater infrastructure directly employs more than 1500 people and thousands of others across contractors and supply chains.

Infrastructure projects are already being called upon by the South Australian Government to keep more South Australians in a job and support local businesses during these unprecedented times. Only a strong and financially viable SA Water will be able to contribute to South Australia's social and economic recovery.

2 Key conclusions informed by an inaccurate consultant report must be reviewed

2.1 Our position

Independent expert consultants add value to many organisations by bridging knowledge and skill gaps, introducing different perspectives, and reviewing plans and designs to provide assurance.

Expert consultants present objective conclusions shaped by robust analysis of all relevant information sources.

The Commission has relied on a consultant report with factual inaccuracies and misunderstandings of fact as its primary source of information for key decisions that impact the findings. SA Water sets out the errors and omissions in the consultant's report in this response, and provides additional information to assist the Commission in understanding these errors. SA Water will also continue to work with the Commission at officer level over the coming weeks to provide additional information and briefings so the errors and inaccuracies become clear. SA Water expects to see a final determination which relies on an accurate understanding of investment needs and reflects decisions that meet the needs of SA Water customers in the long term.

2.2 Context informing our position

The Commission procured an independent financial and engineering assessment of our capital and operating expenditure plans, and the asset management systems used to inform and guide them, from consulting firm Cardno.

The resulting report that the Commission has adopted for key elements of the Draft Determination includes factual inaccuracies, misinterpretations and misunderstandings. The findings have overlooked relevant source material provided, and in some instances makes recommendations with very little basis of justification. Feedback was provided to the Commission on the draft Cardno report on 18 February 2020, but many of these errors and misunderstandings have not been addressed. As a result, they have been compounded in the Draft Determination. Our experience was the Cardno report and review timeline was greatly compressed, with a vast amount of material provided to Cardno for review in a short period of time, which may explain some of the underlying issues with its content.

The Draft Determination relies on a report which draws conclusions from the wrong source material.

Referencing within the Cardno report is thorough and as a result it has been easy for SA Water to identify where the incorrect documents have been reviewed for the wrong projects or programs, and in some instances where no material has been reviewed to inform decisions at all.

An example of this is the review of sewerage main expenditure. In its review of this program, Cardno has not referenced the Wastewater Pipe Networks Asset Management Plan which is the primary document detailing how these assets are managed. The review instead references the Wastewater Networks Facility Asset Management Plan, which provides very little useful information on the management of wastewater mains, instead focussing on the management of network facilities.

The report also demonstrates confusion around the difference between the capital investment in renewing concrete sewer mains required to maintain current levels at the

lowest possible cost and the operating expenditure proposed to clear mains of tree root intrusion in order to decrease overflows to the environment as valued by our customers.

The capital investment aims to maintain performance and the investment profile is based on the condition of the asset, while the separate operating expenditure program is driving improved performance and investment based on a sophisticated GIS tool assessment of the likelihood and consequence of a choke in certain locations that are high risk and would result in an overflow to the environment.

This difference was clearly articulated in the original documentation accompanying Our Plan, and also in our response to the numerous and specific requests for information from Cardno, but are not referenced or reflected in the report or findings. As a result, the Draft Determination is similarly confused and undervalues this important investment in maintaining sewerage mains in the future.

The Cardno report also questions the lack of customer engagement and support for the capital investment in renewal of wastewater reticulation mains. The reason is that this expenditure is justified based on the condition of concrete mains and the financially sound time to invest in these mains to prevent failures that interrupt customer services, risk the environment and ultimately cost more to fix than pre-failure interventions. The justification for the investment strategy in these assets is set out in the Wastewater Pipe Networks Asset Management Plan. SA Water assumes this document has not been read. It is not referenced and Cardno suggests that SA Water's current strategy is not appropriate, as it does not establish the risk threshold for the assets or allow for the determination of the optimal intervention timing based on the varying criticality of pipes within the broader proposed program. All of this was detailed in the Wastewater Pipe Networks Asset Management Plan. For this reason, SA Water requests a re-review of this expenditure.

Further to this, Cardno examined SA Water's Wastewater Gravity Main Decision Support Tool, which is used to prioritise renewals within the overall program. While Cardno found the tool to be broadly sound, it noted that the risk scoring for the 'consequence of failure' for specific sections of pipe identified for renewal within the overall program needed further refinement. It suggested that good practice is to introduce multiple variables into the scoring of consequence:

> *'Diameter is a useful starting point as a proxy for population served. Other factors typically used by other utilities to assess the consequence of failure of wastewater mains include proximity to environmentally sensitive receptors such as waterways and the proximity to public spaces where public health may be impacted.'*

These factors are employed by SA Water and detailed in the opex strategy to improve environmental overflows performance. The model developed by SA Water to risk assess pipes takes into consideration specific pipe attribute data, locality to environmental and public sensitive sites, likely impact of tree root intrusion on service, history of events, wastewater network flow and land topography data. The model is robust and sophisticated in its capability to target pipes for preventative maintenance strategies and is directing SA Water in ability to efficiently improve performance against environmental overflows.

The Draft Determination has relied on the information from Cardno described above and this requires a re-review.

The Draft Determination relies on a report which proposes a flawed premise.

Cardno recommends disallowing a range of expenditure (described further below) by saying it should be considered 'business as usual'. They take the position that an exceptional utility should be doing these things and excludes them without any robust justification. Cardno acknowledged in their contribution towards RD16 that SA Water has

been on a significant improvement journey from 2012 and still are, with more still to be done. As these activities have never been done, they cannot be called 'business as usual' nor are they included in SA Water's base costs. These areas of expenditure must be allowed to enable the improvement Cardno has recommended on multiple reviews and acknowledges SA Water needs to pursue in order to mature its asset management practices.

The Draft Determination relies on a report which was informed by limited review of proposed operating expenditure.

Very little review of the additional operating expenditure required to maintain water and sewer assets occurred. Cardno did not engage with SA Water on any detail regarding operating costs and the resultant report provides limited justification for the reductions in operating expenditure linked to operating and maintaining assets in the most prudent and efficient ways taking into account whole of lifecycle costing for the assets.

Examples of this include:

- A $0.2 million per annum proposal for condition assessments across major water pumping mains was disallowed on the basis that Cardno considered it should be 'business as usual'. This assessment was reached without seeking to understand how much is currently spent on these types of investigations at present and what this spend achieves, while still advising that SA Water's approach to managing these assets needs to be improved. The changing age profile of this infrastructure and increased risk failure means less can be assumed from age and additional targeted inspections are required to fully inform future capital plans. If SA Water is to meet the capital efficiency targets Cardno recommended based on asset management maturity, adequate operating funds need be allowed to obtain the maturity. Otherwise SA Water will remain at current maturity and the efficiency targets need to be revised down.
- Cardno incorrectly assessed the scope of works associated with $0.5 million per annum for maintenance on ancillaries in the sewerage network as reducing blockages and risk of collapse, when it is about inspection and assessment of access chambers, educt vents, access covers and customer connections. These assets currently have limited/ad hoc inspections or no inspection regimes in place. The business cases show clear evidence detailing how these assets contribute to service disruptions to customers and the broader community. In the case of wastewater connection inspections, this is a new activity as described in the Wastewater Connections Approach document to inspect and implement solutions for those customer connections which have experienced more than 6 connection chokes in the previous 3-year period. No reference was made to the Wastewater Connections Approach document in Cardno's commentary and SA Water assumes this has not been read as part of the review.
- A $0.2 million per annum proposal for condition investigations across wastewater pumping mains was rejected with Cardno noting *"This additional operating expenditure is proposed to support a $128 million capital investment in SA Water's major pipelines and trunk mains for renewals."* This incorrectly links this activity with the water network instead of the wastewater network. The Wastewater Pumping Mains Approach documents provide the description and justification for the proposed condition inspection activities. Cardno did not reference these documents in their report and SA Water assumes these were not read.
- $3.2 million per annum proposed in Our Plan to fund the shifting of our asset management maturity towards a greater emphasis on 'totex' solutions on major water non-pipeline assets was not allowed in the Draft Determination. SA Water

proposed to do this through identified non-capital interventions to ensure optimal management of asset performance, cost and risk. Additional investigations are required in emerging risk areas, which this opex would also be used to fund.

- $0.2 million per annum to perform various initiatives to ensure optimal operation of the water network and increase the life of pipe assets was disallowed in the Draft Determination. This funding was for:
    - Acoustic capability development (research collaboration), and
    - Training for surge mitigation.

  The Commission will note that it was surge mitigation that caused the major main breaks and flooding in Paradise in 2016. This funding for increased surge mitigation training across our workforce is critical and should be reinstated.

The Draft Determination relies on a report which has fundamental factual errors.

The Draft Determination applies the following compounding capital efficiency targets, in addition to the 5 per cent capital delivery efficiency already set by SA Water:

Efficiency Challenges	SA Water proposal	Draft Decision
Capital Expenditure:		
Catch-up	Flat 5% top down	1.5% per annum[163]
Continuing		0.5% per annum
Operating expenditure:		
Catch-up	0.5% per annum	$64 million[164]
Continuing		0.5% per annum[165]

The Commission cites the following reasoning for adopting Cardno's recommended 1.5 per cent catch up efficiency target:

> *An efficiency target of 1.5 percent is proposed for the portion of the capital program that was not reviewed through the sampling approach. This target has been informed by the evidence provided by Cardno that there were at least two key areas in the asset management system where it believes SA Water should be able to make material improvements to its processes during SAW RD20: improved assurance over expenditure justification and improved asset management decision making.*

Improved assurance over expenditure justification

Cardno states that SA Water's capital program would benefit from improved line of sight to outcomes and greater recognition of the regulatory framework in which it operates to provide regulatory certainty that expenditure is justified. Cardno cites the following examples of this:

> *The proposal to increase expenditure in Smart Networks to $20.9 million in SAW RD20 without quantifying the benefits expected to be delivered, even though a trial has been completed providing information to inform this assessment.*

The water network structures program proposing a level of expenditure to mitigate an unconfirmed level of asset failure risk, despite SA Water being aware of the benefits of quantifying this risk during the SAW RD16 period but not doing so.

The wastewater networks program has been developed with limited consideration of consequence of failure. A more sophisticated approach will provide more assurance that cost and risk are being balanced.

Cardno's analysis that SA Water's expenditure on Smart Networks was unquantified with regard to benefits is factually incorrect. The business case contained strong financial analysis; it did not contain societal impact modelling. The projects were justified on financial and non-financial benefits, so societal impact modelling was not necessary to further justify the initiative (knowing that strong societal benefits existed without any additional cost).

However, since developing the original business case, SA Water has now implemented societal impact modelling and, it shows reduced societal impacts of main breaks and reduced corporate and community risk exposure. The outputs from this modelling exercise have then been used to update the original NPV analysis, which now shows an incremental NPV (over the base case) of $10.86 million. That is a net benefit to SA Water, SA Water customers and the community of $10.86 million over and above the costs incurred.

Further, SA Water expects to increase this benefit going forwards through refining the operational response model. Current financial modelling estimates a further $20.77 million benefit to SA Water, SA Water customers and the community. This is a $31.63 million net positive benefit from these investments. Note that this analysis also excludes savings related to a reduction in non-revenue water lost through leaks and main breaks.

The Water Networks Structures program does indeed propose a level of expenditure to mitigate unconfirmed failure risks. These risks have been estimated based on current knowledge of network assets and sound asset management practices.

Based upon the increased maturity of asset management processes, as acknowledged by Cardno, and taking a Totex approach to investment, SA Water has proposed additional opex to carry out further asset condition inspections which has been disallowed in the Draft Determination without justification.

If Cardno and the Commission recommend SA Water operate on finite asset condition data instead of assumptions, predictions and modelling it will need to allow the additional operating expenditure for those asset condition inspections to be carried out now and into the future. This is an ongoing need.

In asset management SA Water tries to balance the expenditure required to carry out 100 per cent asset condition inspections with the cost to do so. This is an accepted and well implemented practice worldwide.

It is also factually incorrect to say the wastewater networks program has been developed with limited consideration of consequence of failure. This program of works has been confused with the operational response to reducing environmental overflows as discussed above and it is not evident Cardno is aware of the sophisticated manner in which SA Water estimates and addresses the consequences of failures in the sewer network.

For these reasons, Cardno's advice on efficiency targets is not reliable. It is based on misunderstandings. SA Water suggests this is re-reviewed with appropriate efficiency targets applied taking into account a full understanding of SA Water's practices and more importantly, the expenditure proposed.

Improved asset management decision making

SA Water has focused significant attention on shifting its maturity in asset management over multiple regulatory periods, something that has been recognised by the Commission on multiple occasions. SA Water now has a management approach that is mature, aligned to international standards and recently been noted to have leading global practices.

While SA Water is proud of the significant shifts it has made over recent years it recognises that continuous improvement in asset management is required to ensure that it continues to deliver the service outcomes customers expect whilst managing risk and the total cost of operation.

SA Water would like to acknowledge that Cardno reviewed the high level asset management practices which generally discussed SA Water's approach to decision-making. Cardno reflected on some very specific projects but there is some information that is relevant for the Commission to consider which was not reviewed by Cardno.

The evaluation approach for projects always includes at least two options and all options considered must take into account many factors in decision making, not just financial outcomes. As part of updating the long-term plans for regional water quality improvements SA Water has considered the financial implications of decisions as well as considering, through a multi criteria analysis process, the non-financial benefits of each option. Non-financial benefits can be described as benefits to the environment, broader social benefits for the community, water quality benefits or benefits to build a stronger reputation for SA Water in the community.

The evaluation process SA Water utilises balances the financial benefits with non-financial benefits and the approval process that exists works to validate the decisions made.

Approval processes exist to confirm options and validate the business case. Business cases are approved by appropriate delegated authorities including the Chief Executive, SA Water Board, the Minister and Cabinet, where appropriate.

Every project identified and put forward to the Commission as part of Our Plan has been developed using the process of considering options and benefits (financial and non-financial). Currently the Draft Determination suggests otherwise based on Cardno's findings, but this is an error of fact. While the Smart Networks business case does not consider options beyond do nothing and implementing a smart network the options were reviewed, validated against each other and conclusions drawn regarding financial and non-financial benefits. This project was viable using this approach, with societal impact analysis only strengthening the case.

While the Commission has used the findings of AMCL's independent review of SA Water's management of water mains[5] and Cardno's report to justify its decisions on this element of capital improvement, the Cardno report contains many errors and mis-findings. Nevertheless, SA Water always acknowledges continuous improvement is required. Using the same approach used in RD16, SA Water applied an efficiency of 5 per cent to the capital program proposed in Our Plan to acknowledge and drive further optimisation and efficiency. This has been articulated in both determination processes, but the Draft Determination appears to apply the abovementioned efficiency targets on top of the already discounted capital plan. SA Water suggests the 5 per cent is reinstated before any efficiency targets are applied in the final determination.

[5] SA Water Water Main Management Independent Review, AMCL, August 2019

Decisions which are out of line with established regulatory practice across Australia

In addition to the factual errors used for setting capital expenditure efficiencies they have also been applied in a manner that is out of step with established regulatory practice used across Australia.

Firstly, the additional efficiency targets have been applied in addition to the 5 per cent capital delivery efficiency already incorporated by SA Water, thereby double counting efficiency.

Secondly, Cardno established a catch up efficiency target of 1.5 per cent, notwithstanding the arguments above as to why this should not have been applied, the manner in which it has been applied is out of step with regulatory practice. Rather than apply a 1.5 per cent target for the capital expenditure this has been applied on an annual basis and compounded so that it is 3 per cent in 2021/22, 4.5 per cent in 2022/23 and 6 per cent in 2023/24. Even if Cardno's argument for the 1.5 per cent catch up efficiency target is accepted, it is not correct to apply a target of up to 6 per cent.

2.3 Our recommendations

That the Commission address the issues identified in the Cardno report and the Draft Determination, namely:

1. Reinstating the operating expenditure for asset maintenance not appropriately reviewed
2. Reinstating the capital expenditure disallowed on the basis of misunderstandings, including:
    - $22.5 million for wastewater mains renewal
    - $5.8 million for Water Tank Structures
    - $9.6 million for IT asset refreshment

    Excluded from this list are the expenditure for water networks which is addressed in section 5 and contingent projects which is addressed in section 6.
3. Correct the calculation of capital efficiency targets to:
    - Remove the 5 per cent efficiency already present in the Our Plan figures proposed
    - Remove the 'catch up' efficiency because it is based on errors in the Cardno report and addresses the compounding of catch up efficiency which is out of line with common regulatory practice.

3 Errors in approach and calculations of operating expenditure must be corrected

3.1 Our position

A modern corporation must be efficient and continuously seek opportunities to improve. The Commission should recognise the efficient nature of our business confirmed through its own assessment and all leading national indicators. The Commission should recalculate an efficient base year to overcome errors in the Draft Determination, set reasonable new efficiency targets, remove the double counting of them in the Draft Determination, and allow justified incremental increases to operating expenditure for specific initiatives.

3.2 Context informing our position

The Draft Determination double-counts efficiency targets and applies further arbitrary and unreasonable targets.

The Commission deemed our business as efficient in the final determination for the 2016-20 regulatory period, with no need for a catch-up efficiency to be applied. Since then, SA Water has met the ongoing efficiency targets set for the 2016-20 period, and therefore meets the Commission's own criteria of an efficient business operating in this environment.

In addition, independent benchmarking activities by KPMG for both RD16 and RD20 place SA Water as one of the most efficient water utilities in Australia. Furthermore, since benchmarking was first undertaken in 2013-14, SA Water has outperformed its peers by improving efficiency by a greater magnitude than any other water utility.

Not only does this show efficiency, but it shows commitment to efficiency as a basis for achieving low and stable prices for customers, and to continuous improvement.

The established approach for setting efficient operating expenditure worldwide – and used by the Commission for the last two regulatory periods – is to determine an efficient base year, allow prudent and efficient additional opex on a case by case basis where evidence is provided, and apply a reasonable efficiency target to reflect the likely changes in operating environment and incentivise continual improvement.

The Draft Determination is out of step with this established practice, double counting efficiencies, applying additional reductions to an already efficient base year, and disallowing justified expenditure required to achieve further sustainable efficiencies.

Key examples of this include:

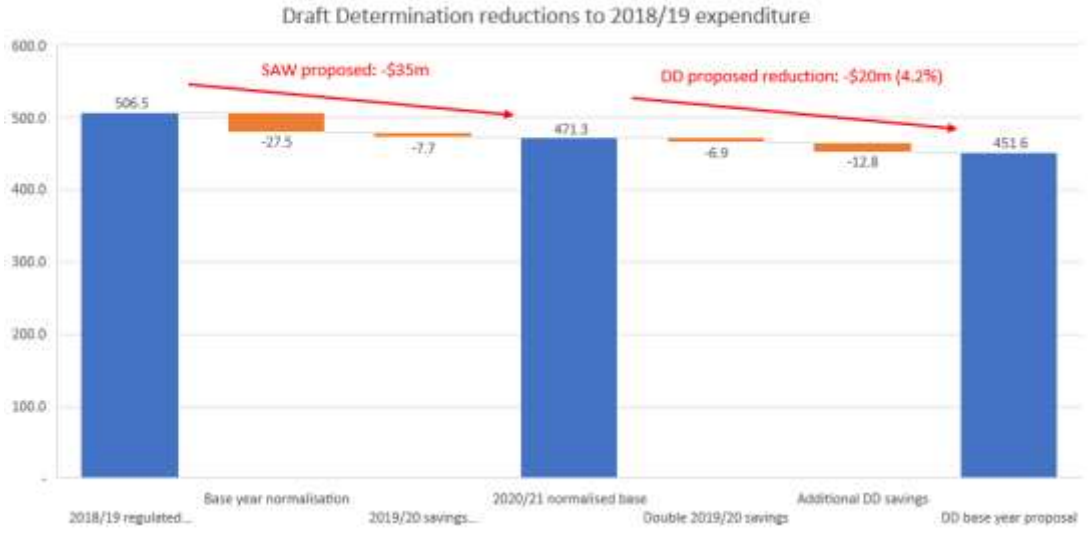
- Applying 2016-20 efficiencies to the 2019-20 year that have already been achieved and reflected in forecasts.
- Reducing IT capital expenditure that will enable an ongoing operational efficiency but requiring or increasing the operational efficiency – effectively double counting.
- IT automation, analytics, and decision support tools are key efficiency enablers for a business and their investment is carefully considered to sustainably drive down business costs. These projects are already NPV positive so there is limited opportunity for additional savings to be identified other than natural progression of technology and innovation over the regulatory period – which is exactly what an ongoing efficiency target allows for.

The Draft Determination makes errors in calculating an efficient base year.

Many of the additional efficiency targets and operating expenditure reductions applied in the Draft Determination are erroneous and include double-counting or appear based on logic that is out of step with reasonable and traditional business and regulatory approaches.

These additional adjustments are applied to a normalised base year which has already been adjusted downwards by $27.5 million from the actual 2018/19 costs. The following waterfall graph articulates the significant additional operating expenditure reduction from our actual 2018/19 operating expenditure. As described below, much of the additional $20 million is not actual savings and sets SA Water well below our actual current efficient cost base. Achieving this would significantly impact customer service levels and increase business risk, in challenging economic times.

Figure 1 Draft Determination reductions to 2018/19 expenditure



SA Water disagrees with the following adjustments to its base year.

An additional 1.5 per cent efficiency applied for the 2019/20 year (further reduction of $6.9 million).

In RD16 the Commission accepted SA Water had efficient operating expenditure and determined that, after compounding efficiency targets in 2016-2018 of 1.0 per cent, 1.0 per cent and 1.5 per cent respectively, an efficient base year for the 2020-2024 regulatory determination would be $479 million.

The Commission applied a further 1.5 per cent efficiency target for the 2019/20 year, a further saving of $6.9 million.

SA Water proposed a base year of $479 million in Our Plan, in line with the determined efficiency starting position for RD20.

It proposed the following efficiencies to reach its 1.5 per cent efficiency target for 2019/20:

- $6.4 million saving from terminating the Adelaide Desalination Plant electricity contract with AGL, and
- $1.3 million relating to IT business projects not delivered and saved from the 2019/20 budget through other means.

This totals $7.7 million and exceeds the 2019/20 efficiency target of $6.9 million. The 2019/20 efficiency target therefore does not need to be re-applied in this determination.

Allwater contract costs (further reduction of $3.0 million)

The Draft Determination appears to be based on a misunderstanding that *"a $2.0 million 'pain share' payment was made by Allwater to SA Water due to actual expenditure significantly exceeding agreed budget during 2018-19"*.

The Draft Determination goes on further to say, *"In recognition of this payment relating to activity during 2018-19, the Commission has made a further $2.0 million normalisation adjustment to reduce the base year operating expenditure by this amount."*

The 2018/19 pain/gain share amount was already reflected as a reduction of the 2018/19 base year Allwater costs of $98.9 million.

The base year reduction of $1.0 million relating to reduction to metropolitan field services back-log, should also be re-considered as the actual volume of work performed in this year is commensurate with a normalised year.

Electricity (further reduction of $2.6 million)

Electricity network charges have remained flat for several historical years despite significant variable energy movement. This means there is no justification for an adjustment to network charges.

The Draft Determination proposes a $0.25 reduction in network charges for every $1 change in wholesale electricity spend. These savings have been derived from SA Water's cost estimates which are predicated on the Zero Cost Energy Future investment. These savings can only be applied to regulated electricity expenditure if the Zero Cost Energy Future investment is also deemed regulated.

Murray Bridge wastewater treatment plant operating costs (further reduction of $1 million)

The Draft Determination further reduces SA Water's base year by $1 million based on a misunderstanding of the operating cost differences between the old Murray Bridge Wastewater Treatment Plant and the new one.

During Cardno's review of operating expenditure SA Water made it clear that the cost differential between operating the old plant versus the new plant was $1 million per annum but the Cardno report states *"that SA Water had not clearly articulated why this higher operating expenditure should be carried forward to the SAW RD20 base year, considering that there should be offsetting benefits from not having to operate the older Murray Bridge WWTP"*.

SA Water can only assume that Cardno did not understand there are offsetting benefits from not operating the old plant but that the new plant still costs $1 million more per annum to operate than the old plant did.

The operating costs of both plants are shown in Figure 2 below.

Figure 2 Operating costs of Murray Bridge Wastewater Treatment Plants

	19/20	20/21	21/22	22/23	23/24
Base Budget Existing MBWWTP	350,000	350,000	350,000	350,000	350,000
John Holland Contract	320,435	1,172,395	842,388		
SAW Costs New MBWWTP	154,511	622,214	809,085	1,002,098	1,006,858
SAW Costs Existing MBWWTP	350,000	-			
Total Cost	**824,946**	**1,794,609**	**1,651,473**	**1,002,098**	**1,006,858**
Budget Shortfall	**474,946**	**1,444,609**	**1,301,473**	**652,098**	**656,858**
(Table 1)					

As can be seen from the table, the operating differential is greater than $1 million in most years, but SA Water has only proposed an additional $1 million per annum across the regulatory period.

It should be noted that while the operating costs are slightly higher for the new plant, SA Water achieved significant efficiencies of approximately $33 million in building the Murray Bridge wastewater treatment plant with those savings being passed on to customers.

Additional labour costs (further reduction of $1.5 million)

In relation to labour costs, the Draft Determination states "The Commission also notes that labour costs transferred to capital projects was abnormally low in 2018-19 with reference to prior year's actual results and the current year budget for 2019-20; and is therefore reducing the normalised base year expenditure by $1.5 million."

As provided to the Commission, labour costed to capital projects for the preceding years and the 2019/20 budget is as follows:

Table 8 Labour costed to capital projects

Year	Labour costed ($ real 2018/19)
2016/17	$38.3 million
2017-18	$41.5 million
2018/19	$42.4 million
2019/20 (budget)	$42.8 million

A higher labour costed to capital projects figure represents a lower labour expense. Labour costed in 2018/19 was actually higher than 2016/17 and 2017/18 by $4.1 million and $0.9 million, respectively, and higher than the 4 year average by $1.2 million. This means there is no basis to reduce SA Water's base year by a further $1.5 million for undercapitalisation in 2018/19. Using this logic, it could be argued that SA Water's base year should be adjusted up by $1.2 million, but SA Water is seeking the best, fairest outcome for its customers whilst being appropriately funded to deliver the water and sewerage services they expect.

Additional IT savings (further reduction of $1.6 million)

As detailed above, SA Water has successfully delivered its regulated operating expenditure budgets for 2016-2020 including the efficiency targets prescribed by the Commission.

The business, and its priorities and challenges, change over time. And it goes hand in that the way it delivers its savings will also change from that contemplated at the previous determination 4 years earlier.

In the Draft Determination the Commission makes an additional normalisation adjustment of $1.6 million "*In recognition of IT driven savings that SA Water has committed to realise in the final year of SAW RD16 (2019-20)*".

These savings have already been delivered (see base year and allocated additional savings of $7.7 million discussed above which out-performs the Commission's 2019/20 efficiency target of $6.9 million). They were not delivered through IT savings as originally considered back in 2016, but they have been delivered by means of restructure, internal resourcing and seeking synergy through contracts.

SA Water accepts that a further $1.3 million is due to be delivered in 2019/20 through IT projects which had not delivered savings in the 2018/19 base year, but not $2.9 million.

In addition to the above base year reductions, SA Water would like to point out that the Commission's approach to further reducing a base year for savings identified early by SA Water contradicts regulatory incentivisation. It is common regulatory practice to incentivise a utility to find and deliver savings early, because these efforts flow on to customers in the next regulatory determination.

The Draft Determination rejects reasonable incremental operating expenditure increases that will sustainably improve service outcomes for customers.

In addition to a very efficient base year, SA Water put forward a very small number of incremental operational expenditure increases that result from changes in its operating environment or are in response to customer needs and feedback.

Electricity

Please also refer to section 4. Benefits from our energy program should be passed to customers, or reasonable electricity allowances must be reinstated for detailed discussion on Zero Cost Energy Future and electricity.

IT (reduction of $2.7 million per annum to actual expenditure)

The Commission seems to confuse the incremental opex funding requirement of $3.2 million, in addition to the base year of $2.8 million. It allowed $0.5 million being the difference between the two. All incremental operating expenditure submitted to the Commission was done so because they are additional operating needs above SA Water's base year and are considered prudent and efficient. SA Water's approach, as per previous determinations was:

1. Take its base year operating expenditure (2018-19) after achieving various efficiencies required up to and including that year (and beyond where SA Water has exceeded efficiency targets)
2. Normalising up or down for any abnormal expenditure, ie expenditure that is not representative of a normal, efficient operating year
3. Apply to the Commission for increments on top of that efficient base year providing justification for each increment SA Water proposes so that the Commission could

independently assess the prudence and efficiency of each expenditure item required above the base year.

For clarity, there is approximately $2.0 million per annum actual IT costs in the base year, not the $2.8 million assumed. RD16 assumed there would be $2.8 million of operating expenditure in our base year. However, due to delays at the start of the current regulatory period and capitalisation of first year costs in many instances that were not accounted for during RD16, only $2.0 million per annum is in the base year.

The additional opex required going forward is $3.2 million per annum, in addition to the efficient base year. This is to fund:

- The operating costs associated with current regulatory period IT projects already approved but not yet reflected in the base year (because the costs were not being incurred at the time SA Water calculated its 2018-19 base year for Our Plan and in the interests of a reliable base year approach, SA Water did not include them).
- Additional opex from critical business projects delivered in 2019-20, not contemplated in RD16 because they were responding to emerging needs, that have increased IT opex needs, for example, the Outage Information and Notification to Customers projects.
- The IT industry is moving from traditional solutions to cloud-based solutions which have a greater operational cost than previous less opex intensive solutions. With the IT industry making this shift, SA Water has no choice but to upgrade to cloud-based solutions. RD16 opex allowances were based on on-prem solutions. Software as a service is provided on a subscription basis and centrally hosted. It significantly reduces the risks of unexpected hardware failures, eliminates patching, reduces support costs and improves performance. While being more expensive, it is therefore a superior solution for reducing the risk of outages for our staff and customers.

These are genuine additional IT opex needs above what is currently included in the 2018-19 base year and supporting documentation has been made available to the Commission to establish that these are indeed prudent and efficient expenditure additions to the 2018-19 base year.

Regional support (reduction of $0.4 million per annum to proposed expenditure)

SA Water is committed to finding the most prudent way of delivering this service improvement while recognising the realities of providing a service like this across the state of South Australia. The proposal put forward is necessary to address the many factors involved with providing this service including training and customer service, security, safety, timely dispatch, logistics, availability.

The funding allowed in the Draft Determination is not sufficient to guarantee an appropriate service level and will disadvantage regional customers.

An option is for the Commission to allocate $0.7 million in each of the first two years of the regulatory period and then set the remaining years based on progress in establishing and maturing this service. Without this opportunity SA Water will be unable to benefit from learnings and implement the most effective and efficient solution.

AGL contract and RECS (reduction of $2.0 million duplicates savings already committed)

The Draft Determination states *"SA Water's proposal for additional operating expenditure to run the ADP does not appear to take into account the fact that it terminated the AGL contract, effective June 2020."*

This is incorrect and contradicts section 7.12.3.2 of the Draft Determination which states *"SA Water has identified $5.2 million per year in procurement contract savings to be*

achieved over SAW RD20, as a result of breaking its long-term electricity contract with AGL."

SA Water accepts the Commission's further $1.2 million adjustment to this saving. However, these savings are derived from the underpinning contract with AGL and the RECS costs that would have occurred had SA Water not terminated the contract. Therefore the $2.0 million reduction proposed by the Commission has already been included in the savings committed as part of the AGL contract termination.

Asset investment operating costs (reduction of $4.1 million per annum to proposed expenditure)

SA Water proposed an average additional $4.1 million per annum of operational expenditure for a range of programs to sustain its network and ancillary assets. These have been disallowed in the Draft Determination on the premise that:

> *'Without understanding why these works have not previously been undertaken, and why SA Water's existing operating expenditure for investigation and maintenance cannot be reprioritised to deliver this program of works, the Commission cannot justify allowing this expenditure.'*

SA Water has continued to evolve its asset management practice over many years to achieve what is considered by many organisations, including Cardno through this process, to be mature, well considered, evidence based (where possible) and best practice with a small number of exceptions. These exceptions require additional opex to fund, for example, increased asset inspections to base decision-making on current asset condition data and this is what SA Water proposed in Our Plan. These improvements have not been done in the past because, as both the Commission and Cardno have noted on multiple occasions over the last six years, SA Water has been on a journey to evolve its asset management processes. This is part of that evolution and therefore requires funding.

In addition, SA Water has evolved its approach to decision making on a total cost of operation basis (TOTEX) approach which has identified many scenarios where it makes more sense over the long term to expend operational dollars rather than invest capital. As a result, SA Water has identified many opportunities over the next four years where there is a strong justification for refurbishment of assets as opposed to capital renewal.

This operating expenditure is therefore required to meet the Commission and Cardno's own recommendations and to manage and maintain assets in the lowest cost manner over the asset lifecycle. If this operating expenditure is disallowed in the final determination, a corresponding increase in capital expenditure will need to be calculated for the renewal of the assets that would have been covered by this opex.

New metropolitan contract savings (reduction of $5.4 million against actual costs)

The $5.4 million reduction each year from 2021-22 was based on an initial SA Water estimate of savings at a very early stage in the development of the initiative. The identified operating expenditure savings was a point-in-time estimate based on a commercial strategy and approach to market that has subsequently been developed and refined. SA Water has since further developed and refined its commercial strategy and subsequent approach to market in relation to the replacement of the Allwater contract. Following a robust market research and peer benchmarking exercise conducted in 2019, SA Water has determined that the scope of services to deliver metropolitan Adelaide's water, wastewater and recycled water systems will result in a different form of contract and service delivery model from July 2021. The future, Board approved, model now consists of two separate commercial arrangements. These are:

- A production and treatment alliance for the operations and maintenance of metropolitan Adelaide's water, wastewater and recycled water treatment facilities.

This model is designed to drive and achieve continuous improvement, collaboration and an alliance partner that can flexibly react, change and adapt to changing operating conditions.

- A field services managing contractor arrangement for field-based operations and civil maintenance to service SA Water's metropolitan customer and water asset base, wastewater network and recycled water network. This model is designed to incorporate a high level of collaboration and attract a service provider that can assume increasing responsibility for driving service productivity, quality and efficiency. As such, the model provides for a clear allocation of commercial responsibility and incentive between SA Water and its service provider.

The above approach will enable SA Water to harness a greater breadth of expertise, flexibility and access to specialisations in both fields, and place SA Water in the best position to realise greater benefits for its customers.

SA Water is currently conducting a tender process for the above commercial arrangements which closes in April 2020. Contract award is planned for October 2020, with a subsequent six to eight month transition period from the current Allwater contract.

At this point in time, there are no identified financial savings from this change in contract model. Any actual savings identified will be an enabler for SA Water to achieve its year-on-year efficiency targets over the RD20 period and then will be embedded in base costs from 2024 onwards.

All tenderers have been encouraged to incorporate efficiencies and cost savings in their tender responses for the new arrangements so that SA Water can continue to deliver sustainable value for money services to customers in metropolitan Adelaide from July 2021. The anticipated efficiencies and cost savings will not be known until the evaluation of tender responses is undertaken.

Similar to the operating expenditure savings, the identified transition costs were a point-in-time estimate. As part of the tender process, tenderers have been requested to provide an estimate for transition costs based on the refined commercial arrangements and market approach outlined above. The cost of transition will therefore not be known until the evaluation of tender responses is undertaken and could be higher or lower than estimated.

Improved technical training (reduction of $0.8 million per annum to proposed expenditure)

SA Water's technical training target audience comprises approximately 400 operational staff who are spread over three business units (Customer Field Services (CFS), Production and Treatment (P&T) and Maintenance). Operators are located at key regional sites across South Australia to ensure that SA Water can deliver essential services to its customers in the most efficient and safest manner possible. A competency-based approach has been taken to ensure employees gain the underpinning knowledge and required skills to safely perform tasks within the work environment.

As outlined below, the allocated funding would not be sufficient to support the delivery of the training program within the required timeframe. The factors include:

- **Geographical spread and travel costs:** there is a vast geographical spread between depots, leading to significant travel distances between sites. This contributes to approximately 51 per cent productivity loss in travel time. In addition, by not deploying enough personnel, there will be a significant increase in associated costs to fulfil training program requirements, including accommodation, car, fuel, flights, and meal allowance. The estimated cost is approximately 16 per cent of the overall budget proposed during the next regulatory period.

- **Specialised skills and competencies:** operational staff require a diverse range of skills and competencies to perform tasks safely. Additional funding is required to ensure SA Water has the required personnel with the range of skills and experience to support the delivery of all Tier 1 programs across multiple business units.
- Trends reflect a significant increase in new employees or employees changing operational roles over the last 3 years. This requires additional funding to support the development of our future workforce with technical skills which is not already in the base year costing.
- **Improving safety:** By failing to provide suitable training for our people, SA Water would import significant risk directly into its operations and may not only lose the productivity balance and flow-on impact to our customers, but expose its workforce to potential life threating incidents and injuries. Within the 2019/20 financial year, SA Water has recorded 7 potentially life-threating incidents and injuries where a lack of training was identified as playing a factor. Additional funding will enable SA Water to continue the customisation of targeted training and re-training of our operational staff in these key areas.

  Technical training supports the Safety team to improve key safety measures. This partnership is critical in continuing to build upon the reduction of incidents by 12.7 per cent and reduction in injuries by 12 per cent in 2018/19 to 2019/20. Additional funding will support continuous development and the update and delivery of training programs to assist in achieving safety goals.
- **Compliance and consistency:** a training needs analysis identified key skill gaps in multiple high-risk operational roles that are related to legislative compliance. These include activities such as high-pressure water jetting, drain cleaning, vacuum loading, load restraint and more. To help bridge the gap, the additional funding will support the development of customised content and deliver on-the-job training covering significant geographical spread to meet these ever-changing obligations.
- Consistency in training will ensure SA Water's people remain compliant with legislation, understand our policies and procedures, and provide greater clarity of their role within SA Water. This includes the need to regularly update and review training content to ensure currency, a critical element to ensure operational knowledge and skills are kept current with industry. This requires additional funding to ensure operational staff remain competent and safe when performing operational tasks.
- **Adopting new technology:** with challenges regarding digital literacy and an ageing workforce, SA Water has various initiatives in place to support and build capacity to adopt new technologies in the workplace. Additional funding is required to complement the skills and experience of the proposed staff delivering required Tier 1 training.
- Recording and reporting is critical to ensure SA Water can demonstrate competency of operational staff and be well placed to deliver associated reporting to key stakeholders. With the introduction of a new learning management system, additional funding will support the administrative reporting for training programs within the business.

A significant investment has already been made to improve Technical Training at SA Water. It requires additional and continued funding support to ensure it builds and maintains a skilled and competent workforce, working safely and delivering essential services for its customers.

3.3 Our recommendations

SA Water recommends the final determination addresses the issues with the Cardno report and the Draft Determination, namely:

- Recognition that SA Water has achieved the operating efficiency targets set by the Commission in 2016 and therefore reapplying this efficiency target is double counting the saving ($6.9 million pa)
- Correcting the adjustments to the base year:
  - 2019/20 committed savings already included in Our Plan submission ($6.9 million)
  - Allwater metro contract ($3 million pa)
  - Electricity savings ($2.6 million pa)
  - Murray Bridge wastewater treatment plant operating costs ($1 million pa)
  - Labour adjustment, including capitalisation ($1.5 million pa)
  - IT savings from 2016-20 ($1.6 million pa).
- Reinstating the additional operating expenditure disallowed:
  - Electricity ($8.8 million pa)
  - IT operating costs from the current approved capital program ($5.6 million pa)
  - Regional customer support ($0.4 million pa)
  - ADP contact ($2 million pa)
  - Asset maintenance ($4.1 million pa)
  - Water networks management ($0.4 million pa)
  - New metro contract savings ($5.4 million pa from 2021/22 onwards)
  - IT operating cost uplift (current capital program) ($2.7 million)
  - Technical training ($0.8 million pa).

4 Benefits from our energy program should be passed to customers, or reasonable electricity allowances must be reinstated

4.1 Our position

The Zero Cost Energy Future program was designed and implemented with the explicit aim of overcoming volatile electricity prices and network charges to lower operational costs and deliver savings for customers. The Commission should allow the full value of the assets built as part of this program to be included in the regulated asset base, so that customers can receive the long-term benefits intended for them. If the Commission chooses not to deliver the benefits of this program to customers, it must provide reasonable electricity allowances in the final determination.

4.2 Context informing our position

The objective of the Zero Cost Energy Future program has not changed. The program's objective remains to neutralise electricity costs – by generating energy for SA Water consumption and selling energy back to the market to offset the cost of the electricity SA Water must purchase – to reduce one of its single largest operational expenses and produce a sustainable saving that can be passed on to customers.

SA Water does not agree with the Commission's interpretation of the *Water Industry Act 2012* and position that this program's assets be excluded from the regulated business. The reason for this is that the Zero Cost Energy Future program uses regulated infrastructure and regulated land to generate electricity for regulated activities or to reduce the net energy costs of regulated activities, for the benefit of customers of the regulated business. By deeming this project non-regulated, the risk to regulated customers is removed but so are the benefits.

The program's arrangements have been designed to best achieve its foundational objective given the operational requirements of a 24/7 business, the complexity and maturity of technology, prevailing electricity market conditions, and the constraints of the National Electricity Rules. Extensive cost benefit analysis demonstrates that this objective is achieved through maximising export capability at a smaller number of sites compared to maximising self-consumption.

The limited interpretation of the Zero Cost Energy Future program as a merchant electricity generation service fails to appreciate the other side to the transaction – the simultaneous purchasing of electricity for consumption at various other sites. Viewing both the exports and imports collectively supports consideration of the program's primary purpose being to reduce electricity expenditure through a natural hedge against price risk, for the benefit of the regulated customer.

The assumption that the regulatory framework shields customers from potential risk associated with this program is flawed. If assumptions on the benefits fail to materialise, the impact is on SA Water's cash flows and not customers.

SA Water has been widely commended by stakeholders and customers – including the Commission and members of its working group – for developing this program and innovating to bring costs down for customers. Should the Commission retain its position on disallowing these energy assets from being included in the regulated business, it should consult with stakeholders and customers on their views of not having the program's benefits flow through to the regulated business.

Should the Commission choose not to deliver the benefits of this program to customers and disallow it from the regulated business, it must provide reasonable allowances for electricity.

Zero Cost Energy Future complies with Guidance Paper 8

In preparing for the revenue determination, the Commission released a series of guidance papers to instruct SA Water on how its revenues would be determined. Guidance Paper 8 provides a conceptual agreement to the recovery of costs related to Zero Cost Energy Future, noting that:

- The primary objective of Zero Cost Energy Future program is to reduce overall electricity costs, with a secondary objective of reducing variations in its electricity costs.
- Determining whether or not a particular project in that wider program is prudent will therefore be based on SA Water demonstrating that the forecast benefits are reasonably expected to exceed the costs for that project.
- As the main purpose of Zero Cost Energy Future is to reduce SA Water's total electricity costs, forecasting the electricity costs that it would avoid as a result of Zero Cost Energy Future is a critical input into the cost-benefit analysis for each project. Part of that avoided cost will relate to energy purchase costs and part will relate to avoided electricity network charges. SA Water may also derive benefits from exporting energy to the grid at times where energy produced is not required for own use.

It is critical to understand and recognise that each of these points is consistent with SA Water's current proposal:

- The primary objective of Zero Cost Energy Future is to maximise benefits to customers; done by maximising electricity generation and minimising electricity consumption when the price is high and shifting electricity consumption to periods where the spot electricity price is low. Therefore, reducing the volume weighted cost of electricity for its entire customer base and reducing exposure to wholesale price volatility.
- Financial analysis demonstrates a net benefit to customers of around $19 less on their annual bill, with the opportunity for this reduction to increase over time. SA Water has in place robust systems and processes that minimise exposure to wholesale market variations.
- The proposed approach to Zero Cost Energy Future allows SA Water to maximise the value of these assets through optimising generation and consumption scheduling across our locations.

Zero Cost Energy Future is a regulated activity

The Commission has determined that the Zero Cost Energy Program is a non-regulated activity. There were three overarching reasons put forward by the Commission in support of its decision:

1. The primary benefit of Zero Cost Energy Future is to earn revenue in the wholesale market, as opposed to:
   a) offsetting SA Water's electricity purchases as a retail operation cost; and/or
   b) generating electricity in order to provide water and sewerage retail services
2. SA Water are operating a merchant electricity generation service; and
3. Customers should be adequately shielded from the risk that net benefits are not realised.

Each of these points is addressed in the follow sections.

The primary benefit of Zero Cost Energy Future is to earn revenue in the wholesale market

The key driver underpinning Zero Cost Energy Future is to minimise the cost of electricity in the provision of water and sewerage services. This has not changed since the project was approved.

Zero Cost Energy Future involves maximising electricity generation and minimising electricity consumption when the price is high and shifting electricity consumption to periods where the spot electricity price is low. This strategy reduces the risk from volatility in the wholesale market that SA Water currently faces, averaging down the volume weighted cost of electricity for its entire customer base. This benefit would be passed through to customers.

The Zero Cost Energy Future arrangements have been designed to best achieve this objective given the technology, SA Water operating schedules, electricity market conditions and constraints within the National Electricity Rules. Since the cost of electricity at sites that don't have behind the meter electricity generation is the wholesale spot price and revenue earned from generation (whether it is used on site or exported) is the wholesale spot price of electricity, export of electricity from a site with generation is a direct $/MWh for $/MWh offset for the cost of electricity between the sites that do have generation and those that don't. This provides a natural hedge against electricity price movements.

Business case analysis demonstrates that, to maximise net benefits, fewer sites provides a lower overall long run marginal cost for the installed assets, whilst still generating the same volume of electricity and providing the same level of self-consumption. Hence customer benefits are maximised.

The total net benefit to customers from Zero Cost Energy Future is approximately $19 per annum on the average residential bill. Operating the SA Water business, including the Zero Cost Energy Future assets, to maximise the self-consumption of electricity generation would increase the net cost of electricity required to provide water and wastewater services to customers by approximately $5/annum on the average residential bill.

SA Water is operating a merchant electricity generation service

A merchant electricity generator sells the electricity it generates directly to the wholesale market and does not have a long-term agreement to sell its electricity generation to a customer. In SA Water's case, generation is located behind the meter and the electricity generated is used first to supply the electricity needed to provide services to customers and then used to offset the equivalent electricity consumed at non-Zero Cost Energy Future sites.

The conclusion SA Water operates as a merchant generator ignores the aspect of purchasing significant volumes of electricity for SA Water asset consumption. Through selling electricity exports into the wholesale market as well as purchasing electricity from that market in the same market financial settlement period, SA Water's proposed approach results in a natural hedge against price risk.

The Zero Cost Energy Future approach should not be viewed as a merchant generation service, but instead as a 'virtual' net settlement arrangement, such that portfolio net consumption is minimised through the balancing of electricity generated from Zero Cost Energy Future assets with electricity purchased for water/sewerage retail services.

The average annual production of electricity from the Zero Cost Energy Future generation assets is approximately 70% of the average annual electricity consumption to operate the

SA Water regulated business; therefore, all generation will be virtually offset with other asset electricity consumption.

Under the proposed model, based on historic portfolio consumption, SA Water expects to export from its electricity portfolio between 23 per cent to 33 per cent of all electricity generated by its behind the meter assets. This is expected to fall to between 3 per cent and 12 per cent over the regulatory period as new water and wastewater assets are built meaning that the majority of electricity produced will be used directly or indirectly across the asset portfolio.

Customers should be adequately shielded from the risk that net benefits are not realised

The proposed Zero Cost Energy Future model has been developed to minimise electricity price risks to customers, which has been and will continue to be significant.

The benefits estimated under the Zero Cost Energy Future model derive from the electricity generated by those assets and are not solely dependent on the revenue earned from exporting a proportion of electricity generation to the wholesale market. Market price volatility affects equally both the value of generation and export and the cost of imports for SA Water and this correlation virtually offsets any price risk. As electricity prices rise the cost of electricity used to operate our assets rises as does the revenue from excess generation, and vice versa.

SA Water's energy management practices, which have been refined since SA Water started paying for electricity on the spot market, provide capability and flexibility to schedule electricity consumption at SA Water sites to ensure that the benefits of Zero Cost Energy Future assets are maximised for customers. Through these systems, SA Water can effectively manage the risk of wholesale market price volatility through quick responses to unexpected changes in the market.

Under the regulatory framework, customers are protected from the estimated benefits not being realised through the combination of a number of arrangements regarding expenditure allowances. In simple terms, if the assumptions on the price and volumes variables used for estimating Zero Cost Energy Future benefits turn out to be incorrect over the regulatory period, then SA Water bears this risk as the benefits of Zero Cost Energy Future are locked in for the duration of the price determination.

If SA Water were to follow a maximisation of self-consumption of electricity produced by the Zero Cost Energy Future assets then it would be exposed to greater spot price risk as electricity generation and the scheduling of electricity consumption to minimise cost would no longer be correlated with the market spot price. This increases the market risk and puts at risk the net customer benefits to be realised.

Zero Cost Energy Future effectively removes this risk through becoming self-reliant on electricity procurement plus removes the costs of having to hedge across wholesale electricity prices. Overall, there is a significant reduction in the amount of energy which needs to be procured under the Zero Cost Energy Future model.

SA Water sought an independent assessment from KPMG on the issues the Commission has raised with the Zero Cost Energy Future program. This assessment forms 1 to this report.

It has been difficult to understand the Commission's workings on the energy allowances reinstated back into the determination.

The Commission has advised they back-calculated 'network and other charges' for 'major pumping and other sites' largely derived from 2018-19 electricity actuals data documents submitted by SA Water. This aggregates all non 'wholesale energy' charges and treats them as if they were network charges.

In the Draft Determination the Commission assumes it is appropriate to apply a $0.25 reduction in network charges for every $1 of wholesale electricity spend. This saving rate has been taken from the Zero Cost Energy Future program business case and is contingent on SA Water's ability to use on-site generation and smart controls from the optimisation and control software to peak-shave maximum demands. It is not based on a direct reduction in network charges from reduced energy usage. If the Commission moves forward with determining Zero Cost Energy Future program as a non-regulated investment it must remove this assumed saving from the energy allowance.

The majority of network charges are set based on fixed charge components or on the capacity utilised (either agreed or actual usage). Capacity is typically charged based on the maximum instantaneous usage during predominantly peak periods (12pm to 9pm business days, November to March). Given the 24/7 nature of SA Water's business and energy usage (based on customer demand for services), it is not generally possible for SA Water to reduce peak utilisation even when the overall energy consumed drops. However, it is expected that the Zero Cost Energy Future program is able to deliver savings against these network charges by generating electricity (or dispatching from batteries) at times when customer demand is highest, reducing our peak impact on the network and therefore reducing network charges. For this reason, the network charge savings SA Water has referenced in its Zero Cost Energy Future business case are tied to the Zero Cost Energy Future generation and dispatch capabilities rather than to the volume of energy generated. This means, without the Zero Cost Energy Future program in the regulated business, this saving disappears and is replaced by a commercial rate in which the non-regulated energy business is to sell energy in the market. The Commission will need to allow a reasonable, commercial rate that covers all of the energy costs, and a reasonable, non-regulated rate of return, regardless of who is selling this energy to SA Water.

Benchmarking the 2018/19 base year network charges for major pumping and other SA Water sites excluding the ADP and other non-network related costs, against recent historical years shows that the network charges have remained relatively stable despite climatic variation which significantly affects energy usage and usage charges.

It is therefore incorrect to assume that the proposed network savings can be delivered simply by reducing the amount of energy consumed from the base year as proposed by the Commission. Both ElectraNet and SA Power Networks are regulated by the AER and SA Water has extremely limited ability to negotiate commercial terms or rates with these suppliers. The network tariffs for both suppliers are provided under regulated pricing frameworks.

The Commission's working documents also indicate that, in benchmarking the reduction in electricity costs against the normalised base year, it has adopted the 2018/19 volume weighted average price published by the AER as the baseline market price for 2018/19 ($128/MWh). The Commission has applied this $128.00/MWh volume weighted average price when benchmarking SA Water's average performance of $96.20/MWh for the 2018/19 financial year, calculating a performance factor of 25 per cent.

The commission applied this percentage performance methodology to calculate a factor to adjust market price and the ASX forward market to determine the year on year percentage change in price. The ASX forward market prices are time weighted average prices. it is not valid to calculate the year on year percentage change between a volume weighted average market price and a time weighted average market price.

Given the methodology chosen, the Commission must use the Time Weighted average price for 2018/19 published by AEMO in the 2019 South Australian Electricity Report when benchmarking SA Water's performance. The figure provided in this report by AEMO is $109.80 (reference). Using the time weighted average price from AEMO provides a

12 per cent performance factor, rather than the 25 per cent performance figure calculate by the Commission.

In setting SA Water's expected performance, the Commission compares the normalised base year $/MWh cost of $80.52 against the forward market rate for 2019-20 of $103.55/MWh, calculating a performance factor of 22 per cent. This performance factor is applied across all future years to adjust the ASX forward market prices to an effective rate for SA Water's performance. It is erroneous to apply the benchmark rate, baselined on the normalised base year $/MWh (2018/19) to a forward market price for a completely different year (2019/20) as the prices and market dynamics are completely decoupled. Given the circumstances, the benchmark performance factor of 12% would be a far more appropriate factor to adopt as this is a like-for-like comparison that can be applied forwards. It should be noted that SA Water does not agree with the approach that the Commission has adopted in its methodology for electricity cost allowances. SA Water's initial proposal was underpinned by a bottom up approach to electricity costing which is far more rigorous.

The revised average electricity prices per MWh based on the methodology used by the Commission are itemised in the following table.

Table 9 Revised average electricity prices per MWh

$/MWh	2019-20	2020-21	2021-22	2022-23	2023-24
ASX Futures	103.55	87.37	70.64	75.06	75.06
Draft Determination	80.95	68.00	55.08	58.38	58.38
Corrected values using the ESCOSA methodology	91.12	76.89	62.16	66.05	66.05

4.3 Our recommendations

1. Determine the Zero Cost Energy Future program as a regulated activity, including all assets, costs and savings as regulated.
2. Any assessment of the benefits of Zero Cost Energy Future, or the assessment of SA Water's future electricity costs without Zero Cost Energy Future, should use the prevailing wholesale market rate and appropriate risk factors.

5 Expenditure to minimise water service interruptions must reflect customer and stakeholder priorities

5.1 Our position

While the performance and reliability of SA Water's water network is strong, continued investment at current levels is required to maintain this level of performance and achieve sustainable improvements that minimise the impact of service interruptions on our customers. The Commission should allow the expenditure for water network management and the complementary investment in smart network technology, pressure management and isolation valves proposed in Our Plan, which reflects customer willingness to pay, community sentiment, the expectations of the South Australian Government, and the Commission's own expressed priority. The value and outcome of earlier asset investment that the Commission supported should also be fully recognised in the regulated asset base.

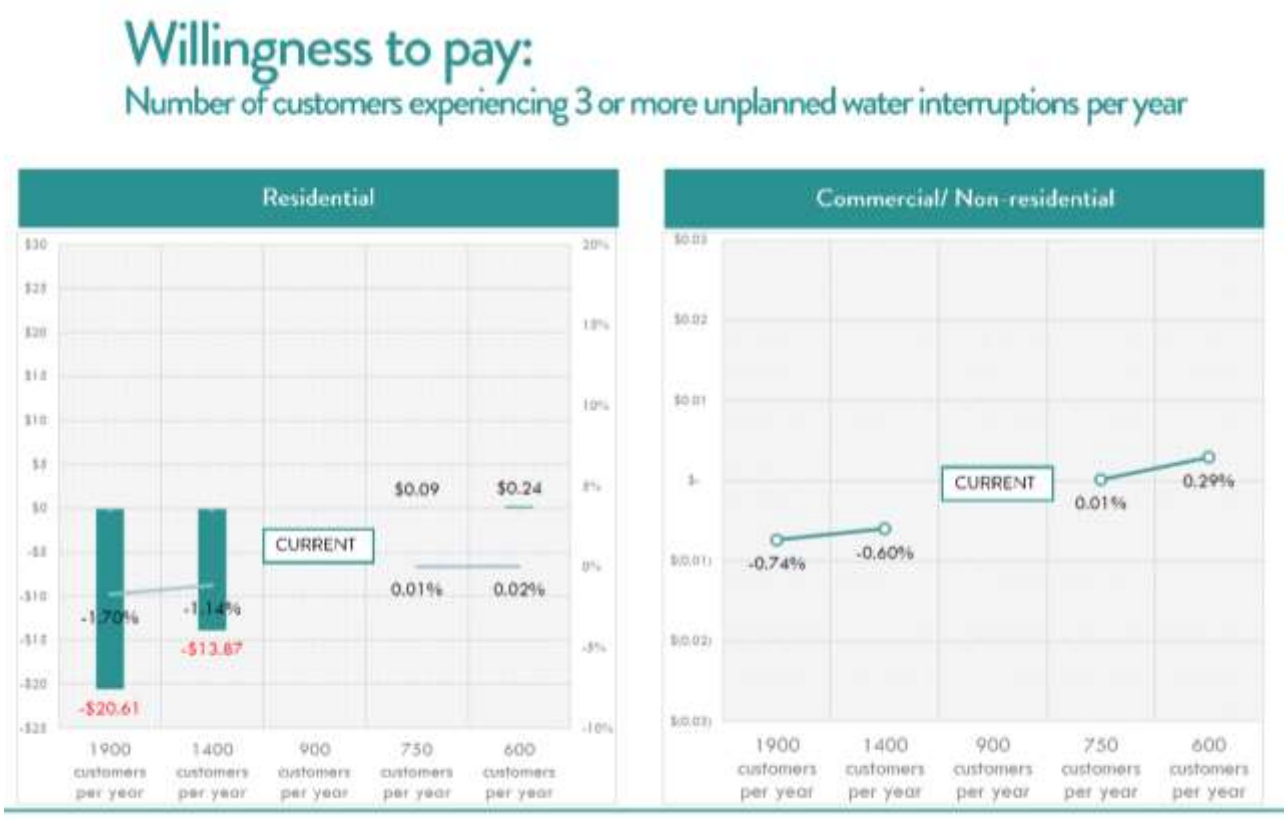
5.2 Context informing our position

Customer feedback and willingness to pay for investment in water network management is clear:

- Customers do not want to see a decrease in level of service from current standards
- Customers value efforts to minimise service interruptions and want to see less of them
- Customers expect these outcomes to be achieved for around the same amount of expenditure
- Customers have a small willingness to pay to improve the level of service for customers who experience multiple temporary service interruptions in a 12-month period

The figure below shows that they have a small willingness to pay for an increase in service and expect a big reduction to their water bills should levels of service decline.

Figure 3 Willingness to pay: Number of customers experiencing 3 or more unplanned water interruptions per year



The South Australian Government's position is also clear:

- "Under the leadership of the SA Water Board and the new Chief Executive David Ryan improvements will be made to ensure South Australians are getting the best possible service." Minister for Environment and Water David Speirs, 22 December 2019
- "I look forward to working alongside (SA Water) to lower water prices, improve the reliability of infrastructure and open reservoirs for recreation." Minister for Environment and Water David Speirs, 22 December 2019
- "While I have seen how SA Water response teams are working harder than ever before to respond to breaks, we now need to look at how to further reduce them and limit the broader impact to the community." Minister for Environment and Water David Speirs, 12 July 2019
- "We want to ensure that South Australians are getting the best possible service when it comes to their water provider." Minister for Environment and Water David Speirs, 12 July 2019
- "We do not think that maintaining the status quo is acceptable and that's why this independent review will take place." Minister for Environment and Water David Speirs, 12 July 2019

The Commission itself wrote to SA Water on 9 December 2019 to seek assurance on the measures SA Water was taking to improve water network service performance and minimise the frequency and duration of interruptions and their impacts on customers.

Our Plan proposed the same level of expenditure as the 2016–20 regulatory period (in keeping with customer feedback), with emphasis on new technologies and a targeted

approach to asset renewal, to achieve a sustainable performance standard improvement of 1,750 customers experiencing three or more unplanned interruptions per year.

The Draft Determination reduces the proposed capital expenditure on metropolitan water mains replacement from $16 million per annum to $10 million per annum, which will reduce service performance and result in around 3,720 customers experiencing three or more service interruptions per annum by 2024. The reduction will also leave SA Water less able to mitigate community impacts such as damage to private property and traffic disruption and prevent it from actioning recommendations from AMCL's independent review (cited above) into water main management that would develop objectives and work practices that reduce total community impact.

The Draft Determination also disallowed $22 million of expenditure on water main renewal in the 2016-2020 regulatory period from being added to the asset base for an additional four years. The decision to prioritise this expenditure was made in line with customer and South Australian Government feedback, and in consultation with the Commission. The Commission did not express any concern about this expenditure at the time it was conceived, or through any ongoing consultation since that time.

Importantly, the performance outcomes the Commission has now set as the benchmark for the 2020-24 period were only achieved due to the total investment made during the 2016-20 period. Those performance outcomes cannot now be adopted as a benchmark if the original expenditure is disallowed and the proposed expenditure is reduced.

Stakeholder feedback on the Adelaide central business district smart network of sensors and the outcomes it has achieved – and the proposed expansion of the program – is also clear and acknowledged in the Draft Determination:

- *'It (the CNC) was, however, supportive of the proposed works on smart networks, pressure management, and valve installations.'*
- *'The Technical Regulator submitted that it was supportive of smart network infrastructure.'*
- *'Consumers SA commended the increasing use of smart networks to assist in determining where likely bursts will occur and to enable SA Water to fix them before they happen.'*

The Commission's decision to reduce the allowed expenditure on this program is based on Cardno's incorrect claim that no financial analysis was included in the business case. The business case contained financial analysis and was validated on those financial (as well as non-financial) benefits.

The business case did not contain societal impact modelling as it was not available at the time of submission but is now complete and shows SA Water has reduced societal impacts of main breaks and reduced corporate and community risk exposure. The outputs from this modelling exercise have then been used to update the original NPV analysis, which now shows an incremental NPV (over the base case) of $10.86 million. That is a net benefit to SA Water, SA Water customers and the community of $10.86 million over and above the costs incurred. Further to this significant benefit, SA Water expects to increase this benefit going forwards through refining the operational response model. Current financial modelling estimates a further $20.77 million benefit to SA Water, SA Water customers and the community. This is a $31.63 million net positive from these investments. Note that this analysis excludes savings related to a reduction in non-revenue water lost through leaks and main breaks.

5.3 Our recommendations

1. Reinstate the $37 million of proposed water network management expenditure to the full $144 million investment proposed in Our Plan 2020, including:
    - Reinstating the $24 million removed from the water mains renewal program to the full $118 million.
    - Reinstating the $13 million removed from Smart Networks and Pressure Management to the full $27million proposed.
2. Allow the $22 million of 2016-20 additional water main renewal investment to be added to the regulated asset base from 2020.

6 An effective contingent project mechanism will add value to regulatory processes

6.1 Our position

SA Water supports the introduction of a contingent project mechanism to manage potential asset investment triggers that are likely but not certain. While supportive of the initiative, it requires further develoment before it can be useful. The process for approving contingent projects needs to be cost effective, straightforward and facilitate timely asset responses to emerging service needs or economic drivers. It should not delay progress of projects. Acting in the best interests of all customers and to support economic development for the state, the Commission should move the following projects from the contingent list and include them in the final determination:

SA Water considers the following projects should be included in the final determination:

- Regional water quality improvement
- Expanding recycled water
- Upper Spencer Gulf capacity upgrade
- Regional non-potable water quality upgrades (subject to clarification from the cross-government task force)
- Kangaroo Island desalination plant (noting the revised trigger for the project to proceed).

6.2 Context informing our position

A robust supporting process will help achieve the intent of the contingent project mechanism and provide guidance for all parties on the criteria and process used to determine when projects are approved and the capital and operating expenditure allowances are adjusted. This process should be clear and simple, and pre-determine realistic trigger criteria to avoid creating additional and unknown costs in efforts to try and satisfy subjective or fluctuating measures.

Vitally, this process should be structured so asset planning and investment decisions can be responsive to changes in the external environment and customer investment decisions, to ensure private investment that will contribute to the state's economic development are not deterred, delayed or derailed. When looking to invest in South Australia, private industry seeks certainty from service providers like SA Water, and overly lengthy approval processes that make it hard for infrastructure to keep pace with private developments disincentivise investment and growth.

Projects identified as contingent in the Draft Determination that should be approved as prudent investments necessary to meet customer expectations and operational needs are:

- **Regional water quality improvement**

  SA Water has submitted a revised multi-criteria analysis (MCA) tool to the Commission for its review and are in the process of determining its expectations for a long term plan that can be prepared and implemented with expenditure on these initiatives to proceed in line with that plan and using the MCA tool in 20202-2024.

Disallowing this project undervalues regional water customers and places them at a disadvantage to metropolitan customers.

- **Expanding recycled water**

  The proposed expansion of the Glenelg to Adelaide Pipeline to increase the amount of recycled water made available in the metropolitan area is directly in keeping with our customers' values and the clear feedback they consistently provided throughout the engagement process.

  Disallowing this project rejects customer priorities and feedback and contradicts the Commission's own position that customer feedback must drive investment.

- **Upper Spencer Gulf capacity upgrade**

  Increasing capacity in this part of the water supply network is essential to meeting demand driven by large commercial customers, and reinforcing security of supply for existing customers.

  Disallowing this project jeopardises economic development in the region and is out of step with the Commission's existing approach to assessing and approving investment in growth initiatives.

- **Regional non-potable water quality upgrades**

  Presently subject to clarification by a cross-government task force.

- **Kangaroo Island desalination plant**

  Following the summer bushfire activity on Kangaroo Island and government priorities and response measures that may see other contributions to this important water security project, a revised business case based upon this updated information will be submitted in the coming weeks.

6.3 Our recommendations

1. Continue working together to define the processes supporting the contingent project mechanism to ensure they are cost effective, straightforward and facilitate timely asset responses.
2. Based upon support by customers, preventing delay to state economic growth and linkage to external funding, approve the capital investment (and associated operating expenditure) for the following projects:
   - Regional water quality improvement
   - Expanding recycled water
   - Upper Spencer Gulf capacity upgrade
   - Regional non-potable water quality upgrades (subject to clarification from the cross -government task force)
   - Kangaroo Island desalination plant (noting the revised trigger for the project to proceed).

7 Customer feedback must be valued more consistently

7.1 Our position

An understanding of a diverse cross section of customer priorities and feedback is essential for an effective and sustainable contemporary business and should inform ongoing business planning, and the approach of a regulator. The Commission should seek to balance the inputs gathered from different stakeholder segments during the regulatory process, to ensure the fair representation of customer voices in decision making and prevent undue emphasis being placed upon single sources. Earlier work to scope and commit to appropriate customer engagement frameworks ahead of the next regulatory cycle will clarify the processes to be followed and areas of influence for all stakeholders.

7.2 Context informing our position

Our Plan was shaped by the most extensive customer engagement program to date. From 2017 to 2019, SA Water 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 SA Water delivers. This included:

- Over 1000 customers sharing feedback through 25 workshops, drop-in sessions and public events held across the state in metro and regional areas.
- More than 11,000 customers completing two detailed surveys to identify key issues and test willingness to support investment in significant projects and service enhancements.
- A 22-member Customer Working Group meeting through six full day sessions over the course of one year, to discuss complex ideas like service standards.
- Over 13,000 people visiting the Water Talks website to view source material and reports on the engagement process, as well as participating in polls and providing feedback.

This mixed-method approach has maximised the range of insights gathered, with special interest groups and peak industry bodies meaningfully engaged, and the large-scale activities ensuring the results are statistically representative of our customer base.

The Commission's staff attended and observed a majority of engagement activities and regularly provided feedback on the process, including making requests that saw SA Water engage the Commission's preferred consultant to design and deliver additional choice modelling research activities.

Importantly, the Commission's own independent expert reviewed our customer engagement process and confirmed it aligned with best practice in the modern Australian utility sector.

The key themes that consistently carried through customer feedback were:

- Low and stable pricing
- Safe, quality water
- Reliable water and sewerage services
- Protecting the environment
- Support, fairness and great customer service.

Customers told SA Water 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

The results and feedback gathered through this engagement process informed our business planning and the related initiatives in Our Plan.

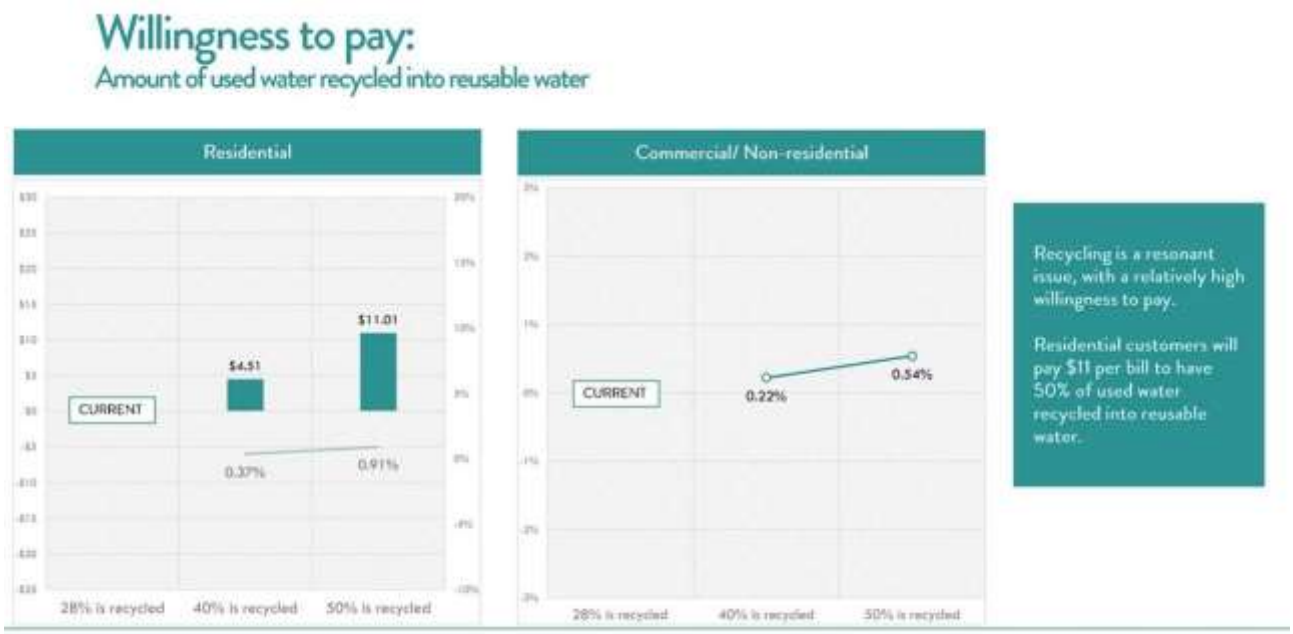
The Commission has expressed the importance it places upon reflecting customer feedback in business planning and decision making, and the Draft Determination acknowledges *"SA Water is best placed to understand the aspects of service that matter most to its customers"*.

Below SA Water sets out the decisions in the Draft Determination that are out of step with customer feedback and expressed willingness to pay.

Expanding recycled water is directly in keeping with customer feedback.

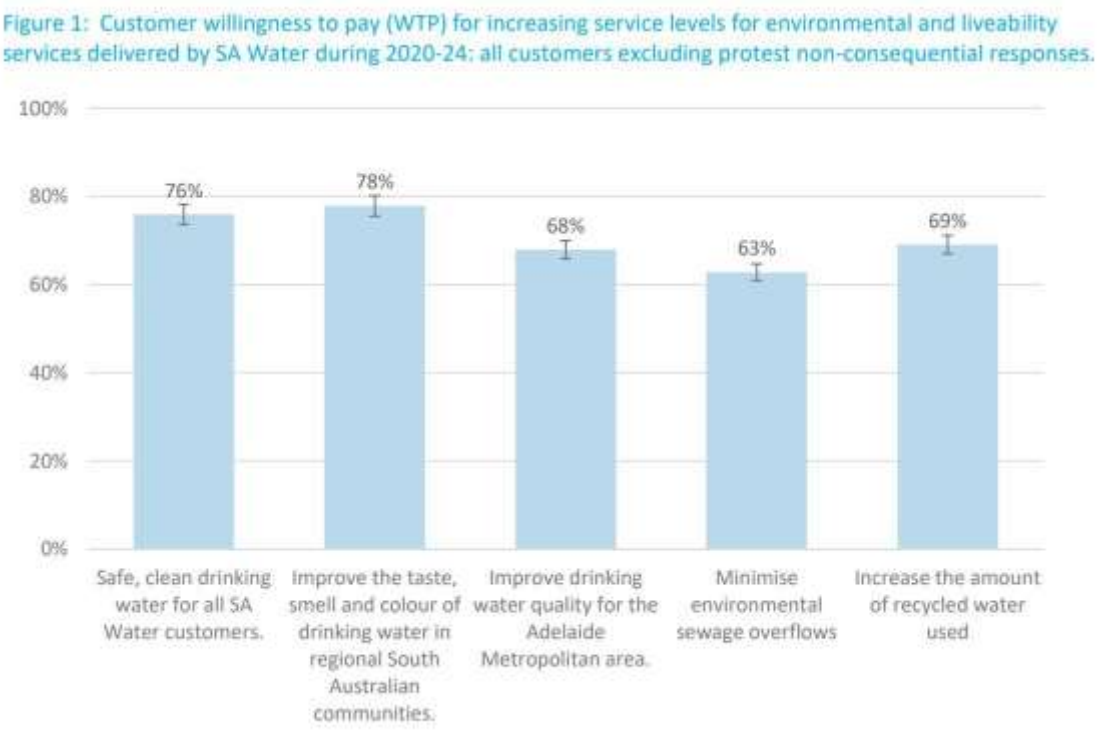
The proposed expansion of the Glenelg to Adelaide Pipeline to increase the amount of recycled water made available in the metropolitan area is directly in keeping with customers' values and the clear feedback they consistently provided throughout the engagement process. In the *What Matters to You* survey, conducted in 2018, customers told SA Water they were willing to pay to increase current levels of water recycling. In fact, it was one of the initiatives SA Water tested that customers felt most strongly about, especially residential customers.

Figure 4 Willingness to pay: Amount of used water recycled into reusable water



It was retested again in a further study, *Would You Invest In This?*, where 69 per cent of customers said they were willing to pay the $10 million cost SA Water proposed in Our Plan 2020 to increase water recycling.

Figure 5 Willingness to pay: *Would You Invest In This?*, Marsden Jacobs, 2019



Disallowing this project rejects customer priorities and feedback and contradicts the Commission's own position that customer feedback must drive investment.

SA Water acknowledges that the GAP expansion may not be as well developed as the Commission would like in order to approve it at this time. An alternative is to consider a $10 million program of funding to pursue any recycling water projects that demonstrate benefits during 2020-2024 in order to increase the amount of water SA Water recycle, in line with our customers' expectations and willingness to pay.

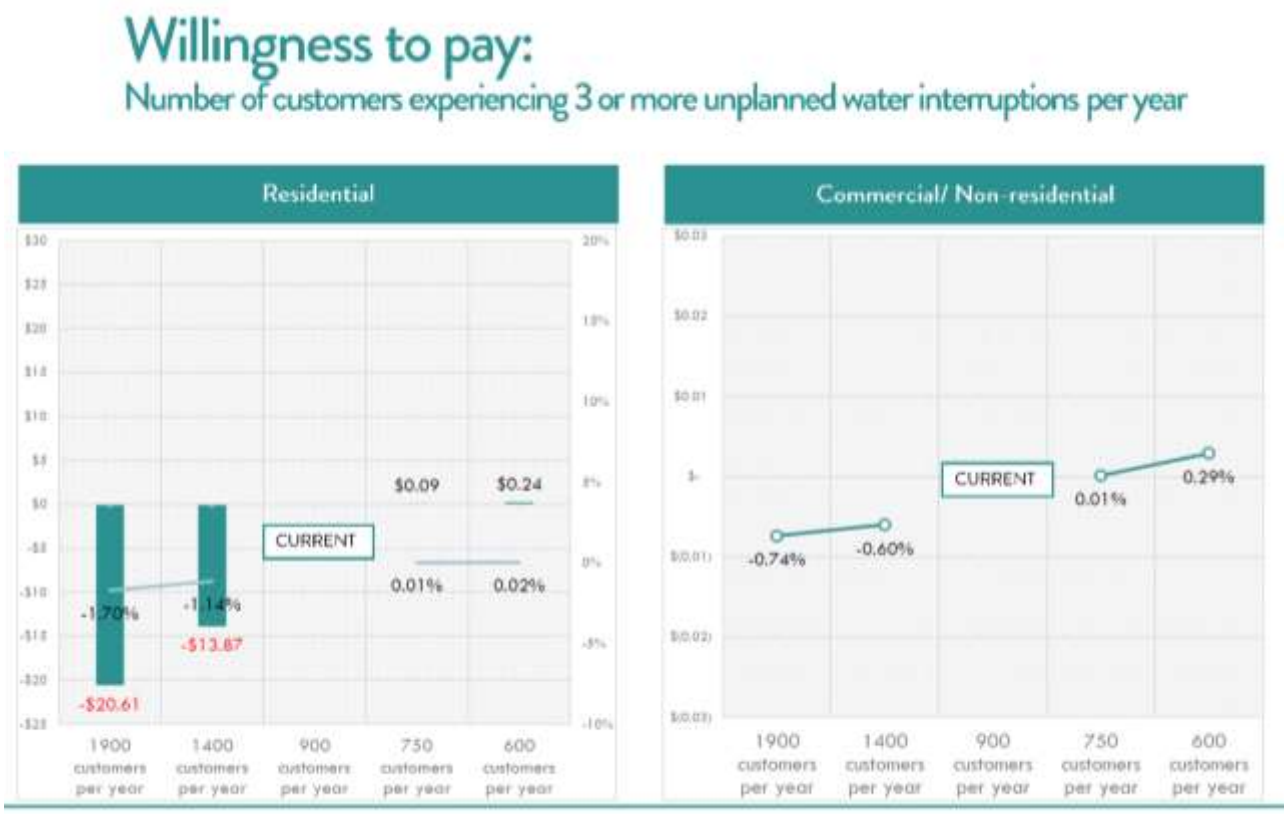
Investing in water main renewals to maintain current service levels, in keeping with customer feedback and public sentiment.

Customer feedback and willingness to pay for investment in water network management is clear:

- Customers do not want to see a decrease in level of service from current standards
- Customers value efforts to minimise service interruptions and want to see less of them
- Customers expect these outcomes to be achieved for around the same amount of expenditure
- Customers have a small willingness to pay to improve the level of service for customers who experience multiple temporary service interruptions in a 12-month period

It is apparent from the graphs below that both residential and non-residential customers have very little willingness to pay for service levels above the current level they were receiving at the time the survey was conducted. However, they expect large decreases in their bills if service was to be decreased, particularly for residential customers.

Figure 6 Willingness to pay: Number of customers experiencing 3 or more unplanned water interruptions per year



Our Plan proposed the same level of expenditure as the 2016–20 regulatory period (in keeping with customer feedback), with emphasis on new technologies and a targeted approach to asset renewal, to achieve a sustainable performance standard improvement of 1,750 customers experiencing three or more unplanned interruptions per year.

The Draft Determination reduces the proposed expenditure on water mains from $16 million per annum to $12 million per annum, which will reduce service performance and result in around 3,720 customers experiencing three or more service interruptions per annum by 2024. The reduction will also leave SA Water less able to mitigate community impacts, such as damage to private property and traffic disruption which the Commission saw as key feedback to SA Water when SA Water engaged with customers in 2016 and 2017 about their concerns with the increased water main breaks.

The Draft Determination also disallows the additional $22 million SA Water invested in water main renewal at that time on the basis that same customer feedback – which clearly advised both SA Water and the Commission that customers expected to see an improvement in water main performance, without an increase to their water bills, as well as protection from property damage and traffic interruptions.

The decision to prioritise this expenditure was made in line with customer and South Australian Government feedback, and in consultation with the Commission, and within the regulatory determination allowance so as not to impact customer bills adversely. The Commission did not express any concern about this expenditure at the time it was conceived, or through any ongoing consultation since that time. The consultant opinion the Commission has adopted is not informed by the customer, government and regulator consultation undertaken at the time.

Importantly, the performance outcomes the Commission has now set as the benchmark for the 2020-24 period were only achieved due to the total investment made during the 2016-20 period. Those performance outcomes will not be achievable with the Commission's proposed level of expenditure and is not in line with customer expectations expressed above and throughout our engagement with customers around water main performance from 2016 through to now.

Investing to upgrade regional non-drinking water supplies to drinking water standard, and improve the aesthetic quality of some regional drinking water supplies, in keeping with customer feedback around social justice and fairness.

In consultation with the Commission, both of these initiatives were tested twice during our engagement program. The results of both surveys are set out below.

Figure 7 Willingness to pay: Upgrade water supply for 650 regional properties from non-drinking water to drinking water; What Matters To You, Haymakr, 2018

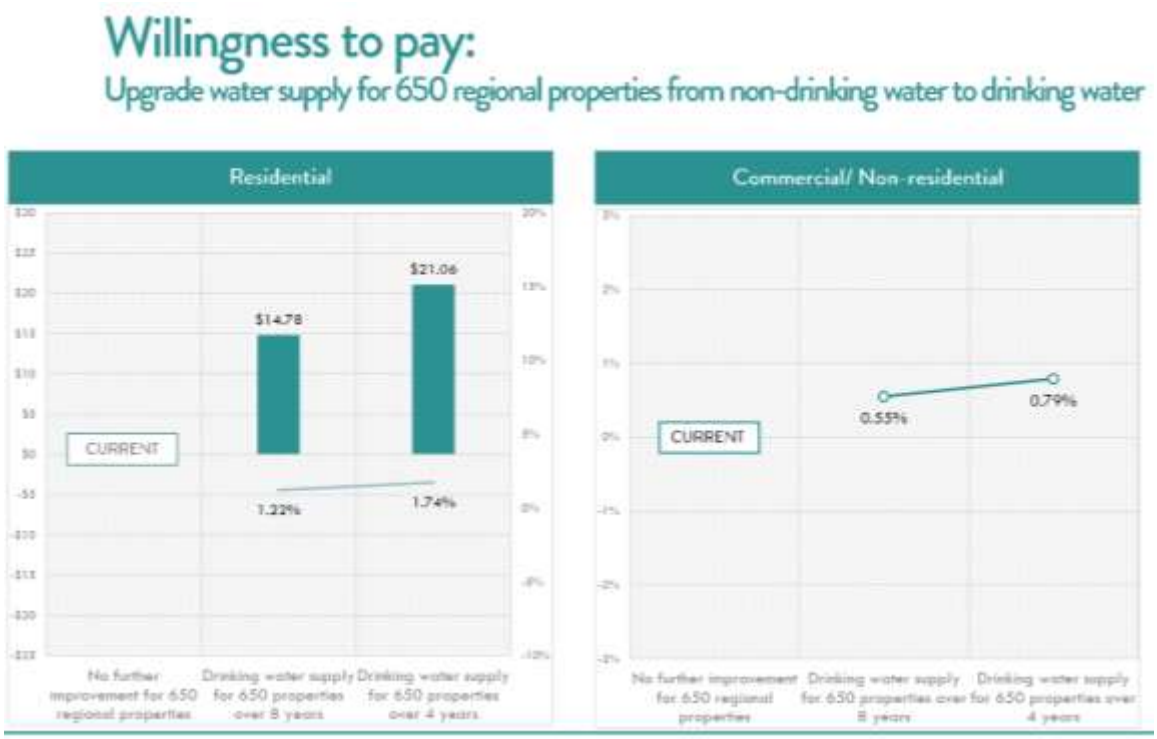


Figure 8 Willingness to pay: High quality drinking water for regional areas with poorer quality; What Matters To You, Haymakr 2018

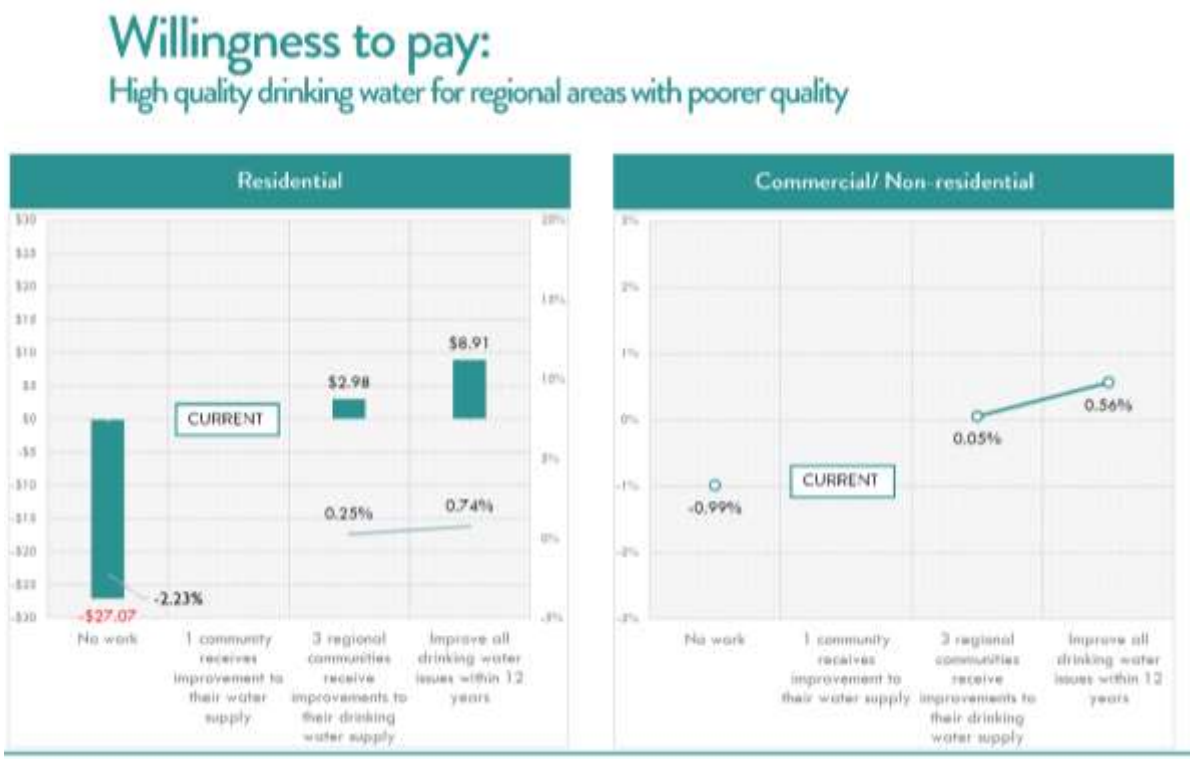
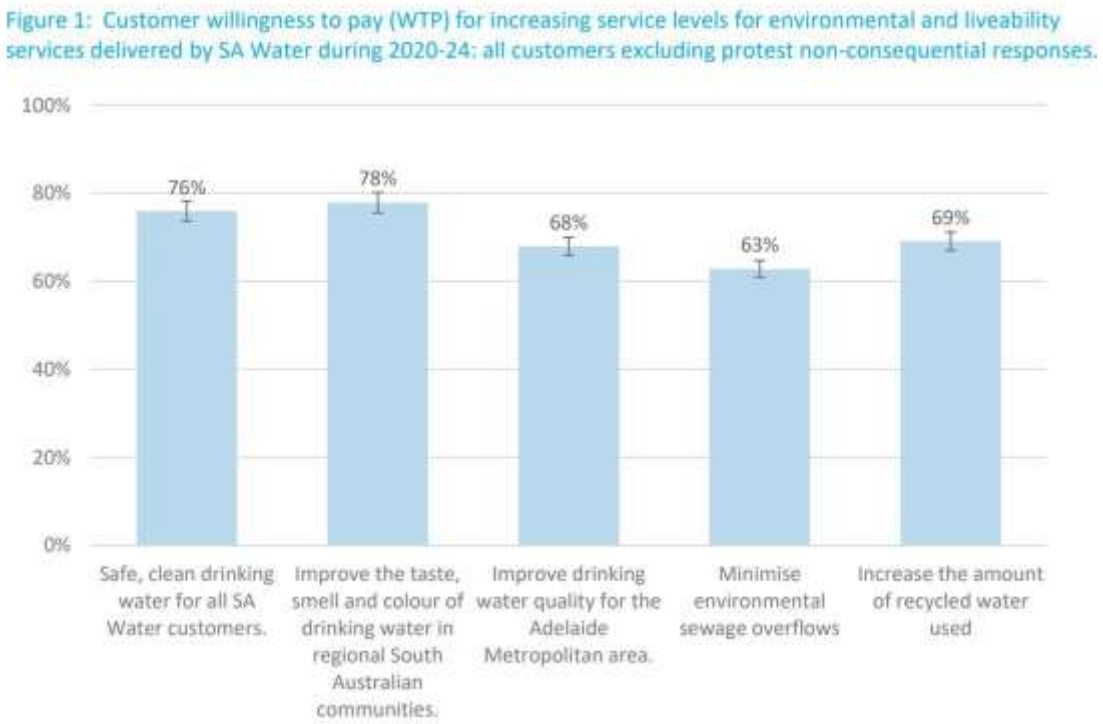


Figure 9 Willingness to pay; *Would You Invest In This?*, Marsden Jacobs, 2019



As is apparent from the above graphs, there is a strong willingness to pay for regional water quality upgrades, particularly from residential customers. These initiatives were again two of the most strongly supported on the What Matters To You? survey conducted by Haymakr in

2018. When retested again in 2019 by Marsden Jacobs, customers again confirmed their willingness to pay the costs SA Water submitted in Our Plan 2020 for these initiatives.

The results of these two surveys echoes sentiment SA Water, and independent engagement consultants, have consistently heard from customers from 2014 when SA Water started engaging with metropolitan and regional customers about the levels of service they receive. South Australians strongly believe all customers deserve the same levels of service regardless of where they live. There is strong support from metropolitan customers for their regional counterparts when it comes to fairness and equity.

In addition to SA Water's customer engagement program, the Commission piloted a new 'Customer Negotiation Committee' format to allow a small group of customer representatives to deep dive on key concepts and initiatives directly with members of SA Water's executive leadership team. This occurred over the course of 24 meetings that were overseen by an independent probity advisor. The Committee's Chair provided a report documenting reflections on the process and views on proposed projects. While the report should form one source of information evaluated by the Commission, of equal or greater importance are the expressed priorities and willingness to pay of more than 12,000 customers.

Although the Committee's independent probity advisor concluded the process was very well run and managed, both from a probity perspective and generally, and that SA Water's business plan was rigorously tested, the Chair documented a gap in expectations around the Committee's scope, role and effectiveness.

Defining the framework and expectations for a rigorous community engagement program to support the next regulatory period should happen immediately after the review of this cycle's process. The resulting clear and early guidance on the Commission's expectations will allow a robust program to be developed, set accurate expectations for all parties involved, and avoid additional unbudgeted activities being identified late in the process.

7.3 Our recommendations

1. Noting that the Commission's staff were involved in and supported SA Water's most extensive customer engagement program to date, the findings of this engagement should be used in making the final determination.
2. There should be proportionate consideration of the 12,000 customers who took part in this engagement against other respondents to the Commission's engagement process.
3. SA Water to gather the lessons learned from the current determination process to inform an appropriate customer engagement framework ahead of the next regulatory cycle.

8 Service standards must reflect allowed expenditure

8.1 Our position

SA Water supports well considered service standards that provide assurance to customers on the quality and reliability of their water and wastewater services and the way SA Water responds to and resolves issues. The development and structuring of service standards should be consistent and recognise that adequate capital and operating costs are required to meet them.

8.2 Context informing our position

The Draft Determination emphasises maintaining levels of service, rather than improving them, yet introduces new standards and increases the targets on others. At the same time as new and increased standards have been introduced, the necessary investment in the water and wastewater networks to enable the continuation of current levels of performance has been either disallowed entirely, reduced, or moved to a contingent list.

An example of this is the proposed reduction of investment in water main renewals in the metropolitan area by $37.2 million to $107 million, and $0.4 million opex reduction, which will negatively impact our ability to meet the following proposed service standards:

- Water network unplanned interruption frequency
- Water network unplanned interruption duration
- Water service interruption frequency – worst served customers
- Water leakage performance
- Water event responsiveness – high priority – metropolitan Adelaide
- Water event responsiveness – high priority – regional areas
- Water event responsiveness – low priority – metropolitan Adelaide
- Water event responsiveness – low priority – regional areas
- Water service restoration timeliness – metropolitan Adelaide
- Water service restoration timeliness – regional areas.

The Commission has proposed service standard targets based on an average of performance outcomes for the last four years. Taking an averaging approach necessarily means SA Water would fail targets that are set this way at least 50 per cent of the time. If the Commission wishes to retain this approach, a more appropriate way to describe these measures would be 'average performance indicator' rather than 'target'.

The Commission has also introduced a 75th percentile rule over a four-year period. This percentile is currently only applicable to reliability standards, which makes the application of targets against other measures inconsistent. For consistency, the percentile rule should be applied across all proposed measures where practicable. This will have the benefit of allowing a measure to be missed in one out of four years within a regulatory period, while still being considered acceptable performance without having to demonstrate best endeavours.

Additional work is required to shape reasonable and effective measures for reporting water leakage (with the proposed measure not being a good indicator and out of step with existing national reporting requirements), and water aesthetics (which are subjective). The inclusion of regional water aesthetic measures should also reflect that the proposed

investment in regional aesthetics has been made subject to the contingent project mechanism, with no link evident between expenditure and these service standards.

A methodology that excludes from the calculation those jobs missed due to customer requests should be adopted and reported as a separate item for information only, with no requirement to demonstrate best endeavours.

In keeping with a 2018 request from the Commission, the development of a business intelligence portal to automate the delivery of performance data for 18 service standard areas was budgeted. New measures proposed in the Draft Determination have not been budgeted for and will increase system development and deployment costs by more than $500,000 and are unlikely to be completed by 1 July 2020. The costs of this additional work should be recognised, along with the additional time needed to complete them and any interim reporting methods required.

In addition, the water aesthetics measures proposed can only be introduced if the expenditure associated with improving regional aesthetics is also allowed.

8.3 Our recommendations

1. Adequately allow additional capital and operating expenditure to enable the service standards proposed in the Draft Determination to be achieved.
2. Where adequate additional investment is not provided, revert to all 2016-20 service standard targets with no increases, and discard new service standards where funding has been reduced, disallowed, or moved to contingent projects.
3. Continue working together to define the intent, methodology and application of new service standards to ensure the approach is reasonable and practical.
4. Allow the additional reasonable costs associated with implementing technology and system amendments to automate regulatory reporting.
5. Continue working together to define reasonable and practical interim reporting arrangements reporting while systems are developed and deployed.

9 Changes to the Water Retail Code are positive for customers

9.1 Our position

Proposed changes to the Water Retail Code will deliver positive outcomes for customers and SA Water supports this. The Commission should recognise the costs of configuring systems to implement the proposed changes and achieve the intended outcomes, and that measures will need to be in place to accommodate the practical and commercial implications of some changes.

9.2 Context informing our position

Amendments to the Code that impact 'pay by dates' will require updates to SA Water's billing systems to facilitate the extended timeframes and manage the impacts to outstanding debt levels. A quote to design and deploy the required system changes has been received from the billing system vendor and will be shared with the Commission, along with the delivery time frame. A transition period will be required to ensure continued compliance with the existing Water Retail Code while system changes are implemented.

Proposed changes to the Code cover the reporting of service payments to customers such as leakage allowances, high water use payments, and insurance payments where SA Water covers the costs of a customer's excess, or in instances where customers are not insured, and commercial and privacy considerations will need to be reflected as the style of reporting is determined.

Further discussions will continue with the Commission on the detailed retail code issues.

9.3 Our recommendations

1. Allow all reasonable costs associated with implementing technology and system amendments to comply with the proposed changes to the Water Retail Code, with quotes to be obtained and provided to the Commission.
2. Continue working together to define reasonable and practical interim arrangements and future reporting mechanisms.

10 Delivering a customer price reduction must be balanced with ongoing financial viability

10.1 Our position

Expenditure savings from lower global interest rates and financing costs should be passed through to customers, but the burden of a loss-making corporation arising from an outdated rate of return methodology must not be passed to taxpayers. The Commission should fix long standing errors in the methodology exposed by unprecedentedly low rates of return, to ensure the ongoing financial viability of the SA Water business and therefore the reliable, cost-effective provision of essential water and sewerage services that protect public health, enable modern lifestyles and contribute to economic recovery and growth.

10.2 Context informing our position

The Draft Determination will result in the SA Water business operating at a loss.

The Draft Determination indicates a near $nil profit from the consolidated business when excluding non-cash gifted assets and contributed assets (table 10 below). This is despite South Australian taxpayer's approximately $13 billion investment in the business, and SA Water's actual gearing ratio of 53 per cent being much lower than the regulatory benchmark of 60 per cent.

Table 10 Forecast profit before tax excluding non-cash revenue based on Draft Determination

Nominal ($m)	2020-21	2021-22	2022-23	2023-24
Profit Before Tax excluding non-cash revenue	-13.87	-0.78	4.71	11.18

The regulatory model (assuming the regulatory assumptions) used for the calculation of the tax allowance, generates a low regulatory profit (see Table 11) of approximately $28.8 million across the regulatory period (approximately $7.2 million per annum). This includes revenue of $148.7 million from gifted assets and contributed assets (for the regulatory period, included as part of the tax allowance calculation although not part of the regulatory revenue allowance - see table 12). When this revenue is excluded, the regulatory profit is negative (see table 11).

The low regulatory profit is further evidenced in the very low tax allowance (building block component) of $4.7 million for the entire regulatory period (Table 13).

Table 11 Taxable income implied in tax allowance calculation as per Draft Determination

Nominal ($m)	2020-21	2021-22	2022-23	2023-24	Total
Water	6.6	7.5	9.2	12.6	35.8
Sewer	4.8	-4.8	-0.1	-6.9	-7.0
Total Taxable Income	11.4	2.7	9.1	5.7	28.8

Note: Figures in this table may not sum to the total due to rounding.

Table 12 Gifted assets and contributed assets implied in tax allowance calculation as per Draft Determination

Nominal ($m)	2020-21	2021-22	2022-23	2023-24	Total
Gifted Assets and Contributed Assets	41.8	32.5	39.0	35.4	148.7
Taxable Income excluding Gifted Assets and Contributed Assets	-30.5	-29.9	-29.9	-29.7	-120.0

Note: Figures in this table may not sum to the total due to rounding.

Table 13 Tax allowance as per Draft Determination

Real Dec 18 ($m)	2020-21	2021-22	2022-23	2023-24	Total
Drinking Water	1.1	0.4	1.5	0.9	3.9
Sewerage	0.8	0.0	0.0	0.0	0.8
Total – Draft Determination	1.9	0.4	1.5	0.9	4.7

Note: Figures in this table may not sum to the total due to rounding.

The Draft Determination will see financial metrics deteriorate.

The reduction in revenue due to the regulatory rate of return methodology proposed in the Draft Determination (2.36 per cent) is approximately $180 million per year (including tax adjustment) compared with the rate of return proposed in Our Plan (3.59 per cent). This revenue reduction could increase as the final rate of return could be lower due to market factors.

When considering financial viability, the Commission has calculated the forward-looking benchmark ratios based on the Draft Determination (table 14). The Commission places greater emphasis on the interest coverage ratio (and notes that other regulators follow a similar approach) in assessments of financial viability.

The Commission concludes that the interest coverage ratio meets the investment grade criteria for each year of the regulatory period other than the last year, but ignores that the ratio steadily deteriorates over the regulatory period and within a span of four years falls below investment grade. This is despite a significantly lower interest rate on debt that is used to calculate the ratio in 2023-24 (based on how the Commission calculates the 10-year trailing average).

The Commission also notes the real funds from operations (FFO)/net debt is primarily driven by the real return on equity and says *"it is unclear how credit rating agencies are taking the current low interest rate environment into account when issuing these ratios"*.

Other than being significantly lower than the target level, the real FFO/net debt ratio deteriorates throughout the regulatory period (similar trend to the real interest coverage ratio) and in 2023-24 is approximately half the value of the target level. While it is not known how credit rating agencies will account for low interest rates, SA Water does not believe this ratio should be easily dismissed as they have been widely used as an assessment of financial viability in the past.

Table 14 Estimated financial ratios: benchmark ratios anticipated for the RD20 period

	Target	2020-21	2021-22	2022-23	2023-24
Real Interest coverage	>2.2	2.4	2.3	2.21	2.1
Real FFO / net debt (per cent)	>7.0	4.5	4.1	3.9	3.6
Net debt / RAB (per cent) benchmark	<70	60	60	60	60
Return on capital employed (per cent)		4.8	4.4	4.3	4.1

The Draft Determination inappropriately considers equity injections as viable risk mitigation.

The Commission notes one of the risk mitigation mechanisms available to SA Water is *"the use of equity injection"*.

The Commission also identifies several other sources of financial viability problems:

> *"There are several potential sources of a financial viability problem under a binding rate of return framework. Timing mismatches between revenue and costs can possibly arise due to regulatory settings, weaker-than-expected demand and/or higher-than-expected expenses (for example, from project cost overruns, lower productivity or mistimed capital expenditure). Also, a deficient level of cash could arise due to higher-than-expected borrowing costs (for which limited or no hedging protection exists)."*

The use of equity injections should not be considered as a possible solution for financial viability issues caused by regulatory settings. The regulatory model should provide sufficient revenue/cashflows for the business to operate without relying on equity injections.

The Draft Determination incorrectly notes market tools can hedge inflation risk.

The Draft Determination states SA Water has *"the ability to use financial tools and products (to hedge inflation and interest rates and to access overdraft facilities from financial institutions)"*.

Inflation swaps are a financial product that can only be used to mitigate inflation risk if the inflation estimate uses the inflation swap rate (i.e. actual inflation can be hedged using the market swap rate), so this product is not available for SA Water to use to hedge the difference between the Commission's inflation estimate and the market swap rate. Therefore, this tool is not available to help manage short-term cashflow issues and would not aid financial viability.

In order to mitigate cash flow mismatches, the Draft Determination has also put forward inflation-indexed products, presumably in reference to inflation-indexed debt. However, Appendix 4 of the Draft Determination argues the market for Commonwealth Inflation-

Indexed Bonds is relatively small and thus would suffer from liquidity premiums. It can therefore be argued that the market appetite for BBB corporate inflation-indexed debt would be even less and suffer from a larger liquidity premium. This additional cost due to the large liquidity premiums is not factored into the current cost of debt allowance.

The Draft Determination flags a welcome review of the methodology used to forecast the inflation estimate.

The Commission's decision to review the methodology used to forecast the inflation estimate is welcome and SA Water looks forward to continuing to work with the Commission on this.

SA Water notes on 7 April 2020, the Australian Energy Regulator (AER) announced that it had commenced a formal review of its approach to estimating inflation[6]. The AER noted that although it had completed a review in 2017, recent changes in data and information it relies upon when estimated expected inflation supports the commencement of a new review. The AER explained that its new inflation review would consider three primary questions:

- What method should the AER use to estimate expected inflation?
- Does the AER's regulatory framework successfully deliver the current target—a real rate of return outcome?
- Should the AER instead target a nominal or hybrid return?

Given the above, the Commission is requested to also reconsider its method for estimating the inflation adjustment to provide a more balanced outcome considering the current economic environment.

The Draft Determination proposes a glide path approach that is out of step with market expectations.

While the inflation forecast improves with the adoption of a glide path, the chosen glide path still has a significant weighting towards the midpoint of the Reserve Bank of Australia (RBA) target band. This results in an inflation estimate of 2.33 per cent which is significantly different to the current market expectation in the current un-precedented economic times. This variance has significant impact on the dividend returned to the government which is used to fund the delivery of essential public services for the community.

While Frontier Economics discuss a glide path approach in their report (included in Our Plan), they conclude it is unlikely the glide path approach would address substantively the problems identified in the inflation estimate. Therefore it should not be interpreted that Frontier Economics has put forward a glide path approach as a suitable alternative to estimating inflation.

The Draft Determination provides an equity beta that is too low.

The Commission reduced the equity beta from 0.7 to 0.65 in the Draft Determination, reflecting the midpoint of the 0.6 - 0.7 range indicated in Guidance Paper 5. A comparison of the equity beta used by other regulators in Australia, that range from 0.6 to 0.77, calculates an average equity beta of 0.68.[7] Given the lack of consensus amongst the regulators, the Commission should adopt 0.68 as the equity beta.

The Draft Determination's approach to cost of debt calculations should be refined to smooth the impact of market volatility.

[6] AER, Initiation notice – 2020 review of inflation approach, 7 April 2020
[7] Table 8.4 SAWRD20 Draft Decision Statement of Response

The 10-year trailing average cost of debt calculation uses the most recent 10-year BBB rate published by the RBA for future periods. A 60-day average (previous two periods) should be used as the forecast for the future years to reduce the adverse impact any volatility of market rates can have on the forecast. It is noted that the Commission's plan to update the cost of debt each year with actual outcomes, means the impact of the forecast would only be for the current year.

The Draft Determination's proposed annual updates to the rate of return are appropriate.

The methodology proposed by the Commission to update the cost of equity and the cost of debt as part of the annual updates to the rate of return are appropriate.

In addition to reforecasting the long-term inflation estimate, a retrospective correction should be made for any difference between actual inflation outcomes and the forecast inflation estimates. This would align the return on capital with the methodology used to index the regulatory asset base (RAB) and minimise the over/under recovery from customers that will arise from errors in inflation estimating.

The Draft Determination ignores the rates of return from important comparator jurisdictions.

When comparing the rate of return outcomes of other jurisdictions, the Commission has compared[8] (table 15) the outcome under its methodology against the methodologies of the Australian Energy Regulator (AER), the Queensland Competition Authority (QCA), the Office of the Tasmanian Economic Regulator (OTTER), the Independent Competition and Regulatory Commission (ICRC) and the Economic Regulatory Authority of Western Australia (ERAWA).

Table 15 Example of indicative real post-tax rates of return as at 06 Feb 2020

	ESCOSA	AER	ERA	QCA	OTTER	ICRC
WACC (real, post-tax) %	2.71	2.74[540]	2.74[541]	1.91[542]	2.80[543]	2.56[544]

SA Water requested Frontier Economics to provide a report of the findings of the Commission in the Draft Determination. Frontier Economics noted several short comings of the comparative analysis in the Draft Determination[9], namely:

1. Selective comparisons across jurisdictions;
2. Estimates based on the Commission's interpretation of other regulators' methodologies rather than actual regulatory decisions; and
3. Focus on real WACC estimates rather than real return on equity estimates.

Selective comparisons across jurisdictions

The Commission has chosen to omit the outcomes under methodologies of the Independent Pricing and Regulatory Authority (IPART) and Essential Services Commission - Victoria (ESCV). Both of these authorities regulate multiple large water utilities in New South Wales and Victoria and also follow building block approaches to determine the regulated revenue in a regulatory period.

[8] Table A4.1, SAWRD20 Draft Decision Statement of Response
[9] Frontier Economics Report – 15 April 2020

Although it is not clear why the Commission has chosen to exclude the rate of return outcomes of these two regulators, the Commission notes:

> *"As a matter of law, regulators must use rate of return methodologies that meet their legislative requirements and objectives. Those requirement and objectives differ by jurisdiction and by industry."*
>
> *"As well as this, there can be different underlying methodologies followed by regulators. For example, the ESCV makes regulatory determinations under its PREMO methodology."*

We note that as part of the comparative analysis, the approach used by the QCA for the Rural Irrigation Price Review 2020-24 has been considered. For this price review, the QCA use an annuities approach to setting cost allowances, rather than a RAB-based approach, which is a significant departure from the regulatory framework used by the Commission.

Given the above, the rate of return outcomes under the IPART and ESCV methodologies should also be included in the analysis (table 16). This demonstrates that the Commission's position is not balanced across all regulators.

Table 16 Published Post-tax Real Rate of Return of IPART and ESCV

Regulator	Rate of Return	Date	Determination
IPART	3.20 per cent	24 March 2020	2020-24 Draft Determination for Sydney Water[10]
IPART	3.20 per cent	24 March 2020	2020-24 Draft Determination for Water NSW Greater Sydney[11]
IPART	3.20 per cent	10 March 2020	Draft Determination for Hunter Water[12]
ESCV	3.68 per cent	24 Feb 2020	2020-23 Draft Determination for South Gippsland Water[13]

Estimates based on the Commission's interpretation of other regulators' methodologies rather than actual regulatory decisions

The estimates provided in the comparative analysis do not reflect actual real WACC determinations used by regulators in other jurisdictions to set regulated prices. Instead they represent the outputs of the Commission's interpretation of the regulator's methodology as at 6 Feb 2020. This can be problematic for a number of reasons:

1. It is not possible to anticipate how other regulators may adapt their rate of return and/or inflation methodologies in response to the highly unusual market conditions that currently prevail;
2. The analysis disregards actual recent (final or draft) determinations made by other regulators.

Focus on real WACC estimates rather than real return on equity estimates

[10] 2020-24 Draft Determination – Sydney Water
[11] 2020-24 Draft Determination – Water NSW Greater Sydney
[12] 2020-24 Draft Determination – Hunter Water
[13] 2020-23 Draft Determination – South Gippsland Water

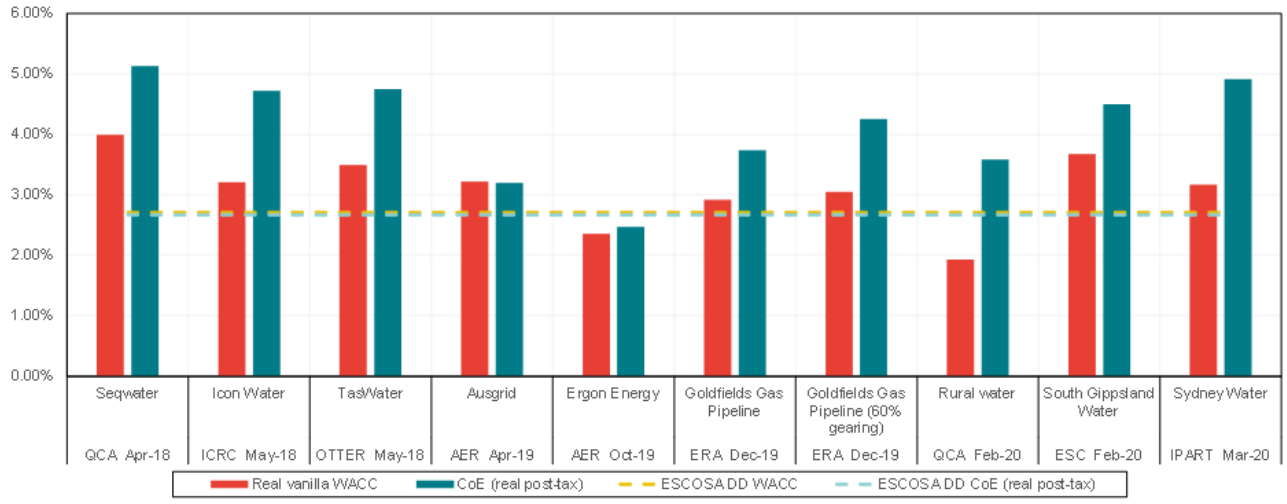
Frontier Economics also highlights that the analysis carried out by the Commission only compares real WACC estimates across jurisdictions.

> *"However, as we explained in our January 2020 report, the two major weaknesses in ESCOSA's WACC methodology relate to the way that ESCOSA estimates:*
>
> - *The nominal return on equity; and*
> - *Expected inflation, for the purposes of converting the nominal return on equity allowance into a real return on equity allowance.*
>
> *Hence, in our view, the ESCOSA cross-check would be a more useful and instructive tool if it were to also compare real return on equity estimates across jurisdictions."*[14]

An alternate analysis by Frontier Economics is given below (Figure 10). The analysis compares actual/draft real rate of return outcomes and the real post-tax cost of equity of other jurisdictions against the real rate of return outcome and the real post-tax cost of equity set out in the Draft Determination.

The analysis shows that recent determinations in other jurisdictions do not support the real WACC allowance used by the Commission in the Draft Determination. Moreover, the analysis reveals that the real return on equity allowances set by nearly all other regulators in recent determinations are materially higher than the real return on equity used by the Commission in the Draft Determination.

Figure 10 Comparison ESCOSA's estimates of real vanilla WACC and real post-tax cost of equity with estimates in other recent regulatory decisions



10.3 Our recommendations

1. Adopt an approach and key measures for the financial building blocks that generates a rate of return that ensures SA Water remains financially viable.
2. Consider the rate of return outcome alignment with other jurisdictions based on actual/draft determinations including decisions made by IPART and ESCV.
3. Reconsider the method for estimating the inflation adjustment to provide a more balanced approach and one which is more closely aligned with general regulatory practice for similar water businesses.

[14] Frontier Economics Report – 15 April 2020

4. Making a retrospective correction for inflation, as well as reforecasting the long-term inflation estimate as part of any annual updates.
5. Reassessing the equity beta to reflect an average of regulatory outcomes across Australia (0.68).
6. Using a 60-day average (previous two periods) for the forecast years in the calculation of the 10-year trailing average of the cost of debt.

11 Minor issues with the Commission's revenue model require correction before the final determination

11.1 Our position

Various errors and issues with the revenue model and calculations have been discussed with the Commission and are documented below. SA Water will continue to work with the Commission on any of the technical issues/errors we find.

11.2 Context informing our position

We have identified a number of anomalies with the Commission's revenue model used to calculate the revenue allowances for the Draft Determination. These are detailed below and SA Water will continue to work with the Commission on ensuring the revenue model is calculating revenue allowances correctly for the final determination.

Segment allocations for capital expenditure

The Draft Determination revenue model allocates 67 per cent of corporate capital expenditure to the water segment and 33 per cent to the sewerage segment. This is inconsistent with the assumptions used in RD16 and Our Plan which all allocated 50 per cent of corporate capital expenditure to each segment. The 50 per cent allocation to each segment best reflects how corporate assets are shared across our business.

The Draft Determination revenue model also fully allocates capital expenditure for the Northern Adelaide Irrigation Scheme (NAIS) to the sewer pipes asset category. This does not reflect the underlying investment in NAIS which is a third (33 per cent) sewer pipes and the remainder (67 per cent) is sewer non-pipe assets.

The combined impact of these changes is an adjustment of around $4 million per annum from the water segment to the sewerage segment.

2019-20 inflation assumption

To be consistent with previous regulatory determinations and regulatory guidance, the Draft Determination revenue model should use March 2018 to March 2019 actual inflation for the 2019-20 inflation assumption of 1.3 per cent rather than the inflation assumption used of 1.9 per cent.

The impact of this adjustment is a decrease in the revenue allowance of around $800,000 per annum.

Depreciation method

The Draft Determination references a change in depreciation approach from an end of year method used in previous determinations, to a mid-year approach. However, the method does not appear to have been adopted in the Draft Determination revenue model.

The final determination should clarify whether the depreciation method is changing and if so, please amend in the revenue model.

Sewerage useful lives

The weighted average useful lives for the sewerage segment in the Draft Determination revenue model do not appear to be correctly updated for the 2016-2020 capital expenditure. This is causing the sewerage revenue allowance to be around $3 million per annum higher than it should be.

Useful lives of assets constructed in 2016-2020

A weighted average useful life method (first introduced in the 2016-20 regulatory period) continues to be used to calculate the depreciation allowance of SA Water's allowable revenue. A key assumption of the weighted average useful life method is the application of prescribed average useful lives for new assets.

Since submitting Our Plan SA Water has identified that the prescribed average useful lives do not fully reflect the actual useful lives of the assets built or acquired over the 2016-2020 regulatory period. Overall, new non-pipe and sewerage pipe assets have longer useful lives and new corporate assets have shorter useful lives.

A disconnect between regulatory assumptions and actual useful lives effectively alters the timing of the depreciation allowance which may lead to future price pressure for customers. SA Water's concern is customers would still be paying for assets that are no longer in use at the same time as also needing to fund replacements for those assets. Further, SA Water would be earning a return on assets no longer in service which is not in the long-term interests of customers.

To avoid this pressure the Commission may wish to consider an enhanced approach to rolling forward capital expenditure. This enhancement would see actual average useful lives of capital expenditure during the regulatory period being rolled forward into the weighted average useful lives. This would fairly balance the recovery of the investment for customers by more accurately depreciating assets over their useful lives.

The table below shows the impact of the enhanced approach on the revenue allowances outlined in Our Plan. Although this adjustment would result in an increased depreciation allowance in the 2020-2024 regulatory period it would result in lower depreciation allowances in future regulatory periods.

Table 17 Impact of enhanced approach to useful lives

Asset class	Our Plan weighted avg useful life	Proposed weighted avg useful life	Variance (years)	Approx revenue impact p.a. 2020 -24
WATER	Yrs	Yrs	Yrs	($M, nominal)
Pipes	57.4	57.3	*-0.1*	-
Non-pipes	36.2	39.0	*2.8*	-$5
ADP	48.6	-	-	-
Corporate	9.6	4.8	*-4.8*	$17
SEWER				
Pipes	62.9	63.3	*0.4*	-
Non-pipes	28.3	28.9	*0.6*	-$1
Corporate	9.4	4.7	*-4.7*	$16
TOTAL				**$27**

SA Water has highlighted the enhancement with Commission staff for consideration as part of the 2020 regulatory determination.

Tax method

The Draft Determination proposes a change to the method of treating tax losses compared to RD16. RD16 allowed for tax losses (refunds) within a segment provided the

overall business did not make a tax loss whereas RD20 is proposing to offset tax losses in one segment to the other segment, creating cross-subsidisation. Whilst SA Water is indifferent to the method applied, earlier guidance of a changed approach would have been preferable.

The Draft Determination also incorrectly states that SA Water's submission had small/zero tax allowances with an accumulation of tax losses. SA Water's submission included around $25 million per annum of tax allowance (with no tax loss), compared to the Draft Determination allowance of $1 million per annum (with sewer making a loss).

A broader issue for further investigation is whether the occurrence of tax losses in the revenue model for a specific segment is consistent with the intent of the National Water Initiative (NWI). Section 64(ii) of the NWI requires water pricing and institutional arrangements which ensure sufficient revenue streams are being allowed for efficient delivery of services. Tax losses arising from the Draft Determination revenue model mean sewer customers are effectively subsidising water customers to a small extent.

Additionally, the Draft Determination tax allowance is only 0.1 per cent of allowable revenue, despite SA Water being required to pay the corporate tax rate of 30 per cent. This may warrant further consideration, particularly in the context of low rates of return.

Approach to revenue comparisons

The Draft Determination adopts present values to compare revenue, operating and capital expenditure across periods. Under this approach RD16, Our Plan and the Draft Determination use different rates of return to discount values to the present value dollars.

This approach is reasonable in a period of general financial stability, however recently rates of return have been more volatile resulting in present values being less comparable.

More specifically as the rate of return has deteriorated over this period, present values of Draft Determination revenues and expenditures, all else being equal, are likely to be higher than RD16 and Our Plan due to the lower discount factors alone. Present value dollars should therefore only be used with consistent discount factors across time periods to ensure it is an accurate comparison.

Presentation of revenue change – community concessions

Our Plan proposed the community concession CSO revenue be removed from the Commission's revenue control to reflect the way this revenue is applied to benefit customers is a matter for Government. This proposal was accepted by the Commission in the Draft Determination.

However, the revenue change in the Draft Determination is understated because the 2016-2020 revenues have not been normalised for the change in community concession approach.

It is estimated the revenue change is understated by around 1 per cent for the water segment and 4 per cent for the sewerage segment.

SA Water acknowledges this is a presentational matter and does not impact the allowable revenues calculated in the Draft Determination revenue model.

Presentation of revenue change – regulatory adjustment

Our Plan outlines an $18 million regulatory adjustment for the sale of temporary water entitlements made during the 2016-2020 regulatory period.

Whilst the Commission supports the regulatory adjustment in the Draft Determination it is not shown in the present value of the 2020-2024 revenues and as a result the change in revenue is understated in the Draft Determination (present value of $3,047 million used instead of $3,030 million for 2020-24 revenues).

Revenue controls

In Our Plan SA Water proposed the water revenue cap be based on a volumetric sales component and a fixed revenue component based on customer numbers as it does not meet the requirements of the Pricing Order for a total revenue cap.

SA Water acknowledges the Pricing Order is technically a limiting factor the way it is currently worded and will discuss this with Government.

11.3 Our recommendations

SA Water recommends that the Commission:

1. Correct the corporate capital allocations to 50 per cent water, 50 per cent sewer.
2. Correct the Northern Adelaide Irrigation Scheme allocations to 33 per cent sewer pipes, 66 per cent sewer non-pipes.
3. Correct the inflation assumption from 1.9 per cent to 1.3 per cent.
4. Clarify whether the depreciation method is changing and if so, please amend in the revenue model.
5. Update the sewerage useful lives to reflect 2016-2020 capital expenditure.
6. Update useful lives to reflect actual useful lives.
7. Adopt RD16 tax method and ensure a reasonable tax allowance is made.
8. Consider using comparable present values for comparing revenues and expenditures between periods.
9. Consider normalising RD16 revenues for CSO change in order to make comparisons between periods accurate.
10. Include the sale of temporary water licences in the quoted Our Plan revenue numbers.
11. Consider proposed changes to revenue controls once the Government is consulted on wording of the Pricing Order.

12 The regulatory environment must be responsive to impacts of the COVID-19 pandemic on the global and local economy.

12.1 Our position

The COVID-19 pandemic is changing the landscape in which SA Water operates, and will also require new and different priorities.

SA Water will be integral to the economic recovery of South Australia during and after the pandemic. The final determination needs to ensure SA Water is able to respond appropriately, and in time.

12.2 Context information our position

Impacts of the global COVID-19 pandemic are reaching all corners of modern day life.

SA Water's expertise in planning and incident response, coupled with its continual focus on efficient work practices and a transition to activity based working introduced around three years ago, has seen SA Water successfully implement distancing measures appropriate for different areas of the business to help slow the rate of transmission within the community, while maintaining reliable services. While earlier operating expenditure to position for these work practices has been successful, the unprecedented impacts of mobilising an entire workforce in this way at one time may bring new investment requirements.

As mechanisms designed to provide structure and rigour, the regulatory process and final determination are almost at odds with the flexibility and agility now required across the economy and everyday life.

It is likely that decisions and processes suited to normal times may need to adjust to reflect the unusual temporary measures required of an economy-wide recovery effort, or even a permanent 'new normal'.

How this will contribute to and facilitate a post-COVID-19 recovery effort, and if existing processes and approaches will enable this need to be considered for the final determination.

SA Water will play an important role in state's recovery from COVID-19, both socially and economically. Not only is SA Water maintaining essential services, but also supporting customers as they deal with debt and hardship. SA Water is expanding its support program to manage many more customers experiencing hardship and offering extended payment terms for customers who are unable to pay their bills. SA Water will play a key role to support the state recover economically. Over 4,000 South Australians are employed either directly by SA Water or for companies who provide services for SA Water and it is important that SA Water maintains these important roles in delivering essential services. SA Water is also bringing forward planned expenditure, where reasonable, on infrastructure to support local businesses at this time when they are struggling to find work.

12.3 Our recommendations

Proposed expenditure and financing cost reductions in the Draft Determination will restrict SA Water from providing the assistance the state needs at this time and SA Water requests that this is taken into consideration in the final determination.

13 Conclusion

The Draft Determination has negative impacts for customers, services and South Australia. It proposes a $177 million reduction per year in SA Water's allowable revenue, a $60 million reduction in operating expenditure and a reduction in capital expenditure of $269 million over four year (excluding Zero Cost Energy Future and capital contributions), when compared to the proposal in Our Plan. As demonstrated in this response, these reductions will significantly impact customer service levels, SA Water's cash flows and financial viability.

Some of these negative impacts are created by relying on incorrect reports and these need to be corrected. In arriving at the expenditure and revenue reductions, the Draft Determination relies heavily on the recommendations in the Cardno review and there are a number of misunderstandings of fact within the findings of their report. The issues with Cardno's findings, and the impact they have had on the Draft Determination, should be addressed for the final determination.

Clear recommendations to fix and achieve a more balanced and sustainable outcome are outlined in this response. SA Water supports the proposed approach for contingent projects although it is seeking five projects excluded from the Draft Determination and classified as contingent projects to be reinstated. SA Water is seeking a proportionate voice for its customers as part of the determination process and requests that the final determination addresses the identified imbalance to ensure the 12,000 customers who took part in SA Water's engagement program are proportionally represented.

SA Water is generally supportive of the service standards proposed in the Draft Determination and is working with the Commission to clarify some of the measures. The targets for these measures need to be reset to a level that can be achieved without the need for additional expenditure which would impact customer prices. SA Water is also supportive of the proposed changes to the Water Retail Code as they will deliver positive outcomes for customers but requests that the final determination address the cost and timing of system changes to allow these changes to be implemented.

The current economic climate has exposed long standing errors in the rate of return methodology and this needs to be addressed in the final determination, in particular, the inflation adjustment. SA Water is supportive of annual adjustments to the regulatory rate of return if this addresses the issues with the current methodology and provides price stability for customers.

The global COVID-19 pandemic has changed the landscape and the Commission must ensure the final determination provides the flexibility to avoid constraining recovery. The final determination will need to consider the role SA Water will play in the state's recovery, both socially and economically. Consideration needs to be given for the necessity to maintain essential services in difficult operational conditions, support for customers as they deal with debt and hardship. and for support economic recovery through employment opportunities and bringing forward investment to support local businesses.

As they stand, the proposed expenditure and financing cost reductions in the Draft Determination will inhibit SA Water from providing the assistance the state needs during the recovery from COVID-19. While savings from current low interest rates should certainly be passed on to customers, errors in regulatory methodology must not be allowed to threaten the long-term financial viability of SA Water and create a burden for South Australian taxpayers.

Appendix A Summary of issues to be resolved

Table 18 Capital expenditure issues to resolve

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination	Issue	Adjustment required
Wastewater Mains Renewal	$67.6 million	$45.1 million	Cardno confused this program with WW opex initiative	$22.5 million
GAP Recycled Water Investment	$10 million	$0 ($10 million on contingent projects list)	SA Water proposed GAP as an example of a project that could help it reach the recycling targets customers value and are willing to pay for. GAP may not be the right solution during 2020-2024 so a program should be funded for SA Water to implement the most prudent and efficient recycling options available in 2020-2024 to meet customer expectations.	$10 million
Happy Valley Water Quality Slow Down of Program	$122.2 million	$80.8 million	SA Water does not disagree with this project being staged over 6 years rather than 4 but there may be timing issues with expenditure yet to be modelled and discussed and the chlorine tank may need to be constructed earlier.	Timing adjustments to be made plus Happy Valley Chlorine Tank allowance may be required

Regional Towns Water Quality	$24.8 million	$0 million (contingent project)	SA Water has submitted a revised MCA tool to the Commission for its review and are in the process of determining its expectations for a long term plan so that can be prepared and implemented with expenditure on these initiatives in proceed in line with that plan and using the MCA tool in 20202-2024.	$24.8 million
Regional Non-Potable Water Supplies	$37.7 million	$0 million (contingent project)	While SA Water agrees that the inter-department review findings should inform decision-making, our customers support, and deserve, the same quality of water regardless of where they live. So SA Water still support this initiative being carried out in 2020-2024 subject to any outcome of the inter-departmental review.	$37.7million
Kangaroo Island Desalination Plant	$22.8 million (plus $0.8 million pa opex)	$0 million (contingent project)	The project is no longer contingent on a capital contribution from a golf course development. Following the summer bushfire activity on Kangaroo Island there are government priorities and	$22.8 million (plus $0.8 million pa opex)

			response measures that may see other contributions to this important water security project. A revised business case has been submitted.	
Upper Spencer Gulf Augmentation	$22.8 million (plus $1.6 million pa opex)	$0 million (contingent project)	Disallowing this project jeopardises economic development in the region and is out of step with the Commission's existing approach to assessing and approving investment in growth initiatives.	$22.8 million (plus $1.6 million pa opex)
Reticulated Water Mains Management (mains replacement)	$112 million	$88 million	This reduction in expenditure is out of step with customer price and service expectations.	$24 million
Reticulated Water Mains Management (Smart Network, Pressure Management and Isolation Valves)	$32.2 million	$19 million	This reduction is based on a combination of misunderstandings of the information provided, and incomplete societal impact analysis (despite the fact the project made sense on financial analysis alone). Societal impact analysis has now been completed and shared with ESCOSA and shows these initiatives should be supported in full.	$13.2 million
Water Tank Structures	$19.7 million	$13.9 million	This reduction is based on a	$5.8 million

			number of factual misunderstandings including the level of risk SA Water carries on this group of assets as a result of underspend last period, and the risk it will overspend due to unknown asset condition.	
IT asset refresh and cyber security	$57.8 million	$48.2 million	Based on a misunderstanding by Cardno of importance of systems to our operations.	$9.6 million
Efficiency targets	5 per cent of total capex already applied to figures submitted	-$54.1 million on top of capex program already reduced by 5 per cent	ESCOSA has applied efficiencies on top of figures that already include a 5 per cent efficiency reduction so they can be embedded in our budgets and delivered.	$54.1 million
TOTAL				**$247.3 million**

*Excluded adjustment for Zero cost Energy Future

**Excludes ex-post adjustments water mains replacement ($22 million) and Western Adelaide Wastewater Network Growth Upgrade ($600,000)

Table 19 Ex post capital review issues to resolve

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination	Issue	Adjustment required
Additional water mains renewal	$22 million	$0 million (in 2020-2024)	This additional expenditure was supported by customers, owner and ESCOSA.	$22 million
Western Adelaide Wastewater Network Growth Upgrade	$12 million	$11.4 million	SA Water does not understand the basis for the $0.6 million disallowed. It is unclear and not well supported.	$0.6 million
TOTAL				**$22.6 million**

Table 20 Operating expenditure issues to resolve

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination adjustment (per year)	Issue	Amount to be reinstated (per year)
Electricity base costs	Included in base year expenditure	-$5.8 million	Based on a factual error. A reduction of network charges ($2.6m) is not possible and have been flat for many years; potential savings are dependent upon ZCEF investment	$2.6 million
Labour base costs	Included in base year expenditure	-$4.1 million (actuarial adjustments of $2.3 million and capitalisation of $1.5 million).	2018/19 labour costed was higher than average by $1.2m.	$1.5 million
IT savings from 2016 -20	Included in base year expenditure	-$1.6 million	The committed savings were made	$1.6 million

			elsewhere and committed, despite these projects not being delivered. Double counting. .	
Murray Bridge WWTP new plant	Included in base year expenditure	-$1.0 million	The opex uplift required has been misunderstood. The $1 million per annum is prudent and efficient incremental to previous operating costs and needs to be reinstated.	$1.0 million
Allwater contract base costs	Included in base year expenditure	-$3.0 million	The 2018/19 pain/gain amount was accrued in 18/19 and already reduced in the base year. Actual field service work volumes were not higher in 2018/19 compared to average.	$3.0 million
2019/20 efficiency	Savings already committed	-$6.9 million	1.5 per cent savings in 19/20 have already been committed through: AGL Contract termination ($6.4m) and business savings from IT yet to be delivered ($1.3m).	$6.9 million
Electricity additional adjustment	Additional opex adjustment	-$8.8 million	Assumed electricity efficiencies are	$8.8 million

			aggressive. A more reasonable forecast needs to be adopted.	
IT savings	Included in 0.5 per cent ongoing efficiency	-$5.6 million	IT enabling projects have been designed to assist SA Water in achieving proposed efficiency targets, they cannot be added on top of the targets. This is not achievable.	$5.6 million
Metro contract further adjustments	Additional opex savings imposed	-5.4 million for 2021/22 onwards	Decision has been based on old information without consulting SA Water. As this project has matured and been costed, these savings are no longer achievable.	5.4 million for 2021/22 onwards
Adelaide desalination plant contract further adjustments	Additional opex required	-$2.0 million	This is already accounted for in the AGL saving accepted by the Commission so cannot include here as well. Double counting.	$2.0 million
IT operating cost uplift (2016 -20 capital program)	Additional opex required	-$2.7 million	These are genuine additional IT opex needs above what is currently included in the 2018-19 base year and supporting documentation has been	$2.7 million

			made available to the Commission to establish that these are prudent and efficient expenditure needs in addition to the 2018/19 base.	
Regional community support	Additional opex required ($0.7 million)	-$0.4 million	The funding allowed in the Draft Determination is not sufficient for SA Water to guarantee an appropriate service level and will disadvantage regional customers.	$0.4 million
Asset maintenance (sustaining services, includes water networks management)	Additional opex required ($4.51 million)	-$4.51 million	These operating costs are to fund prioritised investigations and maintenance on major non-pipeline assets, condition investigations across pumping mains, major pipeline ancillary asset refurbishment and are required to mature asset management decision-making. SA Water's asset management practice has matured over many years and is considered	$4.51 million

			best practice with a small number of exceptions.	
Technical training	Additional opex required ($1.0 million)	-$0.8 million	The allocated funding is not sufficient to deliver a training program within the required timeframe. The factors include: geographical spread and travel costs; specialised skill and competencies; improving safety; compliance and consistency; delivering to our customers; and adopting new technology.	$0.8 million
TOTAL				$46.8 million

*Excluded adjustment for Zero cost Energy Future

Appendix B Decisions supported

Table 21 Capital expenditure decisions supported

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination	Notes
Upgrading the Mount Bold Reservoir dam in 2020-2024	$86.9 million	$86.9 million	
Building a desalination plant on the Eyre Peninsula to support local water suppliers and decrease the pressure on the natural resources in that region	$78.1 million	$78.1 million	
Commencing replacement of the Morgan to Whyalla pipeline (No 1) during 2020-2024	$69.1 million	$69.1 million	
Happy Valley Treatment Plant Upgrade (opening reservoirs)	$13.8 million	$13.8 million	Noting some components of the upgrade look to be more costly than first estimated, SA Water will keep ESCOSA updated so these costs can be included in the final determination.
Metropolitan Water Quality Improvement Program	$122.2 million	$80.8 million (program spread over 6 years instead of 4).	Timing adjustments to be made plus Happy Valley Chlorine Tank allowance may be required

Table 22 Ex post capital review decisions supported

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination	Issue
NAIS	$84 million (net of contributions)	$84 million (net of contributions)	

Table 23 Operating expenditure decisions supported

Initiative	Proposed by SA Water in Our Plan 2020	Draft determination adjustment (per year)	Notes
Wages increases	$2.2 million per annum	$0 million per annum but ringfenced from efficiency target	
Reconciliation Action Plan	$0.3 million per annum	$0 million per annum	SA Water still believes increased expenditure in reconciliation is important for South Australia and will re-prioritise other expenditure to further its contribution to reconciliation.
GIS Data Quality Improvement	$0.1 million per annum	$0 million per annum	This decision will impact reliability of data that impacts service levels, both in terms of accuracy and performance.
IT investment operating costs – improving services	$3.3 million per annum	$3.3 million per annum	
Asset investment operating costs – enabling growth	$1 million per annum	$1 million per annum	
Eyre Peninsula Desalination Plant operating costs	$5.1 million per annum	$3.9 million per annum	
NAIS operating costs	$2.8 million per annum	$2.8 million per annum	
IT investment operating costs – external obligations	$1.8 million per annum	$1.8 million per annum	
Safety (property portfolio)	$0.7 million per annum	$0.5 million per annum	
Environmental improvement plans	$0.8 million per annum	$0.8 million per annum	
Water industry licence fee reduction	-$2.4 million per annum	-$2.4 million per annum	
IT licencing cost above inflation	$0.6 million per annum	$0.6 million per annum	
IT investment operating costs – sustaining services	$0.4 million per annum	$0.4 million per annum	