Barwon Water

28 September 2017

Mr Marcus Crudden
Director, Water
Essential Services Commission
Level 37, 2 Lonsdale Street
Melbourne VIC 3000
water@esc.vic.gov.au

Dear Mr Crudden, Marcus

Re: Barwon Water 2018 Price Submission

I am pleased to submit Barwon Water's *2018 Price Submission* which sets out our proposed prices, service standards and customer outcomes for the next five-year regulatory period.

Our submission is the culmination of more than 18 months deep and genuine research and engagement with our customers and community, and with our Board, management and staff. The new regulatory framework has encouraged us to listen and respond to our customers, so that we can be sure we are giving them the services and outcomes they value and expect, in the same way a competitive market would. Our engagement involved:

- Exploring top-of-mind issues with customers and using the information gained to understand the key themes of interest to our customers and how they would like to be engaged on these issues;
- Completing extensive qualitative and quantitative research with 1,116 customers, supplemented by a public campaign that included face-to-face discussions with 560 customers;
- Applying the principles of deliberative democracy, using the same process as for a 'citizen's jury', to ask a random, representative group of 27 customers (our Community Panel) to agree the outcomes they want Barwon Water to deliver and their preferences about the level of services;
- Testing our proposed outcomes, actions and prices with 1,260 customers through a public consultation process and a follow-up deliberative process with 17 members of our Community Panel, both of which demonstrated high levels of comfort amongst customers; and
- Designing five outcomes based on customer's preferences and determining the levels of service and key actions to deliver these outcomes accordingly.

As a result, our prices are more equitable and bills will remain affordable. We are also reducing our costs and targeting ambitious savings, stretching into new areas and delivering the outcomes our customers want, and committing to being even more accountable for our performance.

Key features of our submission include:

- We are giving customers greater control over their bills, so that in five years' time 74% of the water charges on an average home bill will relate to the amount of water used, not fixed charges.

- Residential prices will reduce by an average of 7.4% in 2018/19 for an owner occupier using an average 160 kL of water per year, and although they will slightly rise by an average of 0.9 % per annum (or $9 per year / $2.30 per quarter) after that, by 2023 they will not be higher than 2017/18 prices (in real terms). This represents a maximum $37 increase (in real terms) by the end of five years.
- Non-residential prices will remain the same for the next five years (in real terms).
- Bill impacts on tenants will be minimised through a transitional rebate over five years so that in the first year the average residential tenant bill will be the same as in 2017/18 (in real terms), as is the case for average residential owner-occupiers. By the end of five years, all tenant bills will have risen by a maximum $37 (in real terms), as is the case for average residential owner-occupiers.
- We are tripling our financial assistance to support customers experiencing hardship through a range of programs including our successful "Arrange and Save" plan which proactively helps customers manage bills.
- We are spending an extra $500,000 a year on expanded water efficiency and literacy programs to help customers save water. Any residential customer able to reduce their annual water usage by 16.5 kL by 2022/23 will not see any increase in their bills (in real terms). This equates to a 10% reduction in water usage for the average household.
- We are reducing charges for recycled water to further incentive its use.

In addition, we have worked hard to keep our costs as low as possible and accept more risk on behalf of customers. While industry benchmarking shows our operating expenditure is already the second lowest in our national peer group, we will work harder to improve even more. Operating expenditure will average $99.11 million per annum (compared to average of $100.34 million in the current regulatory period), with an average 2.3% productivity efficiency in controllable costs. Gross capital expenditure will total $328.6 million over five years, which is 20% lower than the current regulatory period.

We are re-prioritising our expenditure so that we are spending more on the services important to our customers, such as investment in renewable energy to meet our community agreed goal of 100% renewable energy by 2025.

If you have any queries or questions regarding our submission please contact

Yours sincerely,

Tracey Slatter
Managing Director

Encl: 2018 Water Price Review - Barwon Water Price Submission
Financial Template - Completed by Barwon Water

Delivering greater value for our customers

Our prices are more equitable and bills will remain affordable

PREMO

We will implement a fair and more equitable pricing structure, so that all customers will pay the same price for water by 2022/23.

Residential prices will decrease by an average of 7.4% in 2018/19 and although they will rise by an average of 0.9 % per year after that, by 2023 they will not be higher than 2017/18 prices (in real terms).

Non-residential prices will remain the same for the next five years (in real terms).

The Government rebate on previous bills will be transferred into lower prices so average residential customer bills stay the same in 2018/19 (in real terms).

We are minimising bill impacts on tenants by providing a transitional rebate over the next five years.

We are tripling our financial assistance to support vulnerable customers and helping all customers to save water and reduce bills.

We are giving customers greater control over their bills, so that in five years 74% of the water charges on an average home bill will relate to the amount of water used, not fixed charges.

We are reducing charges for recycled water to further incentivise its use.

We will stretch into new areas and deliver the outcomes our customers want

PREMO

A reliable, secure water future for our region.
e.g. increasing the volume of recycled water put to productive use to 3,600 ML.

Deeper knowledge and partnerships with our community.
e.g. increasing community green open space by 20 hectares.

Timely, innovative services for our customers.
e.g. providing notice of water supply interruptions by SMS and restoring supply within 5 hours.

Affordability for all our customers.
e.g. increasing the number of customers supported through our hardship program by 30%.

A healthier environment for all.
e.g. lowering our carbon emissions by over 14,000 tonnes.

We have deeply engaged our customers and community early and constantly. This involved three phases of engagement including going that extra step to publish our draft prices on our website to check back in with our customers before finalising this submission.

Our customers and community have set and agreed the priorities .

They have led the way in developing prices and services.

Listen, respond, listen, respond, listen, respond.

We have adopted a whole-of-organisation transformative approach to the development of our submission. Our entire strategic direction has been shaped by the voice of our customer, leading to an ongoing and deeper commitment to them.

We have reduced our costs and targeted ambitious savings

PREMO

Industry benchmarking shows our operating expenditure is already the second lowest in our national peer group.

We are reducing our gross capital expenditure by 20% without compromising service delivery.

We are reducing our controllable operating costs by 2.3% (more than double the 2013 efficiency hurdle) by targeting more than $19 million in additional operating savings.

We have re-prioritised our expenditure so that we are spending more on the services important to our customers, such as investment in renewable energy to meet our community agreed goal of 100% renewable energy by 2025.

We are keeping our costs low despite increases in uncontrollable costs such as ensuring water security (an extra $5.5 million per year) and sustainable water management (an extra $2 million per year).

We will be even more accountable for our performance

PREMO

We will maintain high performance at lower cost and improve performance in areas important to our customers.

We have set ourselves ambitious targets against key performance measures to achieve customer outcomes and commit to report performance to customers annually.

If our net revenue from our water sales exceeds our forecasts, we will return that surplus revenue to our customers through either lower prices or other initiatives they nominate.

If we don't meet our performance targets, we propose to return up to $11.5 million to our customers through either lower prices or other initiatives they nominate.

We have self-assessed our position as advanced under the new PREMO framework because we will deliver greater value for our customers as shown in this submission.

Barwon Water

2018 Water Price Review Price Submission

28 September 2017

Message from Chair and Managing Director

We respectfully acknowledge the Traditional Owners and custodians of the land on which we operate today, and we pay our respects to their Elders, both past and present. We recognise and respect their culture, beliefs and ongoing connection to the land over thousands of years.

We are extremely proud to submit Barwon Water's 2018 Price Submission to the Essential Services Commission for review.

Our submission is the culmination of more than 18 months deep and genuine research and engagement with our customers and community, and with our Board, management and staff, involving courageous conversations about services, costs, bills and pricing.

We have listened and responded to our customers and community every step of the way – even going that extra unique step in a third stage of consultation to publish our draft prices and outcomes on our website and check back in with our customers on their views before finalising our proposed prices and services for this submission.

In doing this we wanted to be absolutely sure that there was a high degree of acceptance for what was being proposed, and confidence from our customers and community that Barwon Water was delivering them value for money.

Our Board, management and staff have been passionately committed and involved in the development of our submission. We have attended hundreds of hours of workshops, focus groups, the community panel (which acted as a 'citizens jury'), online engagement and other forums to observe, listen and provide information where required.

We have also had strategic discussions for over 270 hours collectively at Board and Executive Leadership Team meetings, demonstrating our ownership of the process and desire to see the submission truly reflect our customer and community aspirations.

We were thrilled to learn that customers who provided feedback had a high level of comfort of 81-93% for all five proposed outcomes and 77-90% for all actions underpinning these outcomes.

More than half of the customers who provided feedback told us they were comfortable with proposed bills over the next five years and less than a quarter were uncomfortable. Some concerns were raised by tenants and accordingly we have listened and adjusted our proposal to address this feedback.

A highlight has been our deliberative community panel which embraced the challenge to review community feedback and a range of other information before making recommendations to Barwon Water.

The energy and enthusiasm of panel members, and their commitment to an independent, robust and transparent deliberative process was inspirational.

In closing, we acknowledge and thank our customers and community for their contribution, knowledge and expertise and we look forward to delivering the outcomes they want from us.

Jo Plummer
Chairman

Tracey Slatter
Managing Director

Delivering greater value for our customers

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We are reducing our controllable operating costs by 2.3% (more than double the 2013 efficiency hurdle) by targeting more than $19 million in additional operating savings.

We have re-prioritised our expenditure so that we are spending more on the services important to our customers, such as investment in renewable energy to meet our community agreed goal of 100% renewable energy by 2025.

We are keeping our costs low despite increases in uncontrollable costs such as ensuring water security (an extra $5.5 million per year) and sustainable water management (an extra $2 million per year).

We will be even more accountable for our performance

PREMO

We will maintain high performance at lower cost and improve performance in areas important to our customers.

We have set ourselves ambitious targets against key performance measures to achieve customer outcomes and commit to report performance to customers annually.

If our net revenue from our water sales exceeds our forecasts, we will return that surplus revenue to our customers through either lower prices or other initiatives they nominate.

If we don't meet our performance targets, we propose to return up to $11.5 million to our customers through either lower prices or other initiatives they nominate.

We have self-assessed our position as advanced under the new PREMO framework because we will deliver greater value for our customers as shown in this submission.

Executive summary

Creating the submission

From June 2016 to August 2017, more than 10,000 hours have been spent planning, listening and responding to what our customers value about water and sewerage prices and services, and their expectations about how to address challenges for the future.

Through the process, we have listened to opinions, generated ideas, debated alternatives and analysed proposals.

Importantly, our customers and community have deliberated and, in the process, learnt more about each other's aspirations, values and goals.

The result is this, a customer and community led price submission, a document which sets out to deliver greater value to our customers over the next five year regulatory period, commencing on July 1, 2018.

The outcomes and actions in our submission have been developed with our customers and community and focus on ensuring a reliable water future, innovative services, healthy environment, deeper community partnerships and affordability for all customers.

The diversity of the people involved and their commitment to providing incredibly clear feedback to us around prices, services and bills makes this document a strong and durable platform to deliver greater value to our customs.

"I'm at the forefront of something... it feels really nice to just have my voice heard and also hear voices that I wouldn't normally hear from."

Sid, Community Panel Member, March 2017

Our prices are more equitable and bills will remain affordable

We will implement a fair and more equitable pricing structure so all customers will pay the same price for water by 2022/23.

Our customers told us they want greater control over their bills therefore, we will change the proportion of fixed and variable water charges on residential bills.

By 2022/23, 74% of the water charges on an average home bill will relate to the amount of water used not fixed charges.

We will fairly implement these changes by actively managing bill impacts for tenants and vulnerable customers.

Table 1: Proposed residential tariffs ($2017/18)	2017/18 (now)	2018/19 (Year 1)	2022/23 (Year 5)
Water volume charge ($ per kilolitre)	$2.2591	$1.8840	$2.2591
Water service charge (every three months)	$42.92	$37.92	$32.24
Sewerage service charge (every three months)	$138.26	$138.26	$138.26
Class A recycled water charge ($ per kilolitre)	$1.8072	$1.3188	$1.5814

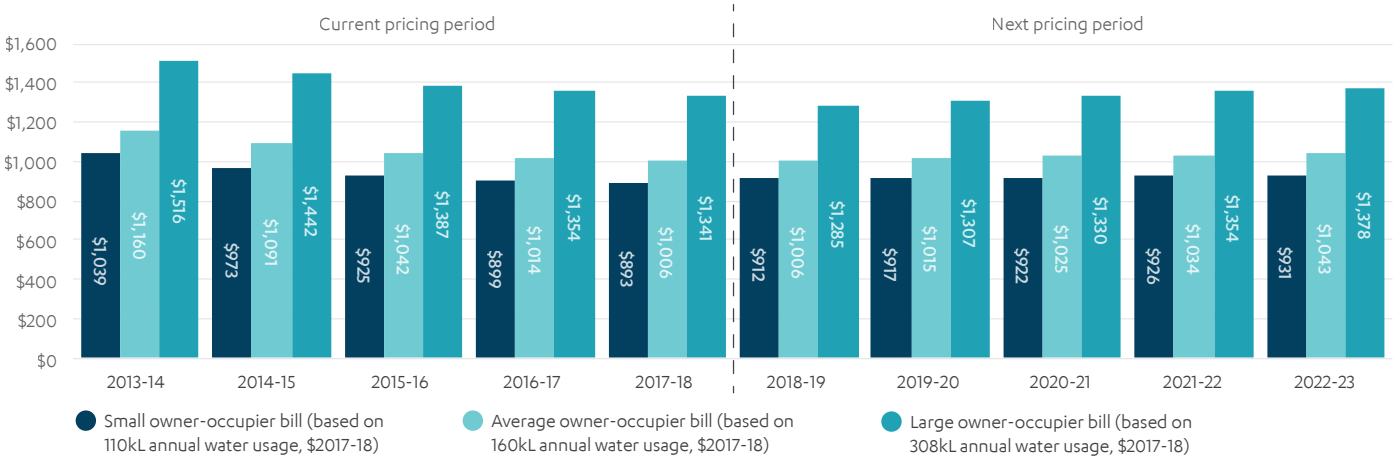
Table 2: Price path for residential tariffs in real terms	2018/19	2019/20	2020/21	2021/22	2022/23
Average	-7.4%	+0.9%	+0.9%	+0.9%	+0.9%
Water volume	-16.6%	4.6%	4.6%	4.6%	4.6%
Water service	-11.6%	-3.2%	-3.5%	-4.1%	-5.1%
Sewerage service	0.0%	0.0%	0.0%	0.0%	0.0%
Class A recycled water	-27.0%	4.6%	4.6%	4.6%	4.6%

Table 3: Proposed non-residential tariffs ($2017/18)	2017/18 (now)	2018/19 (Year 1)	2022/23 (Year 5)
Water volume charge ($ per kilolitre)	$2.2591	$2.2591	$2.2591
Water service charge (every three months)	$42.92	$42.92	$42.92
Sewerage volume charge ($ per kilolitre)	$1.8775	$1.8775	$1.8775
Sewerage service charge (every three months)	$83.66	$83.66	$83.66
Class A recycled water charge ($ per kilolitre)	$1.8072	$1.8072	$1.8072
Trade waste volume charge ($ per kilolitre)	$1.8775	$1.8775	$1.8775

Table 4: Price path for non-residential tariffs in real terms	2018/19	2019/20	2020/21	2021/22	2022/23
Water volume	0.0%	0.0%	0.0%	0.0%	0.0%
Water service	0.0%	0.0%	0.0%	0.0%	0.0%
Sewerage service	0.0%	0.0%	0.0%	0.0%	0.0%
Class A recycled water	0.0%	0.0%	0.0%	0.0%	0.0%
Trade waste volume	0.0%	0.0%	0.0%	0.0%	0.0%

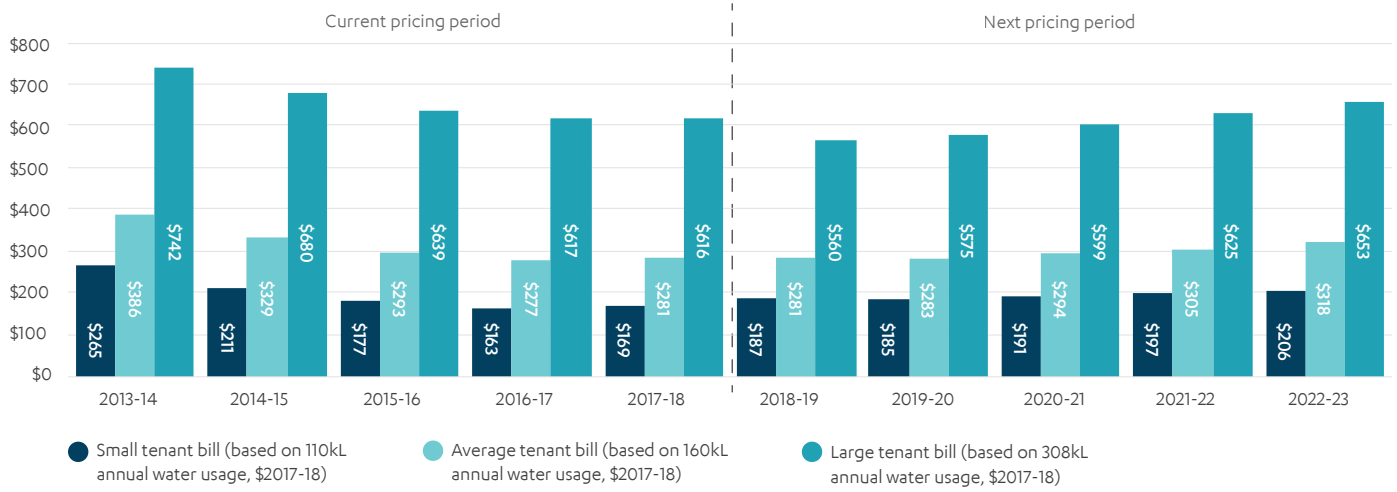
We've worked hard to transfer the Government rebate on previous bills into lower prices, so that average residential bills won't increase (in real terms) from the last year of the current pricing period (2017/18) to the first year of the next pricing period (2018/19).

Figure 1: Owner-occupier customer bill (small, average and large water users)



These amounts are rounded.

Figure 2: Tenant customer bill (small, average and large water users)



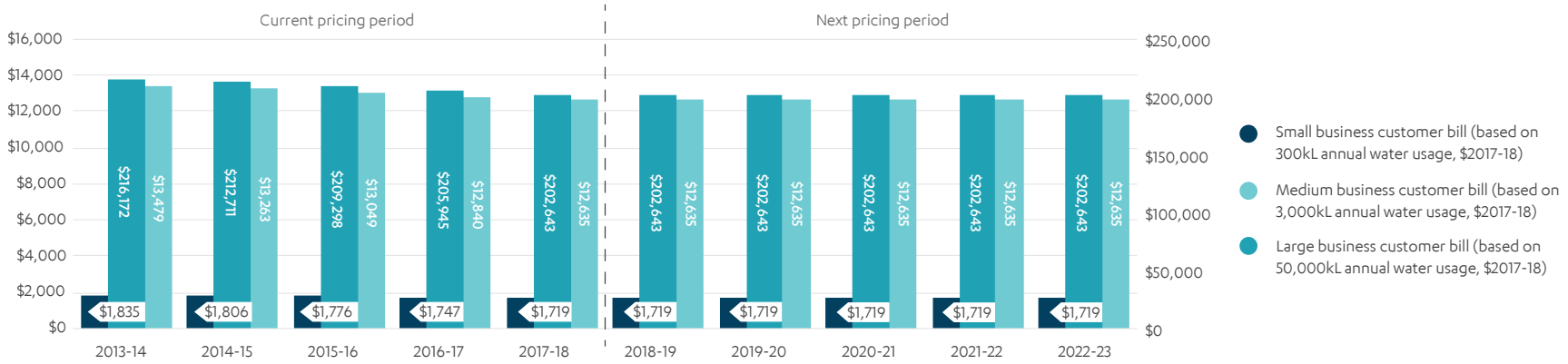
These amounts are rounded and include the application of the Transitional Rebate Adjustment.

Our new pricing structure provides rewards for water savers. Any residential customer able to reduce their annual water usage by 16.5 kL by 2022-23 will not see any increase in their bills (in real terms). This equates to a 10% reduction in water usage for an average household.

We will partner with residential customers to provide them with the skills, knowledge and support to help achieve this saving.

Non-residential bills will remain steady from the current pricing period to the next and over the next five years (in real terms), unless businesses use more water or more of our other services.

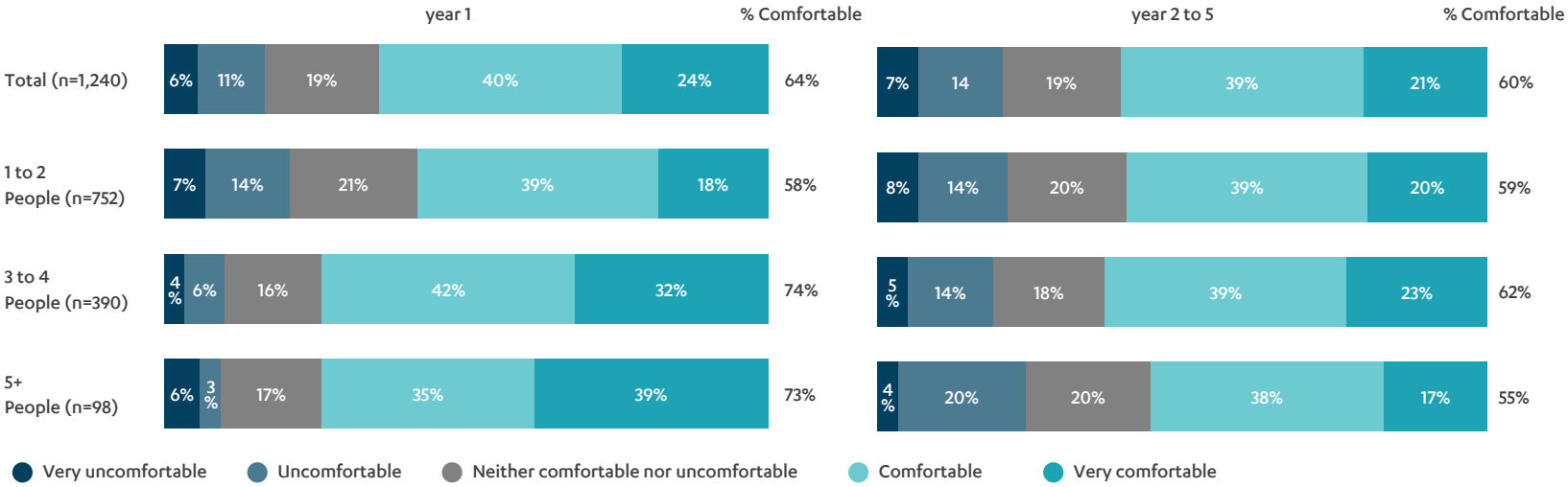
Figure 3: Non-residential customer bill (small, medium and large water user)



These amounts are rounded.

More than half of our residential customers are comfortable with their bills in the next pricing period and less than a quarter are uncomfortable.

Figure 4: Percentage of surveyed residential customers comfortable with proposed bills (July 2017)



We will stretch into new areas and deliver the outcomes our customers want

"We support the proposed price submission as put forward by Barwon Water, as it also supports our views and where necessary we have provided supportive commentary for our recommendations. We commend the report to the Essential Services Commission for their approval".

2017 Community Panel Report

More than 81% of our customers are comfortable with the outcomes we will deliver.

Figure 5: Percentage of surveyed customers comfortable with proposed outcomes (July 2017)

We will track our progress in delivering outcomes and report annually on our performance to customers

Table 5: Performance measures and targets for each outcome

Outcome	Performance measure	Current Performance – 2017	Target Performance – 2023
A reliable, secure water future for our region	Volume of recycled water allocated to productive use by 2022/23 *	2,600 ML	3,600 ML
	Compliance with EPA licence parameters	100%	100%
	Percentage of population receiving drinking water that meets E.coli standards	100%	100%
	Percentage of population receiving drinking water that meets turbidity standards	100%	100%
	Percentage of population receiving drinking water that meets disinfection by-products standards	100%	100%
	Compliance with bulk entitlement and licence conditions	100%	100%
	Compliance with water security statement (will not run out of water in a drought and plan for water restrictions less than 5% of the time) *	100%	100%
Timely, innovative services for our customers	Number of customers who receive e-billing *	14,500	54,000
	First point resolution rate through the Customer Centre *	80%	85%
	Customers who are able to receive their notifications via SMS *	62%	75%
	Customer effort based on satisfaction, effort and would you recommend	77%	85%
	Customers who have an unplanned water supply interruption have their water back on within 5 hrs *	96.5%	96.5%
	Customers who have a planned water supply interruption have their water back on within 5 hrs *	85%	85%
	Number of customers who have more than 5 unplanned water supply interruptions per year *	1	1
	Number of customers who have more than 2 sewer spills per year *	1	1
	Customer satisfaction with quality of drinking water	85%	85%
	Number of water quality complaints per year / 1000 customers *	3	3
	Number of complaints to EWOV per year / 1000 customers	0.65	0.65
A healthier environment for all	Total emissions produced (tCO2e) *	42,986	28,742
	Progress towards 100% renewable energy by 2025	0%	43%
	Percentage of biosolids mass re-used	100%	100%
	Percentage of "unaccounted for" water	9%	9%
	Percentage of industrial waste recycled (from BW operations)	tbd	tbd
	Percentage of water treatment sludge re-used	tbd	tbd
	Waste to energy capture (from BW operations)	tbd	tbd
Deeper knowledge and partnerships with our community	Stakeholder perceptions (large customers / regional stakeholders / strategic partnerships)	tbd	tbd
	Reduction in residential per capita water usage	tbd	1-10%
	Increase in social media / digital media engagement	tbd	tbd
	New community green / open space provided	0 ha	20 ha
	Economic impact of partnerships	tbd	tbd
	Economic impact of Barwon Water on region	tbd	tbd
	Diversity indicators (for BW organisation)	tbd	tbd
Affordability for all our customers	Operating savings ($ mil)	$0	$19m
	Capital works program on budget	$82.2m	$55.5m
	Number of customers engaged and supported through Barwon Water's hardship payment plans *	1,150	1,500
	Direct opex / property ($ 2017-18)	$682	$629
	Direct opex / FTE ($ 2017-18)	$318k	$313k
	$ and time saved from continuous improvement for BW and customers	tbd	tbd
	Customer affordability measure	tbd	tbd

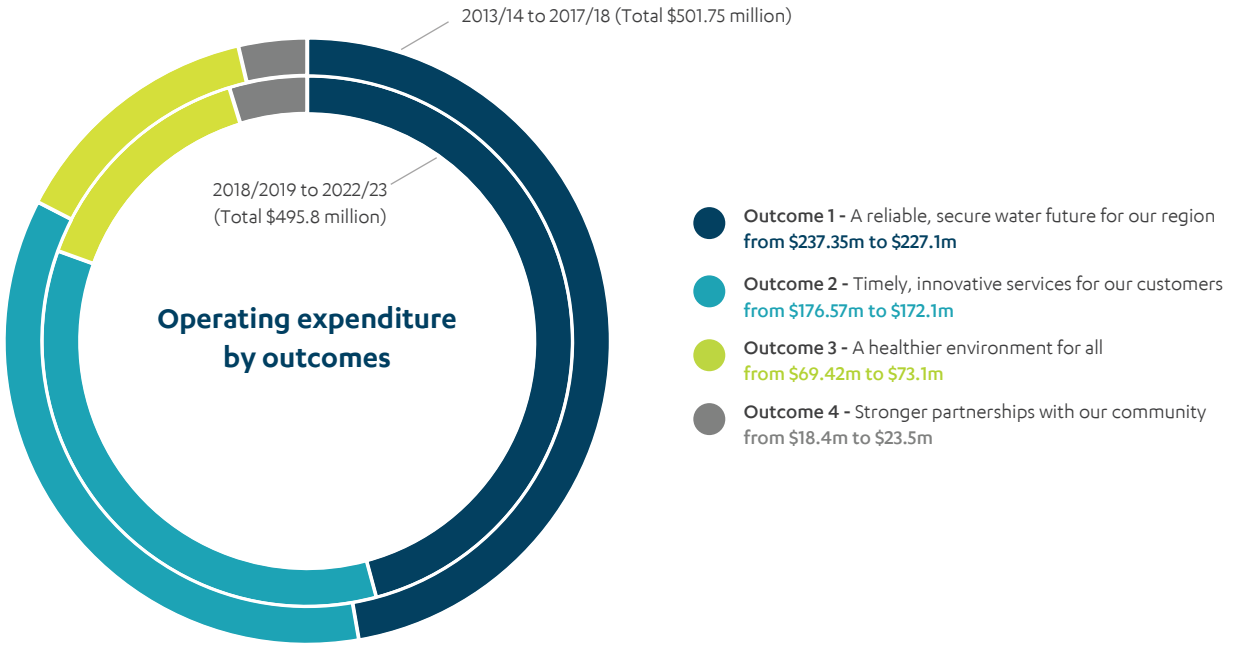
** If we don't meet our targets for these performance measures, we propose to return up to $11.5 million to our customers through either lower prices or other initiatives they nominate.*

*** tbd means 'to be determined'. We are committed to developing measures that are important to our customers, rather than relying on what we can or do currently measure.*

We have reduced our costs and targeted ambitious savings

We have re-prioritised our planned expenditure so that we are spending more on those areas of importance to our customers.

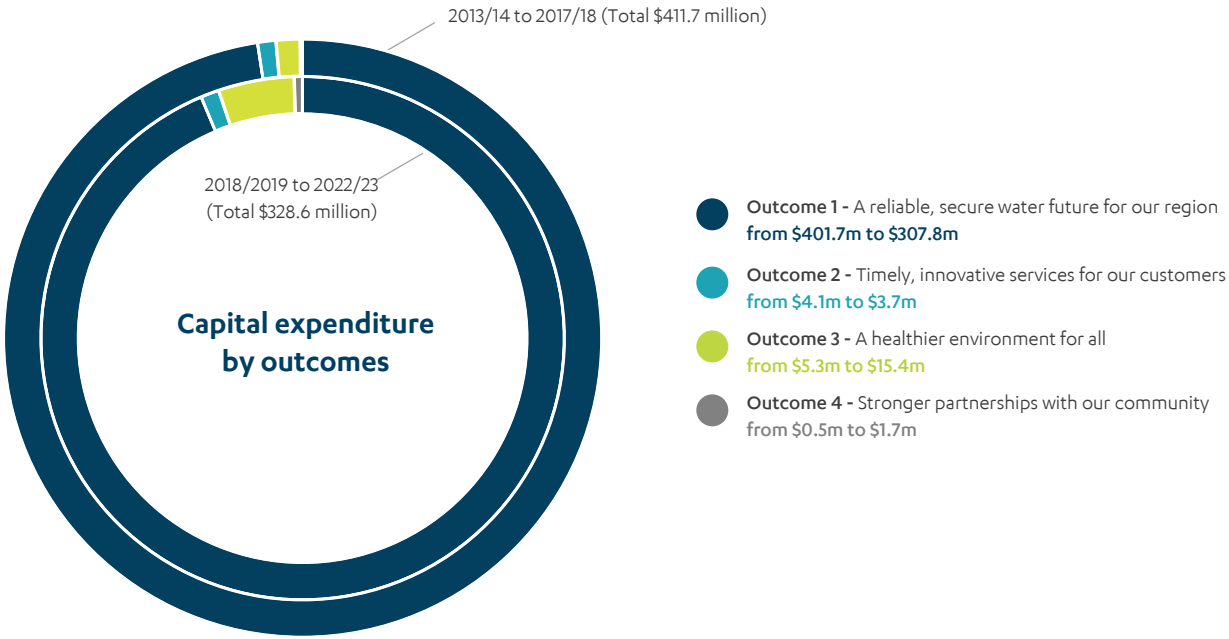
Figure 6: Changes in operating expenditure to deliver outcomes ($2017-18)



We are holding our total operating expenditure at an average of $99 million per annum, despite growth and increases in uncontrollable costs (an extra $5.5 million per annum in Melbourne headworks charges and an extra $2.0 million per annum in environmental contributions), by:

- building on our current approach, which industry benchmarking shows our operating expenditure is already the second lowest in our national peer group
- committing to a 2.3% reduction in controllable operating costs without compromising service delivery by targeting $19 million in additional operating savings
- pre-paying $21.65 million of our Melbourne headworks charges in 2016/17 to reduce customer bill impacts in the next pricing period
- capitalising the remaining portion of our Melbourne headworks charge.

Figure 7: Changes in capital expenditure to deliver outcomes ($2017-18)



We are reducing our gross capital expenditure to $328.6 million, which is $83.1 million (20%) lower than our actual expenditure in the current pricing period, by:

- excluding uncertain projects totalling $60 million from our proposed allowance
- adopting P50 cost estimates and a rigorous cost estimation process that included independent review by an infrastructure engineering advisory firm.

We will be even more accountable for our performance

PREMO

We have self-assessed our submission as "Advanced" rating under the ESC's new PREMO framework because:

P We will be accountable for our performance

R We will bear more risk on behalf of our customers

E Our submission is built on an industry-leading approach to engagement with our customers

M We are keeping costs and revenues as low as possible, which customers will not pay significantly more

O We will deliver the outcomes that our customers want

PREMO element	Barwon Water self-assessment
Risk	Advanced, Very Confident / Score 3.5
Engagement	Leading, Confident / Score 3.75
Management	Advanced, Very Confident / Score 3.5
Outcomes	Advanced, Very Confident / Score: 3.5
Overall PREMO rating	Advanced / Score: 14.25

Listed below are some examples of our initiatives that meet the requirements of an "Advanced" PREMO rating. Our detailed PREMO self-assessment is presented in Section 10 of our submission.

P
- We have set ourselves ambitious targets against key performance measures to achieve customer outcomes.
- We commit to annually reporting back to our customers on our performance against the ambitious targets we have set ourselves.

R
- If we don't meet our targets, we propose to return up to $11.5 million to customers through either lower prices or other initiatives they nominate.
- If our net revenue from our water sales exceeds our forecasts, we will return that surplus revenue to our customers through either lower prices or other initiatives they nominate.
- We will bear the risk that we are unable to achieve the ambitious $19 million in additional operating savings we have targeted.

E
- Our three distinct phases of engagement included going that extra step to check back in with customers on our draft prices and outcomes before finalising our submission.
- We spoke with over 3,100 customers (or 2.1% of our customer base) for almost 1,950 hours during the development of our submission.
- We applied the principles of deliberative democracy to ask a random, representative group of 27 customers, who acted as a "citizens jury" to agree the outcomes they want us to deliver.

M
- Our average residential prices are going down by 3.9% over the next five years instead of going up by 8.0%, as would have been the case without the initiatives proposed in our submission.
- We are committing to a 2.3% reduction in controllable operating costs and a 20% in gross capital expenditure without compromising service delivery.
- We are adjusting our residential tariffs to avoid bill shock for customers (particularly tenants), to give greater control over bills and to incentivise use of recycled water.

O
- Our outcomes were entirely shaped by our customers via a robust customer and community engagement process.
- We have fundamentally overhauled our performance management framework so that we can be sure we are delivering the outcomes customers want.
- We have proposed a performance incentive scheme to ensure that we are focussed on delivering outcomes we have promised to our customers.

Attestation

The ESC requires our Board to provide an attestation statement in relation to the submission, which it does so as follows:

As at September 2017, the directors of Barwon Water, having made such reasonable inquiries of management as we considered necessary (or having satisfied ourselves that we have no query), attest that, to the best of our knowledge, for the purpose of proposing prices for the Essential Services Commission's 2018 Water Price Review:

- information and documentation provided in the price submission and relied upon to support Barwon Water's price submission is reasonably based, complete and accurate in all material respects;
- financial and demand forecasts are the business's best estimates, and supporting information is available to justify the assumptions and methodologies used; and
- the price submission satisfies the requirements of the 2018 Water Price Review Guidance paper issued by the Essential Services Commission in all material respects.

By resolution of the Board dated Thursday, September 21, 2017.

Jo Plummer
Chairman

Tracey Slatter
Managing Director

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Figures

Tables

A guide to reading this submission

This document follows the journey we have taken in developing our 2018 Price Submission, a journey where customers have led the way. Key points in this journey are illustrated through the use of icons throughout this document. The icon that is highlighted at the top of each page reflects the point of the journey that is being explained in the content on that page. Each chapter heading also highlights the elements of the PREMO framework that are most relevant to that point in the journey – Performance (P), Risk (R), Engagement (E), Management (M), Outcomes (O).

We will stretch into new areas and deliver the outcomes our customers want	
	We adopted a new approach that allowed customers to inform development of our submission through three distinct phases of engagement.
	We explored top-of-mind issues with 51 customers and used the information gained to understand the key themes of interest to our customers and how they would like to be engaged on these issues.
	We completed extensive qualitative and quantitative research with 1,116 customers, supplemented by a public campaign that included face-to-face discussions with 560 customers, to gather data about customer views in response to the question: *What do you value most about water and sewerage services and what do you expect in the future?*
	We applied the principles of deliberative democracy, using the same process as for a 'citizens jury', to ask a random, representative group of 27 customers (our Community Panel) to agree the outcomes they want us to deliver and their preferences about the level of services we provide.
	We tested our proposed outcomes, actions and prices with 1,260 customers through a public consultation process and a follow-up deliberative process with 17 members of our Community Panel, both of which demonstrated high levels of comfort amongst customers.
	We designed five outcomes based on what we heard from our customers, determined the key actions we would to take to deliver these outcomes in line with customer preferences about levels of service and reprioritised our expenditure accordingly.
We have reduced our costs and targeted ambitious savings	
	We worked hard to keep our costs and revenue as low as possible, and accepted more risk on behalf of our customers: • Operating expenditure – average of $99.11m p.a. (compared to average of $100.34m in current period), with average 2.3% productivity efficiency in controllable costs. • Gross capital expenditure – $328.6 million over five years (20% lower than 2013-2018).
Our prices are more equitable and bills will remain affordable	
	Our customers will not pay significantly more over the next five years: • Prices – non-residential prices remain steady whilst residential prices decrease by an average of 7.4% in 2018-19 and then increase by 0.9% p.a. for an owner-occupier using an average of 160 kL per year. • Bills – average residential owner-occupier and tenant bills remain steady in 2018-19 at $1,006 and $281 respectively, and then increase by an average of $9 p.a. (in real terms).
We will be even more accountable for our performance	
	We refined our proposals and confirmed a performance reporting and incentive mechanism that will ensure we hold ourselves accountable for delivering the outcomes that our customers told us they wanted.
	We finalised our submission to the Essential Services Commission, which made our case to be assessed as 'Advanced' under the new PREMO framework.

1. Setting the scene

1.1 Our approach to the 2018 Price Submission

This document sets out Barwon Water's price submission to the Essential Services Commission (ESC), for the five year regulatory period commencing on 1 July 2018.

Developing this submission has been a journey. It started with a 'light-bulb' moment – why don't we let our customer lead the way, rather than adopting the same approach we used over the previous two regulatory periods?

We planned our journey so our customers informed the development of our submission through three distinct phases of customer engagement:

- Test Phase – we asked our customers which issues are of interest to them;
- Main Phase – we engaged more deeply with our customers on these issues, to help inform the development of our proposals; and
- Draft Submission Phase – we allowed customers to review our proposals and provide feedback, to ensure we heard their views correctly.

Our 'light-bulb' moment meant we moved from a 'cost plus' approach, to responding to what customers told us so that we could deliver a better deal for our customers.

We are committed to the customer-focussed approach we have adopted in developing this submission. We believe our approach delivers on the objectives of the ESC's new regulatory framework – called PREMO – which is intended to deliver better outcomes for Victorian water customers, with stronger incentives for water businesses to put forward better quality price submissions reflecting their customers' expectations, and offering great value for the prices proposed.

1.2 Our past – performance over the 2013-18 regulatory period

Our performance against some key indicators over the current regulatory period are set out in Table 1 below.

Table 1: Key performance outcomes achieved ($2017-18)

2013-18 regulatory period	
Prices	Down by 1.6% p.a. (exc CPI) Plus Government rebate on previous bills of $50-$90 p.a.
Customers	Satisfied with overall quality of drinking water (84-89%), customer service (74-75%), response to faults and emergencies (71-72%)[1]
Demand	Closely tracked forecasts, despite year-to-year variability, with only 1.4% variance between forecast and actual demand over the current regulatory period
Opex	Undertook extra initiatives to fund the Government rebate on previous bills over the past four years, including optimising chemical dosing and locking in electricity prices, which meant our actual operating expenditure over the current regulatory period was 3% less than the ESC's 2013 allowance
Capex	Increased expenditure by 8% compared to the ESC's 2013 allowance to address security of supply issues and regional economic development initiatives, offset by the disposal of surplus landholdings

[1] EY Sweeney 2015, *Customer Perceptions – Barwon Water Report*, 30 November, pp. 46-48.

1.3 Our future – alignment with Strategy 2030

In response to customer feedback, we have also reframed the strategic direction of our business through the development of *Strategy 2030*[2].

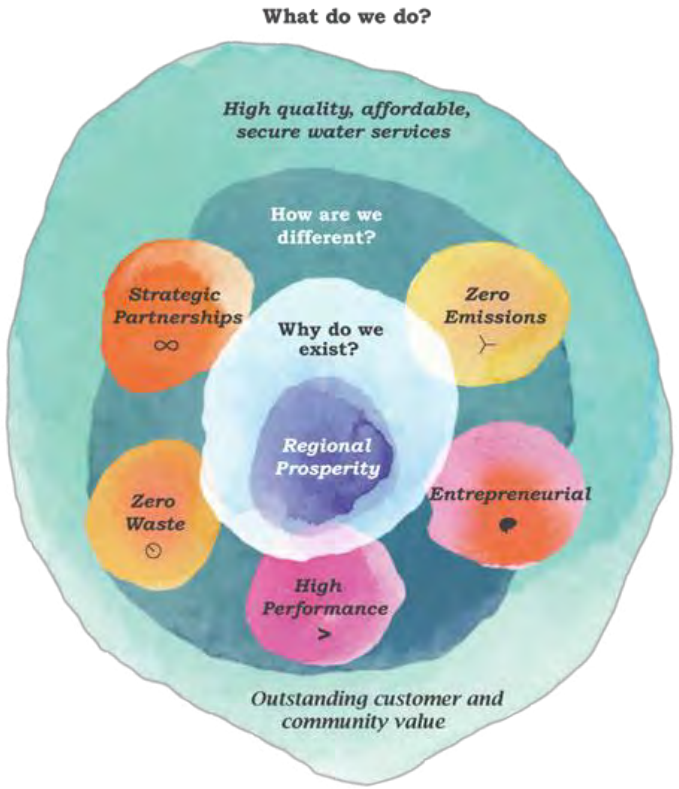
Strategy 2030 is founded upon Barwon Water having more than 110 years of experience in providing excellence in water, sewerage and recycled water services to its customers and the community. This is what we do – we do it well and we need to keep doing it well.

Building on our core business success, we recognise that we are now entering a new phase in the organisation's history. We need to respond to the following challenges ahead:

- Climate change is expected to see a 7% reduction in flows to our reservoirs by 2040;
- Population growth is accelerating. By 2040, Geelong's population is expected to swell more than 40% to 410,000 and Colac's to grow 13% to 16,000;
- A transitioning economy from an industrial base to one driven by technology and services in education, health tourism and niche high-value exports in agriculture and manufacturing; and
- Rapid technological advancement revolutionises how we live, work and play.

Recognising these challenges, *Strategy 2030* articulates how we are shifting our mindset from being a water utility to being a leader of the region's prosperity. It sets out a road-map for achieving this new aspiration by 2030. Figure 1 summarises the key elements of *Strategy 2030* – it defines why we exist, how we will undertake our business in a different way to achieve our new aspiration and what it is that we do.

Figure 1: Our role in delivering regional prosperity



[2] The strategy is available at: http://www.barwonwater.vic.gov.au/about/corporate/strategy-2030.

The proposals in this submission set out how we will work towards delivering our new aspiration over the next five year regulatory period, in line with what our customers told us they wanted. Specifically, the five customer-led outcomes set out in this submission describe what we will deliver to customers (consistent with what they have asked for) and the five *Strategy 2030* focus areas describe how we will operate as an organisation in order to deliver these outcomes. Table 2 summarises the alignment between the outcomes in this submission and *Strategy 2030*.

Table 2: Alignment between Strategy 2030 (objectives) and 2018 Price Submission (outcomes)

What we will deliver – *2018 Price Submission*	How we will operate – *Strategy 2030*				
	Strategic Partnerships	Zero Emissions	Zero Waste	Entrepreneurial	High Performance
Outcome 1 – A reliable secure water future for our region		✓ e.g. "all new energy using infrastructure and upgrades [will] incorporate zero net emissions in their design and delivery"	✓ e.g. "maximise the use of our main waste stream, recycled water, from our water reclamation plants"		✓ to enable delivery of *Strategy 2030*, we will: • "create strong strategy ownership" • "achieve diversity, inclusion and gender diversity at all levels of the organisation" • "develop inclusive leadership capabilities" • "set a high performance culture"
Outcome 2 – Timely, innovative services for our customers	✓ e.g. "use technology to ensure our customer experience is second to none and the level of customer choice is enhanced"		✓ e.g. "review our processes and practices to ensure they are productive and make us a more customer and community focused organisation"		
Outcome 3 – A healthier environment for all		✓ e.g. "achieve 100% renewable energy by 2025 [and] zero net emissions by 2030"	✓ e.g. "reduce resource consumption and waste production through improved efficiency"		
Outcome 4 – Deeper knowledge and partnerships with our community	✓ e.g. "proactively seek opportunities for strengthening partnerships with key groups where we have clear mutual interest"			✓ e.g. "adjust our culture to be one of seeking regional economic opportunities"	
Outcome 5 – Affordability for all of our customers	✓ in delivering *Strategy 2030*, we will bring a focus on affordability to all that we do, because *what* we do is not changing – we provide "high quality, affordable, secure water services [and] deliver outstanding customer and community value" – but *how* we do it is				

1.4 Understanding our 2018 Price Submission

Key points in our journey to develop this submission are illustrated through the use of icons throughout this document. The icon that is highlighted at the top of each page reflects the point of the journey that is being explained in the content on that page. Each chapter heading also highlights the elements of the PREMO framework that are most relevant to that point in the journey – Performance (P), Risk (R), Engagement (E), Management (M), Outcomes (O).

We have put forward our 'best offer' in our submission. We are confident that:

- Our customer value proposition aligns with the requirements of an 'Advanced' PREMO rating (see Chapter 10) – we have pushed ourselves to deliver better services for lower prices; and
- Our submission meets the requirements of the ESC's Guidance Paper[3] (see Appendix 2) and is of sufficient quality to warrant being 'fast-tracked' – we have aimed to transparently communicate our proposals and have sought independent assistance and advice to provide ourselves and the ESC with confidence in our proposals and this submission.

The claims made in our submission are substantiated by further detail set out in seven supporting papers (see Chapter 11), which in turn reference more detailed supporting documents that are available on request.

We confirm that the financial and other information presented in this submission and supporting papers accords with the requirements of the ESC's Guidance Paper.

In particular:

- All information contained in the price submission (including the completed financial model) is reasonably based; and
- All financial and demand related information represents the best available estimates at the time of finalising the submission.

We also confirm that:

- All financial information (including prices, operating and capital expenditure) in this price submission (and the completed financial model) is stated in 2017-18 dollars, with the March quarter 2017 CPI as the base;
- This price submission contains no confidential information and can therefore be published by the ESC without any redaction; and
- Our expenditure forecasts and regulatory asset values, which are inputs to determining our revenue requirement and prices, relate to prescribed services only, and exclude the costs of non-prescribed services.

[3] Essential Services Commission, *2018 Water Price Review, Guidance paper*, November.

2. Testing ideas (E)

- We have a strong understanding of our customers' needs and preferences, through a process of continual engagement.
- We began the first of our three phases of targeted engagement for the 2018 Price Submission in June 2016.
- We held workshops, focus groups and interviews with residential and non-residential customers from across our service region.
- The findings were used to design the scope and nature of our next phase of engagement.

2.1 Continual engagement

We are committed to open and transparent conversations with our customers and community.

We have a dedicated organisational community and stakeholder engagement strategy and have aligned our engagement approach with the Australasia industry leader – the International Association of Public Participation (IAP2).

Through this strategy, we have established a number of dedicated consultative committees, consult regularly and directly on our infrastructure projects, and hosted dedicated community and stakeholder forums.

For example, our Future Focus project is aimed at delivering improvements for our land development and connections customers. Based on what these customers told us face to face, and through telephone and online surveys, we have implemented a number of process improvements leading to over 2,000 hours of productivity gain, resolving serious customer pain points, and installing new controls to manage risk. Guided by the process redesign work completed in 2016, the imagined 'to be' processes are now becoming reality.

Our Customer Consultative Committee (CCC) was established in 1996. It has an independent chair and supports us in responding to customer needs, involving our community in project planning, understanding issues raised by interest groups and accessing valuable community knowledge.

Our Environmental Consultative Committee (ECC) was established in 2000. It has an independent chair and members from local environment groups. The committee meets regularly and advises on environmental issues and policy.

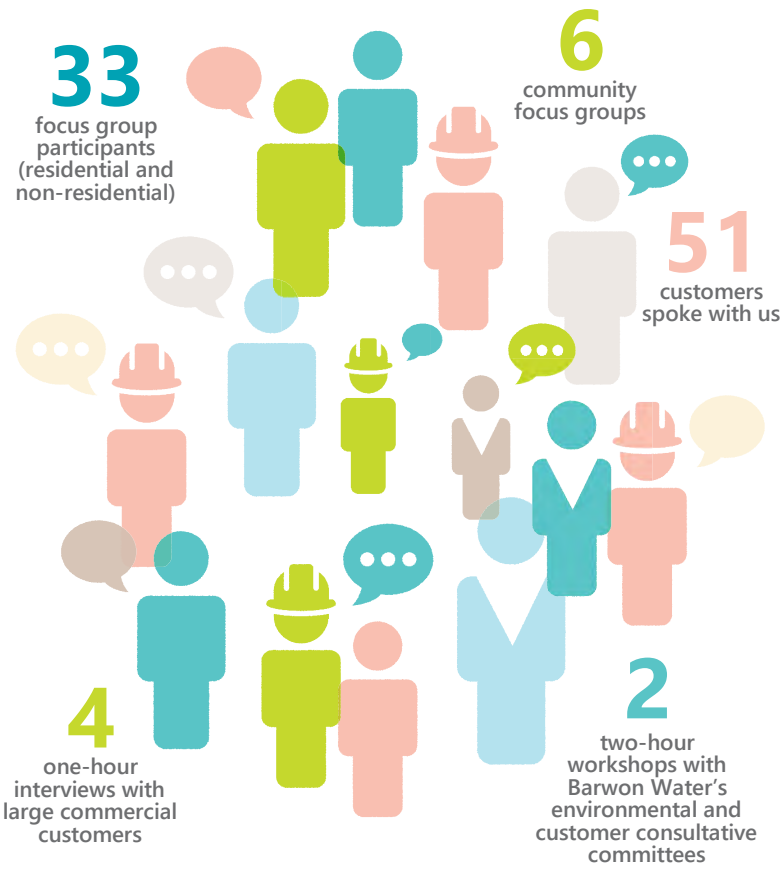
Our customer perception qualitative and quantitative engagement was established in 2008 and supports us in identifying key customer segments, planning decisions through willingness to pay scenarios and satisfaction ratings. Since its inception, more than 3,000 customer voices have been heard.

We drew upon the findings of this continual engagement to design a targeted engagement program for the 2018 Price Submission.

2.2 Test Phase – June to August 2016

The purpose of this first phase of targeted engagement for the 2018 Price Submission was to engage with a small, representative sample of customers/community to confirm the content, and the methods by which, they would like to be more fully engaged during the development of the 2018 Price Submission, as shown in Figure 2.

Figure 2: Test Phase (June 2016 – August 2016)



We commissioned Newgate Research to undertake workshops, interviews and focus groups with a cross section of residential and small, medium and large non-residential customers from a mix of geographic locations across our service area[4]. This involved:

- three residential focus groups of 22 participants in total, with each group segmented by generation (one with Generation X, one with Generation Y and one with Baby Boomers/Seniors) but representing customers from a mix of geographic locations across our service area;
- one non-residential / business focus group of 11 participants, representing small and medium businesses from a mix of geographic locations across the area;
- four in-depth interviews with large non-residential customers, representing a selected mix of large water users and/or large employers for the region, namely – Australian Lamb Company (Colac), EP Robinson, Portarlington Golf Club and Deakin University; and
- two workshops with members of our Customer and Environmental Consultative Committees.

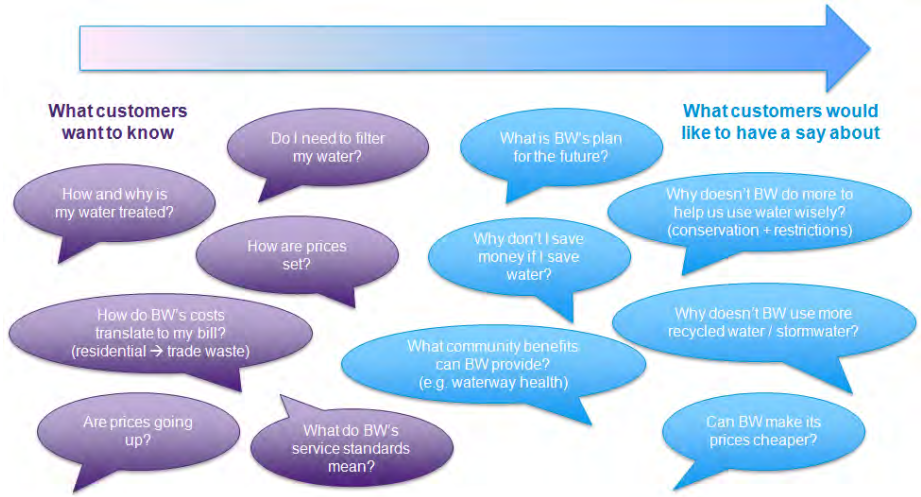
Detailed discussion guides and participant materials were prepared in close consultation with Newgate Research to ensure that the facilitators provided adequate information and instruction to research participants.

[4] Newgate Australia 2016, *Barwon Water 2018 Price Submission, Customer and Stakeholder Engagement Plan*, August, pp. 35-61.

2.3 Findings from Test Phase

The Test Phase gathered information about the top-of-mind issues that are of most interest and importance to customers. These ranged from issues that customers wanted to know more about (at the 'Inform' end of the IAP2 spectrum) to issues on which customers would like to have a say (at the 'Involve/Collaborate' end of the IAP2 spectrum), as shown in Figure 3 below.

Figure 3: Test Phase findings – what customers are interested in



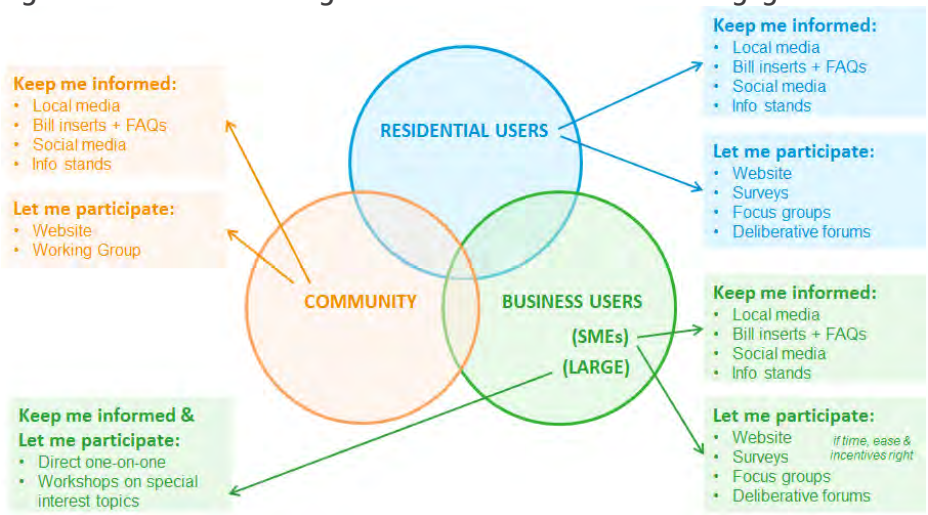
The Test Phase acted as a funnel – we explored a broad range of issues with customers and we used the information gained to understand the key themes that our customers would like to explore further, as shown in Table 3, and how they would like to be engaged on these issues, as shown in Figure 4.

Table 3: Test Phase findings – key themes[5]

Key themes	For example
The water we provide you	Water sources, quality and standards, treatment, taste
The services we provide you	Customer friendly service standards and guaranteed service levels
The future of our water / services	Water security commitment and options, role of water conservation and recycling
The way we charge you for our services	Changes to residential water tariff (and implications for non-res customers), Class A tariff
Other services we can provide – helping customers	Help for hardship, encouraging water efficiency, account manager services
Other services we can provide – helping the community	Renewable energy. 'community benefits' (e.g open space, recreation)

[5] Newgate Australia 2016, *Barwon Water 2018 Price Submission, Customer and Stakeholder Engagement Plan*, August, page 9.

Figure 4: Test Phase findings – how customers want to be engaged



2.4 How these findings were used

The findings from the Test Phase were used to:

- Design the scope and nature of more detailed and extensive engagement activities so we could explore these issues in ways that customers wanted[6]; and
- Work up detailed draft proposals to explore with customers in response to their desire for us to provide them with more information.

The findings of the Test Phase also confirmed our understanding that different customer groups were interested in different issues and would require different forms of engagement. Our next phases of engagement were designed with these differences in mind.

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[6] Newgate Australia 2016, *Barwon Water 2018 Price Submission, Customer and Stakeholder Engagement Plan*, August, pp. 4-33.

3. Listening to our customers (E)

- Our second phase of engagement began with qualitative and quantitative research on those issues customers had identified as important to them.
- Telephone and online surveys were conducted with 816 recruited, demographically representative residential customers and 300 business customers.
- Research was supplemented by a public campaign – "Have your say on what you pay" – that enabled any interested customer to participate.
- The findings were presented to our Community Panel to inform their deliberations, using the same process as for a 'citizens jury'.

3.1 Main Phase: Data Gathering – October 2016 to January 2017

The purpose of this second phase of engagement was to explore more deeply with customers those issues of interest to them, as shown in Figure 5.

We had a staged approach to this phase. First, we undertook a range of engagement activities to gather data about customer views in response to the question 'What do you value most about water and sewerage services and what do you expect in the future?' Then, we convened a Community Panel to 'deep-dive' into this data and provide a series of recommendations about outcomes and preferences in answer to this question, using the same process as for a 'citizens jury'.

Figure 5: Main Phase (October 2016 – March 2017)

Customer Challenge Group

Building on our continual engagement approach, we convened a Customer Challenge Group from nominated representatives of our Customer Consultative Committee and Environmental Consultative Committees.

The role of the Customer Challenge Group was to:

- Explore issues and provide feedback to Barwon Water on content and proposals relating to the 2018 Price Submission and 2017 Urban Water Strategy by:
    - providing their views about the issues on which Barwon Water is seeking customer feedback; and
    - acting as a sounding board for Barwon Water with regard to its process of engaging with the broader customer base about these issues;
- Review and provide feedback to Barwon Water on the findings from a range of engagement activities undertaken, and the development of the 2018 Price Submission and the 2017 Urban Water Strategy in response to these findings.

The Customer Challenge Group met in person five times from October 2016 to May 2017, and received one electronic update in December 2016.

Qualitative and quantitative research

We commissioned EY Sweeney to undertake customer research to provide insights around the key themes identified from the Test Phase[7].

The quantitative aspect of this research involved:

- Residential customers – 816 x 25 minute surveys (165 online and 651 by telephone), with respondents specifically recruited so that the results were reflective of our service region across key demographic characteristics of gender, age and location;
- Business customers – 300 x 20 minute telephone interviews across small, medium and large businesses in our service region.

The qualitative aspect of this research involved:

- Six group discussions (each lasting 90 minutes) with community members in locations across our service region, including Geelong (inner and outer), Colac, Apollo Bay, Lorne and Torquay;
- One group discussion (lasting 90 minutes) with the 'Customer Challenge Group' appointed by Barwon Water;
- Eight in-depth interviews (each lasting 60 minutes) with five major businesses and three social services organisations as representatives of vulnerable customers.

[7] EY Sweeney 2017, *Community Consultation report, Quantitative and qualitative report,* 31 January.

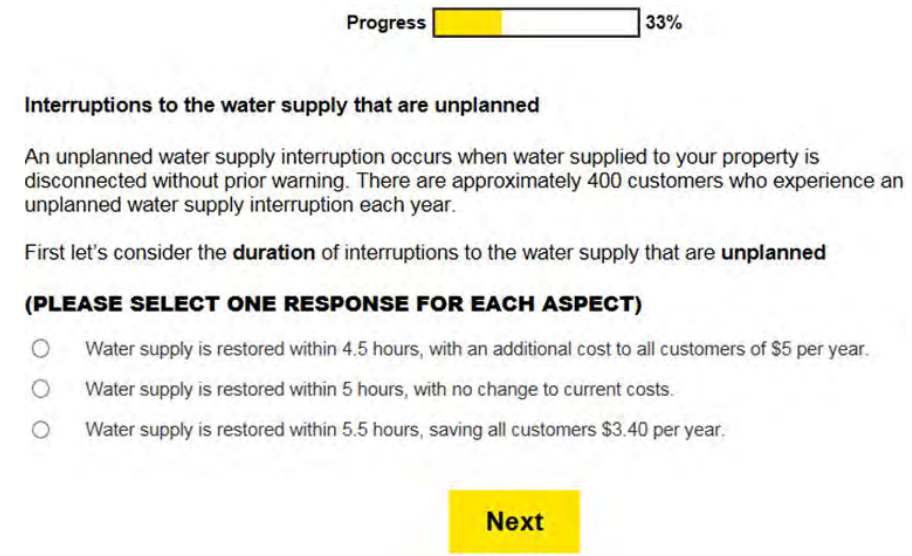
The research posed specific questions to help us to explore those issues on which customers had told us in the Test Phase they wanted to have a say:

- The services we provide, including:
  - the aspects of service that are most important to customers;
  - the level of customer satisfaction with the drinking water supplied by Barwon Water;
  - willingness to pay to reduce the number and duration of planned and unplanned water supply interruptions;
  - willingness to pay to decrease the frequency of sewer spills; and
  - customer service and billing options, such as willingness to engage with online services and email delivery of bills.
- The future of our water and services, including:
  - customer attitudes towards water restrictions, and the circumstances in which water restrictions are considered to be appropriate; and
  - customer preferences for developing different water sourcing options, including increased use of recycled water, increasing the capacity of reservoirs, purchasing additional water from the Melbourne system and extracting ground water.
- The way we charge for our services, including:
  - increasing the usage (volumetric) charges and decreasing fixed charges
  - pricing of recycled water relative to potable water
  - billing options, such as introduction of a handling fee for customers receiving paper bills and treatment of merchant fees on credit card payments
- Other services we can provide to help customers and the community, including customer attitudes towards:
  - assistance provided to vulnerable customers
  - delivering environmental and community benefits, such as use of non-potable water in public open spaces and increased use of renewable energy by Barwon Water
  - encouraging more efficient use of water through water efficiency programs and the use of digital water meters.

The qualitative research focussed on understanding perceptions and concerns of customers about these issues. Detailed discussion guides and participant materials were prepared in partnership with EY Sweeney to ensure that the facilitators provided adequate information and instruction to research participants.

The quantitative research tested specific customer preferences by providing context and other information, as necessary. Detailed survey questionnaires were developed in partnership with EY Sweeney to ensure that adequate information and instruction was provided, particularly around questions that tested customer willingness-to-pay. An example of the context given when testing customer willingness to pay to reduce the duration of unplanned water supply interruptions is shown in a screenshot of the online quantitative survey, in Figure 6 overleaf. This same context was given when the survey was conducted by telephone, along with the opportunity for respondents to ask for it to be repeated or clarified as necessary.

Figure 6: Screenshot of online quantitative survey question



'Your say' campaign

To supplement the recruited aspect of the EY Sweeney quantitative research, we launched the 'Your Say' campaign, which was aimed at encouraging any interested community members to provide input to the development of our price submission under the tagline of 'Have your say on what you pay'.

We developed an animation to explain what we were doing and how community members could get involved by meeting with us face-to-face, completing the online survey, completing an online 'quick poll' or submitting an idea. Our animation can be viewed at https://www.youtube.com/watch?v=UBO8fDYt6Mk.

The campaign gained attention in the local print and electronic media.

We reached out to 560 community members through nine community 'pop-up' information sessions hosted between October and December 2016 across Barwon Water's service region.

Letters were sent to more than 100 regional stakeholders and community groups advising of the opportunity to participate in the 'Your Say' campaign.

We also met with four Traditional Owner groups (Eastern Maar, Kuuyang Maar, Guli Gad and Wadawurrung) from across our service region during December 2016 and January 2017.

3.2 Findings from Main Phase: Data Gathering

The findings from the Data Gathering stage of the Main Phase were made publicly available and were used to inform the deliberations of our Community Panel, in the next phase of engagement.

The findings were presented under headings of core services, community services and charges, to align with the way in which the areas of influence were defined for the Community Panel. In summary, the key findings[8] included:

Core Services – Water and Sewerage:

- More than 90% of customers support Barwon Water's approach to providing water security;

[8] EY Sweeney 2017, *Community Consultation report, Quantitative and qualitative report,* 31 January.

- Between 80 to 90% of customers are unwilling to pay more to decrease the duration or number of water supply interruptions experienced by about 1,150 customers annually;
- Almost 40% of customers would pay more to decrease the number of sewer spills experienced by about 175 customers annually;
- The taste/look/smell of water is the most important aspect of Barwon Water's service, and around 80% of customers are satisfied with this;
- "We can manage it [planned water service interruption] as long as we're given prior notice." (Apollo Bay group);
- "You better make sure that the quality is the number one priority. So, people feel good about drinking it." (Lorne group);
- "I run a gardening business and none of my clients would dare water their lawn regularly as they'd get a lecture from me." (Outer Geelong group); and
- "Gotta just go with it. Accept it. I'm happy to have more restrictions all year round." (Colac group).

Core Services – Customer Experience:

- 75 to 90% of customers would use at least one online service but choice is paramount;
- More than six in 10 customers are likely to pay for a digital water meter;
- "If your phone goes off with a text, you check it. Everyone checks their text messages" (Torquay group);
- "It would be ideal if, when you ring, they can help you straightaway or can give you a timeframe for when it will be resolved. They don't just fob you off." (Outer Geelong group);
- "Put me through to a person who has the authority to answer my questions when I call, rather than move me from person to person." (Survey respondent); and
- "I am old school. I still want a letter in the mail" (Torquay group).

Community Services – Environmental:

- More than 60% of customers are willing to pay between $2 to $15 per year for Barwon Water to switch to 100% renewable energy;
- 2 in 3 customers are willing to help fund projects that deliver environmental and community benefits, such as using non-drinking water on green public open spaces;
- "Invest in environmentally friendly or sustainable infrastructure" (Your Say respondent); and
- "Invest in water saving and catchment initiatives … where possible, utilise renewable energy for pumps, buildings and offices" (Your Say respondent).

Community Services – Education & Assistance:

- About 8 in 10 customers support programs that encourage customers to use less water;
- More than 60% of customers are willing to help fund these water efficiency programs;
- More than 60% of customers are willing to pay extra on their bills to help vulnerable customers;
- "Education on water saving measures needs to be ongoing. It goes off people's radars when we get lots of rain." (Outer Geelong group); and
- "Continue to find ways to improve water conservation and pass that information on to the customer." (Survey respondent).

Charges:

- About half of customers who suggested an improvement to Barwon Water's services asked us to lower fees or offer discounts;
- 74% of residential customers support the idea of a greater percentage of their water bill being a volume based charge;
- "Water access is a right, not a luxury." (Inner Geelong group);
- "I like the idea of truly paying for what you use. It would make people more socially conscious of water waste." (Torquay group); and
- "From my perspective, the attempt to use water wisely is not rewarded because the service charges keep increasing and I think "Why bother using less water!!" (Your Say respondent).

3.3 How these findings were used

These findings were provided to our Community Panel, in the next phase of engagement, to support their deliberations.

4. Learning from our Community Panel (E)

- We convened a Community Panel, who acted as a 'citizens jury'.
- Our Community Panel process satisfied the key principles of deliberative democracy.
- The Community Panel met for over a month of face-to-face and online deliberations about the question – *What do you value most about water and sewerage services, and what do you expect in the future?*
- The Community Panel agreed the outcomes that they expect us to deliver and agreed their preferences about levels of service of which they would like us to provide more, less or the same.

4.1 Main Phase: Community Panel – February to March 2017

The purpose of the Community Panel was to allow customers to explore, in detail, information about the operations of Barwon Water's business alongside the qualitative and quantitative community feedback obtained through the data-gathering stage, so as to provide informed, detailed input to the development of our price submission.

The Community Panel process was guided by experienced and highly skilled facilitators Mosaic Lab, who are IAP2 accredited trainers. We used the same process as for a 'citizens jury' and satisfied the key principles of deliberative democracy, as follows:

- The assumption that the process will have a high level of influence over outcomes or decisions – the Community Panel was personally assured by our Managing Director and the Chair of our Board that their recommendations would be considered by the highest levels of decision-makers at Barwon Water;
- Participants will have access to the information they need to have an in-depth conversation and sufficient time to consider that information – the Community Panel met face-to-face four times (one three-hour session on 1 February 2017, two eight-hour sessions on 26 and 27 February 2017 and one five-hour session on 4 March 2017) and participated in online deliberations between face-to-face sessions; and
- Participants are selected randomly, are representative of the broader community and inclusive of all voices – as explained below.

Over 9,000 invitations to participate in the Community Panel were sent to Barwon Water customers, with 212 registrations received. The Community Panel comprised 27 randomly selected community members representing a broad cross section of Barwon Water's residential and business customers, both in terms of demographics and location. The composition of the Community Panel was determined independently by Deliberately Engaging Pty Ltd to satisfy recruitment criteria set by Barwon Water.

Table 4 and Table 5 overleaf shows the composition of the 20 residential customer members of the Community Panel by location and age.

Table 6 overleaf shows the composition of the 7 business customer members of the Community Panel by number of employees, industry and location.

Table 4: Composition of the 20 residential customer members of the Community Panel, by location

Target number of members	Actual number	Actual number by suburb
Geelong LGA goal was 11	12	Armstrong Creek, East Geelong, Geelong, Geelong West, Lara, Leopold, Newcomb – 1 each Newtown – 2; and Corio – 3
Otway LGA goal was 2	2	Forrest
Golden Plains LGA goal was 2	2	Bannockburn and Teesdale
Surf Coast LGA goal was 2	3	Jan Juc, Lorne and Torquay
Queenscliff LGA goal was 1	1	Queenscliff

Table 5: Composition of the 20 residential customer members of the Community Panel, by age

Age ranges	Target number of members	Final number
18 - 24	Goal was 2	1
25 - 34	Goal was 2	3
35 - 49	Goal was 6	5
50 - 59	Goal was 4	4
60 - 69	Goal was 4	3
70+	Goal was 4	4
TOTAL	Goal was 22	20

Table 6: Composition of the 7 non-residential customer members of the Community Panel

Characteristic		Amount
# of employees	1 to 2 employees	3
	3 to 19 employees	4
Industry	Accommodation and hospitality	1
	Agriculture	2
	Construction	1
	Manufacturing	1
	Retail	1
	Other	1
Location	Armstrong Creek	1
	Breakwater	1
	Colac	1
	Highton	1
	Indented Head	1
	Lara	1
	Torquay	1

During February and early March 2017, the Community Panel came together online and face-to-face to consider the question 'What do you value most about your water and sewerage services and what do you expect in the future?'

The Community Panel's task was to agree a series of outcomes that they expect Barwon Water to deliver and to provide their views on a range of services offered by Barwon Water – specifically, agreeing their preferences about which areas Barwon Water should be:

- Accelerating its efforts, increasing levels of service or investing more ambitiously (do more);
- Doing less, reducing levels of service or making savings (do less); or
- Maintaining current standards or programs (do the same).

The Community Panel was provided with a range of information about Barwon Water's business, including a handbook that explained their task[9], a purpose-written report that addressed the key issues of customer interest identified in findings from the Test Phase[10] and the EY Sweeney research report that reflected findings from the Main Phase: Data-Gathering[11].

The Community Panel was guided in its deliberations and decision-making by independent facilitators Mosaic Lab, who helped the Community Panel to understand social styles and critical thinking skills so that they could operate effectively as a collective and were confident to critically analyse the information presented to them.

4.2 Findings from Main Phase: Community Panel

The Community Panel's recommendations were captured in a report[12] that was written by Community Panel members on the basis of consensus rules established and enforced by the independent facilitators, Mosaic Lab. In summary:

- The report started as a blank page and the Community Panel wrote it collectively; and
- An 80% 'super-majority' of Community Panel members needed to agree that they could 'live with' a recommendation for it to be included in the final report.

The Community Panel agreed five outcomes that they expect Barwon Water to deliver, and agreed their preferences about fifteen different services offered by Barwon Water. The Community Panel's recommended outcomes, and related preferences, are shown in

[9] Barwon Water 2017, *2018 Price Submission, Community Panel handbook*.
[10] Barwon Water 2017, *Snapshot of Barwon Water, Prepared for 2018 Price Submission community panel discussion*.
[11] EY Sweeney 2017, *Community Consultation report, Quantitative and qualitative report,* 31 January.
[12] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report,* 4 March.

Table 7. Further details about the Community Panel's preferences are provided in Table 8.

Preferences were agreed based on the Community Panel's understanding of the relative impact of their decision on an average annual residential owner-occupier bill (customers using 160 kL of water each year, which is the average across our region). This understanding was shaped by contextual information given by us at the Community Panel's request during their deliberations, which included our understanding at that time of possible bill impacts arising from areas outside the influence of the Community Panel such as regulatory and legislative obligations (in the order of $80 over the five year pricing period)[13]. The Community Panel was also given a detailed 'report back' prior to its final day of deliberations, which outlined our understanding of their draft recommendations, what we proposed to do in response to these recommendations and the impact this would have on an average annual residential owner-occupier bill[14]. This report proved invaluable in helping the Community Panel to refine and finalise its recommendations.

The Community Panel delivered its report to the Managing Director and Chair of Barwon Water on 4 March 2017. Representatives of the Community Panel presented their report to Barwon Water's Board at its meeting on Thursday 18 March 2017 and spent about 30 minutes with the Board, providing an overview of the process and answering questions from the Board.

A video documenting the Community Panel process, which features footage of the Community Panel in action and interviews with Community Panel members, can be viewed at: https://www.youtube.com/watch?v=jfrcT1TBmNc&t=1s.

[13] Barwon Water 2017, *2018 Price Submission, Community Panel handbook,* pg 8.

[14] Barwon Water 2017, *Preferences, Barwon Water understanding*.

Table 7: Outcomes and preferences agreed by the Community Panel

Outcomes	Preferences
Use of innovation and technology 1. Working in partnership with customers to use innovation to encourage water efficiency. 2. Stay at the forefront of technological advances to maintain and improve existing systems and infrastructure.	10, 11 and 12
Affordability of services Implement a fair and equitable pricing structure that takes into account different circumstances i.e. smaller households, lower socioeconomic groups and future developments that Barwon Water is undertaking within the region and the needs of commercial customers	1, 13 and 15
Environmentally sustainable services Barwon Water to deliver their services of water supply and all water treatment in an environmentally and financially sustainable manner, meeting the community needs towards 2025 and over the next 50 years.	4, 6 and 7
Community resources, knowledge and education Whole community is more informed and educated on the complexities of harvesting and processing water; different ways to save and use water efficiently and effectively; new water technologies that are available to them.	2, 3, 5 and 8
Reliable supply of water for the future Provide Technologically Up-to-Date Water and Sewerage Services; Reliable - both now and into the Long Term Future (e.g 50 years).	1, 9, 13 and 14

Table 8: Detailed preferences agreed by the Community Panel

Preferences*	Bill impact
1. Helping customers to save water and pay bills – **Same**	$0.00
2. Supporting the community – **More**	+$2.50
3. Recognising Aboriginal values of water – **Same**	$0.00
4. Creating a liveable community – **Same**	$0.00
5. Providing recreational opportunities – **Same**	$0.00
6. Action on climate change – **More**	+$2.90
7. Protecting the environment – **More**	+$0.56
8. Supporting regional economic growth – **Same**	$0.00
9. Water security – **Same**	$0.00
10. Duration and number of water supply interruptions: a. Unplanned – **Same** b. Planned – **Less**	-$1.70
11. Number of sewer spills – **More**	+$0.88
12. Customer service – **Same**	$0.00
13. Increase the water volume charge and decrease the water service (fixed) charge – **More**	$0.00
14. Class A recycled water charge – **More**	+$1.50
15. Sewerage charges – **Same**	$0.00

**Community Panel's task included agreeing their preferences on where Barwon Water should do more / do less / stay the same.*

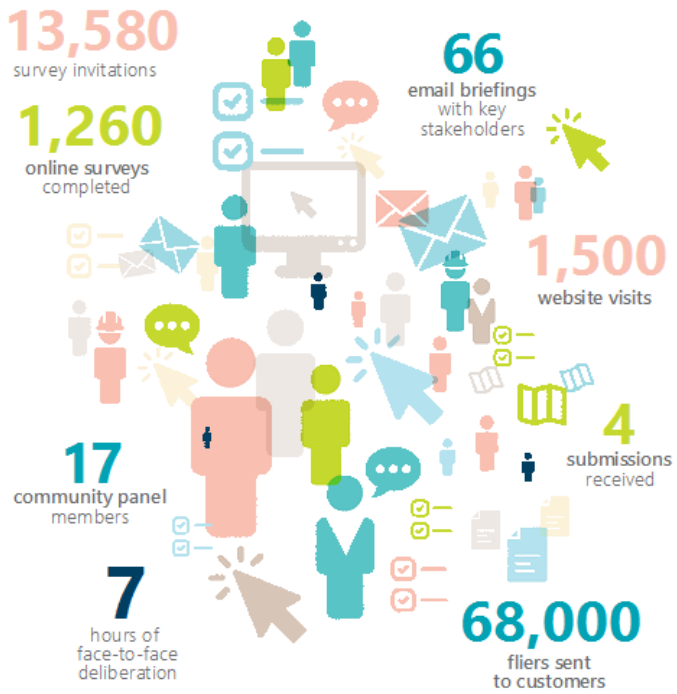
5. Testing our proposal (E)

- We substantially accepted the findings of our customer engagement. We designed outcomes, actions and prices based on what our customers had told us.
- We tested our proposed outcomes, actions and prices with customers, by asking for their feedback over a three-week public consultation period in July 2017. We explained and provided reasons for any proposed differences to what customers had recommended.
- 1,260 customers completed an online survey and 4 customers made a detailed submission on our proposals.
- Overwhelmingly, these customers told us they were comfortable with the outcomes we propose to deliver. And the majority of these customers were comfortable with proposed bill impacts over the next five years.
- We also convened a follow-up deliberative process with 17 members of our Community Panel, who acted as a 'citizens jury', to revisit their original recommendations in light of our proposals and broader community feedback.
- The Community Panel supported all aspects of our proposals.

5.1 Draft Submission Phase – July to August 2017

The purpose of this phase was to report back to customers on our proposed services and prices, and to allow the customers to provide feedback on whether we had heard them correctly, as shown in Figure 7.

Figure 7: Draft submission phase (June 2017 – August 2017)



On 1 July 2017 we publicly released a detailed document[15] and supplementary fact sheets to explain how we had used the feedback from customers to develop:

- Five outcomes that we understood our customers want us to deliver;
- Actions we propose to take in relation to each outcome;
- How we propose to track our progress;
- How much we will spend; and
- The future prices that customers can expect to pay.

We also developed an animation to explain what we were proposing, which can be viewed at: https://www.youtube.com/watch?v=6pVhokDlA_c.

We explained how the five outcomes we proposed to deliver had been shaped by the five outcomes recommended by our Community Panel, who had in turn been informed by the views of our broader customers. Whilst we used slightly different terminology, our outcomes directly matched to the outcomes recommended by the Community Panel. We also broadened the outcome about 'community resources, knowledge and education' to include both stronger knowledge and partnerships with our community, in recognition that we need to build relationships and work collaboratively with all parts of our community to achieve the outcomes sought by the Community Panel.

We also explained how we proposed to change some of the specific services we provide to reflect the 15 preferences recommended by the Community Panel. We used four categories to describe our change in services, to help resolve some of the confusion that existed amongst the Community Panel around the category of 'Same'. Some of the preferences of the Community Panel were categorised as 'Same' but they wanted us to do things differently, so we categorised these preferences as 'Change focus' instead.

Appendix 1 to our public document provided details of our proposed response to the preferences of our Community Panel, including the impact of each of these preferences on average annual residential owner-occupier water bills (customers using 160 kL of water each year, which is the average across our region).

Generally, we agreed to implement the recommendations of the Community Panel. However, for some preferences, we proposed a slightly different response to that recommended by the Community Panel, and provided our reasons for doing so. In summary, we proposed the following changes to the Community Panel recommendations:

- Increasing the water volume charge and decreasing the water service charge – We proposed to decrease the water service charges for residential customers by 25% over five years, rather than increase the water volume charge by 10% as recommended by the Community Panel, to avoid potential adverse impacts on vulnerable customers, particularly tenants (see Section 8.1);
- Helping customers to save water and pay bills – We proposed to spend an additional $500,000 per annum on initiatives to support vulnerable customers that may have difficulty paying their bills, as we move towards our new proposed pricing structure (see Section 8.1);
- Providing recreational opportunities – We proposed to spend additional $1.7 million on Stage 1 of the Aqueduct Park project, which will ultimately

[15] Barwon Water 2017, *Our proposed services and prices for 2018-2023,* July.

create a new 66-hectare community park on the Barwon River around the heritage-listed Barwon River Ovoid Sewer Aqueduct;

- Protecting the environment – We proposed to spend an additional $112,500 per annum as recommended by the Community Panel but invest this in programs to deliver better waterway and catchment health outcomes for the Barwon and Moorabool Rivers, rather than on our own land; and
- Duration and number of water supply interruptions – We proposed to continue our current effort and expenditure on planned water supply interruptions, rather than spend less as recommended by the Community Panel. We found we were unable to change our target response times for planned interruptions without impacting responses for other incidents.

Further details are available in Appendix 1 to our public document.

5.2 Findings of Draft Submission Phase

Quantitative research

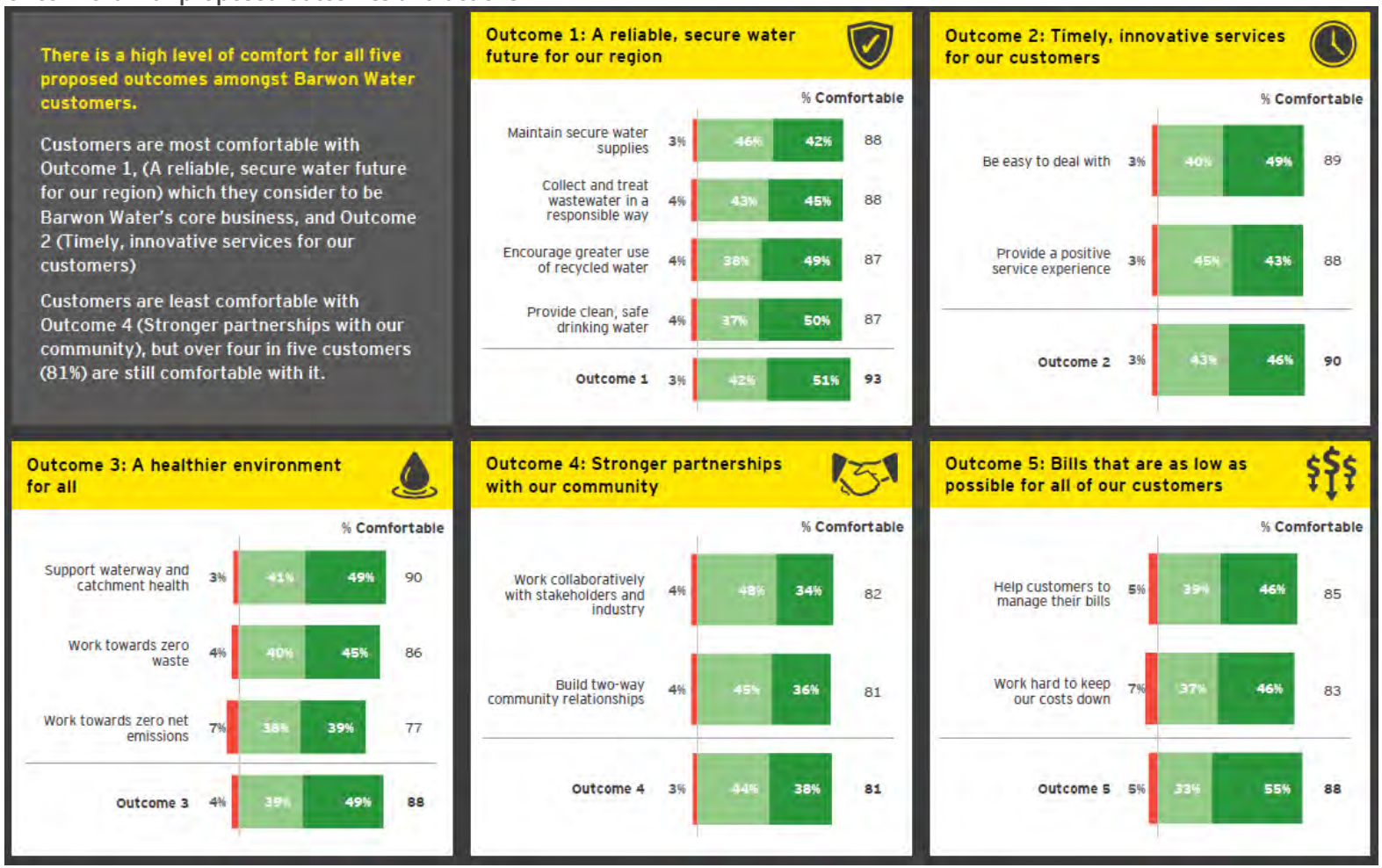
1,260 surveys were completed and 4 submissions were made over the three-week public consultation period.

Key findings from customers surveyed are shown in Figure 8 and Figure 9 overleaf. In summary, the key findings[16] included:

- Outcomes – Overwhelmingly, customers told us they were comfortable with the five outcomes we propose to deliver (between 81% to 93% comfortable) and all of the proposed actions underpinning these outcomes (between 77% to 90% comfortable);
- Bills – At an overall level, two in three (64%) of residential customers were comfortable and less than one in five (17%) were uncomfortable with the proposed bills in Year 1, with these level of comforts remaining relatively consistent for Years 2 to 5 (60% comfortable and 21% uncomfortable). It was evident that:
    - The majority of customers were comfortable with Year 1 bill impacts, even if their bills increased – there were higher levels of comfort for Year 1 bill impacts amongst households greater than 3 people (73-74%) than those with 1-2 people (58%) in line with relative bill impacts (as Year 1 bills increase only for small households);
    - The majority of customers were comfortable with Year 2 to 5 bill impacts – levels of comfort were consistent across all households (between 55% to 62% comfortable); and
    - Overall, levels of comfort were higher for owner-occupiers than for tenants, but around half of tenants were still comfortable with Year 1 bill impacts (see Section 8.1).

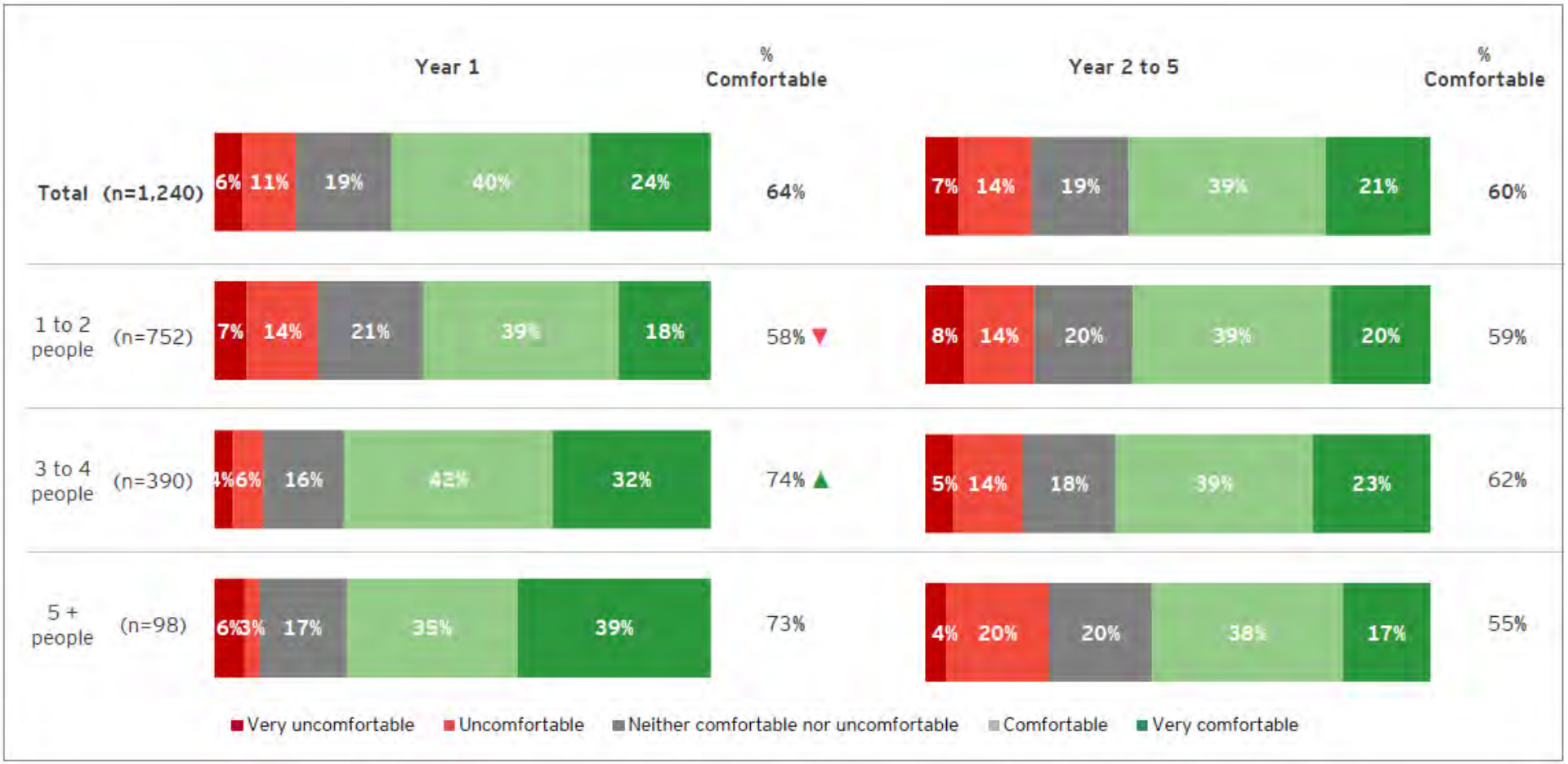
[16] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August.

Figure 8: Levels of comfort with proposed outcomes and actions [17]



[17] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August, pg 7.

Figure 9: Levels of comfort with proposed bills – all residential customers[18]



[18] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August, pg 17.

Community Panel

The Community Panel was reconvened on 5 August 2017 to:

1. Consider how we had incorporated their recommendations into our proposed services and prices;
2. Consider the views expressed by the broader community on our proposed services and prices; and
3. Agree changes (if any) to the Community Panel's recommendations, in light of the above.

Having reviewed our proposed services and prices document and the research findings, the Community Panel supported/agreed with our proposed approach in response to all of their recommendations about outcomes and preferences made in March 2017. The Community Panel amended their original report to reflect their final recommendations[19].

The only new recommendations made by the Community Panel were that we should:

- Include additional supporting data for our proposed action on climate change (zero net emissions) in our submission to the ESC[20];
- Provide further clarification and education about what is meant by 'zero net emissions' and '100% renewable energy', as there may be confusion amongst the broader community about these different terms and the relative benefits of these initiatives.[21]

These recommendations have been addressed in section 7.4.1 of this submission.

The Community Panel also provided a powerful final statement on their process, as shown in Figure 10.

Figure 10: Community Panel final statement[22]

> As members of the Community representation panel, we provide you with the report from our final day of deliberations, in response to the Barwon Water community consultation (Our proposed services and prices for 2018-2023). This is a culmination of a series of workshops, over a series of days, to prepare for this final report.
>
> We have had the opportunity to review all of the Barwon Water background information, original panel work, online discussions, and the EY Sweeney report on the community consultation research. We also received submissions from Barwon water explaining the process undertaken in preparation and implementation of the survey, and an extrapolation of the results. We can provide assurances that as a panel, we have been supported by the facilitators in reaching conclusions that we believe are representative of our collective views. The net result is that we support the context of the proposed price submission as put forward by Barwon Water, as it also supports our views, and where necessary we have provided supportive commentary for our recommendations.
>
> We commend the report to the Essential Services Commission, for their approval.

[19] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report,* 5 August.
[20] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report,* 5 August, pg 5.
[21] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report,* 5 August, pg 13.
[22] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report,* 5 August, pg 2.

Targeted consultation with business customers

Our conversations with major water users as part of the Test Phase highlighted that trade waste and Class C recycled water prices were top-of-mind issues for these customers. Specific feedback about these charges included providing support and advice on improving trade waste quality and the high cost of Class C recycled water. We also understood from these customers that they wanted to be engaged in a targeted way, on issues that were relevant to them, when we had sufficient detail about our proposals to share with them. We therefore undertook targeted consultation with these customers during the Draft Submission phase.

Building on our successful consultative approach when we redesigned our New Customer Contribution (NCC) framework based on ESC Guidance in 2013, we also contacted during the Test Phase developers and consultants who pay NCCs to advise the NCC framework was being reviewed for the next regulatory period. These customers were invited to provide feedback on the existing framework. Feedback was sought on (but not limited to) standard charges, Infrastructure Sequencing Plans and growth assumptions. On the basis of the limited feedback that was received, we decided to undertake targeted consultation with these customers during the Draft Submission phase, when we had more detail on our proposed amendments to the NCC framework and draft NCC prices.

Further details of our targeted consultation with business customers on Class C recycled water, trade waste and NCCs are provided below.

Class C recycled water

In mid-2017, we asked Class C recycled water customers to consider our proposals to:

- Keep the Class C volume charge ($ per ML) steady from 2018/19 to 2022/23 except for annual inflation adjustments; and
- Introduce a 'take-or-pay' option where Class C recycled water customers can access a nominated amount of recycled water per year at a cheaper price, to the standard volume charge per ML.

Feedback was sought through an online survey, phone conversations and face to face briefings.

Letters and emails were sent to our 22 Class C recycled water customers informing them of the proposed prices (and the new take-or-pay option). Six online surveys were received and several telephone and one-on-one discussions were held with customers. Feedback indicated:

- Customers are comfortable with the proposed pricing;
- Support for the 'take-or-pay' option and to pay quarterly rather than lump sum;
- Ideas for incentivising high volume users such as providing a discount on each 50 M/L increment on the 'take-or-pay' option; and
- Support for lower Class C water prices.

A detailed proposal was tendered by Anglesea Golf Course, which outlined a number of recommendations including consideration of:

- Changes to the recycled water supply agreements policy;
- A price per water reclamation plant depending on the class of water being produced, rather than the current 'postage stamp' pricing approach;
- Development of a strategic partnership to pursue ongoing opportunities for innovative and increased use of recycled water.

Trade waste

In mid-2017, we asked trade waste customers to consider our proposal for there to be no increase to the unit charges for trade waste quality parameters from 2018/19 to 2022/23, except for annual inflation adjustments.

Feedback was sought through an online survey and customer briefings.

Letters and emails were sent to 29 of our trade waste customers informing them of the proposed charges. Five online surveys were received and several telephone and one-one-one discussions were held with customers. Feedback indicated:

- The majority of customers supported the pricing proposal, indicating prices were fair;
- Acceptance of increasing prices by inflation only;
- Recognition that trade waste quality charges assist to motivate businesses to improve the quality of their trade waste discharge;
- Concerns around business viability due to other external non Barwon Water price increases; and
- Requests for support to find new technology or efficiencies in decreasing the cost to treat trade waste and for these savings to be passed onto customers.

New Customer Contributions

In mid-2017, we convened a forum for developers and consultants around the proposed NCC charges and framework. More than 1,000 invitations were issued. The proposed NCC framework for 2018-2023 was also advertised on our website.

We also offered one-on-one briefings and phone call catch-ups for those customers unable to attend the forum.

About 30 customers attended the forum to discuss the proposed charges and amendments to the NCC framework for 2018-2023. Further to this, three formal submissions were tendered. Feedback included:

- Developers are pleased with the proposed reduction in the NCC charges;
- Developers are supportive of the introduction of a Greenfield and an Infill charge;
- Understanding of the difficulties in introducing a transition and supportive of measures for Barwon Water to address this through revised Offers;
- Pleased that Barwon Water has listened to feedback over the past five years and attempted to introduce measures to provide more fair and equitable outcomes for the development industry; and
- Interested in growth numbers and their relationship to Infrastructure Sequencing Plans.

5.3 How these findings were used

The findings from this engagement were used to shape our final proposals, as further explained in Chapters 6, 7, 8 and 9.

We changed five key aspects of the proposals set out in the public document we released in July 2017, in light of the feedback provided by our customers and community:

1. We changed the titles of two outcomes to better reflect community views – Overwhelmingly, customers told us they were comfortable with the outcomes we propose to deliver. However, our Community Panel noted we used slightly different words to describe some of the outcomes they had recommended. We renamed two of our proposed five outcomes to clarify that we mean the same thing as our Community Panel – from stronger partnerships with our

community to deeper knowledge and partnerships with our community, and from bills that are as low as possible for all our customers to affordability for all our customers.

2. We decided to provide more financial assistance to tenants – Tenants told us they were far less comfortable about proposed bill impacts than owner-occupiers, as their bills were poised to increase more than owner-occupiers. We decided to extend our proposed Transitional Rebate Adjustment so that it applies to all tenants over the next five years (see Section 8.1).
3. We gave more thought to how we will track our progress in delivering outcomes – Customer levels of comfort about the outcomes we proposed to deliver were so high that we strengthened our performance measures and targets to ensure these were meaningful for our customers and delivered on the outcomes they have asked for (see Chapter 9).
4. We sought independent review of our expenditure and proposals – Whilst the majority of customers were comfortable with proposed bill impacts, we couldn't ignore that some people were uncomfortable. To that end, we wanted to ensure our costs and proposals were as efficient and cost effective as possible (see Sections 7.3 and 7.4).
5. We spoke with key business customers and developed proposals in response to their specific needs – Early conversations with Class C recycled water and trade waste customers and property developers suggested these key groups wanted us to have targeted discussions about the details of our proposals that were relevant to them. We came up with proposals that respond to their specific needs (see Sections 8.3, 8.4 and 8.5).

We prepared a report that we released publicly to explain these key changes[23]. The aim of this report is to 'close the loop' with our customers and community about how their feedback helped to shape our final proposals.

[23] Barwon Water 2017, *Proposed prices and services for 2018-2023, Community feedback report*, September.

6. Delivering outcomes (O)

- Our outcomes were entirely shaped by our customers via a robust customer and community engagement process.
- We have designed performance measures (or outputs) that we will use to monitor our delivery of outcomes, many of which are new (reflective of customer priorities) and/or have stretch targets attached to them.
- We have set ourselves ambitious targets against our performance measures (or outputs), which mean we will maintain our current high standards of performance at a lower cost and improve our performance in those aspects of our service that are most important to our customers.

6.1 Introduction

Our customers told us they wanted us to deliver five key outcomes.

This chapter explains:

- How the outcomes we will deliver were shaped by what our community asked of us;
- The key actions we will to take to deliver these outcomes, and how these actions were shaped by the preferences of our community, together with the regulatory and legislative obligations that were outside their realm of influence;
- How we will track our progress in delivering these outcomes; and
- How much money we will spend against each outcome.

We are committed to delivery of these outcomes.

We will track our progress in delivering these outcomes against a new suite of performance measures (or outputs) that match the priorities of our customers. Many of these performance measures are new relative to the 26 service standards presented in our last price submission, and others have been reframed to better reflect the experience of our customers.

We have also set ambitious targets for our performance to ensure we deliver greater value for our customers. These targets show how we will maintain our current high performance at lower cost in core service areas and improve our performance in areas important to our customers. Some targets reflect areas of performance that we do not currently measure, so are shown as 'to be determined' ('tbd') in the remainder of this chapter. However, as these areas are important to our customers, we commit to understanding our current performance and setting new targets for these areas. We are starting to gather baseline data about our performance, and we commit to measuring our performance in these areas within the first twelve months of the next regulatory period. We are committed to developing measures that are important to our customers, rather than relying on what we can or do currently measure.

We have reflected these performance measures and targets in our new approach to performance management across our organisation (see Chapter 9).

6.2 Outcome 1 – A reliable, secure water future for our region

What we heard

> "Provide technologically up-to-date water and sewerage services … Reliable both now and into the long-term future (i.e. 50 years)" (Community Panel – Outcome No. 5)

Key actions we will take

1. Provide clean, safe drinking water:

- Build new infrastructure and upgrade existing infrastructure to support regional growth. For example:
    - Build new water infrastructure to service new developments at Armstrong Creek, Torquay and Spring Creek, such as Stage 5 of the Torquay high level water feeder main ($2.8 million).
- Manage the repair and replacement of aging infrastructure by using innovative, risk-based software developed by the CSIRO (Pipeline Asset Risk Management System). For example:
    - Water reticulation main renewal program ($15.5 million).
- Augment existing infrastructure to improve water reliability. For example:
    - Upgrade clear water storage capacity at Colac Water Treatment Plant to maintain supply in the event of treatment plant outages ($6.1 million);
    - Dam safety upgrades program ($5.3 million);
    - Water channel rehabilitation program ($8.0 million).

2. Treat wastewater in a compliant manner:

- Build new infrastructure and upgrade existing infrastructure to support regional growth. For example:
    - Upgrade the Colac Water Reclamation Plant to cater for expansion of key Colac industries, such as the Colac Water Reclamation Plant balance tank ($3.1 million) and sludge dewatering upgrade ($4.2 million).
- Manage the repair and replacement of aging infrastructure by using innovative, risk-based software developed in-house (Sewer Infrastructure Management System). For example:
    - Main sewer lining program ($11.1 million);
    - Sewer reticulation renewal program ($21.7 million).

3. Encourage greater use of recycled water:

- Partner with industry to find more productive uses for recycled water.
- Subsidise the cost of Class A recycled water to encourage its use by setting its $/kL price at 30% less than drinking water, from 20% currently (Community Panel – preference #14).
- Undertake an education program to change community perceptions about using recycled water (Community Panel – preference #14).

4. Maintain secure water supplies:

- Pay our fair share of the costs of Melbourne's water supply system, in relation to the 16,000 ML bulk entitlement we hold to water from the Yarra-Thomson catchment, so that the water security benefits of being connected to Melbourne via the Victorian Water Grid can be shared from Geelong to Colac to Aireys Inlet. Because we are only entitled to water

from the Yarra-Thomson catchment, we do not pay any costs associated with the Victorian Desalination Project.

- Explore options with our community for maintaining a secure water supply for Apollo Bay as its grows.
- Work within existing legislative processes to redesign permanent water restrictions (Community Panel – preference #9).
- Redesign our residential water tariff structure to provide financial incentives to save water (Community Panel – preference #13).
- Raise awareness of permanent water savings measures and encourage use of water efficient appliances under an expanded 'water efficiency and literacy program' (Community Panel – preference #1).

How we will track our progress

Performance Measure	Current Performance – 2017	Target Performance – 2023
Volume of recycled water allocated for productive use by 2022/23	2,600 ML	3,600 ML
Compliance with EPA licence parameters	100%	100%
Percentage of population receiving drinking water that meets E.coli standards	100%	100%
Percentage of population receiving drinking water that meets turbidity standards	100%	100%
Percentage of population receiving drinking water that meets disinfection by-products standards	100%	100%
Compliance with bulk entitlement and licence conditions	100%	100%
Compliance with water security statement: 'Barwon Water will not run out of water in a drought. We may need to be on water restrictions in a dry period, but we plan for this to occur less than 5 percent of the time'[24]	n/a	100%

What we will spend

Operating: $227.1 million

Capital: $307.8 million

These expenditures reflect our 'business as usual' approach to delivering the services that our customers expect, and ensuring that we meet all of our compliance obligations. A breakdown of these expenditures per action are shown below.

Action	Opex	Capex
Provide clean, safe drinking water	$112.1m	$21.4m
Treat wastewater in a compliant manner	$75.9m	$114.2m
Encourage greater use of recycled water	$17.3m	$16.5m
Maintain secure water supplies	$21.8m	$155.7m

[24] Water security statement reflects level of service defined in our 2017 Urban Water Strategy – Barwon Water 2017, *Urban Water Strategy*, March.

6.3 Outcome 2 – Timely, innovative services for our customers

What we heard

> "Work in partnership with customers to use innovation to encourage water efficiency. Stay at the forefront of technological advances to maintain and improve existing systems and infrastructure."
> (Community Panel – Outcome No. 1).

Key actions we will take

1. Provide a positive service experience:

- Investigate any spike in water quality complaints and rectify the cause, if it is our responsibility (Community Panel – minority report #1).
- Minimise the impact of planned and unplanned water supply interruptions by keeping customers informed and restoring supply within five hours (Community Panel – preference #10).
- Provide prompt and effective response in the event of a problem with our water or sewerage infrastructure, including clean up support services and ex-gratia payments (Community Panel – minority report #2).
- Implement a new payment regime to customers adversely impacted by a problem with our sewerage infrastructure (Community Panel – preference #11).
- Maintain current automatic payments to customers who receive a level of service below these guaranteed levels:
    - No more than five unplanned water supply interruptions in the year = $80
    - No more than three unplanned sewerage service interruptions in the year = $80
    - No more than two sewer spills in a year = $613.

2. Be easy to deal with:

- Encourage uptake of digital technology by customers on a cost-effective basis (Community Panel – preference #12). For example:
    - Commence the transition to digital water meters, starting with a trial project at Colac;
    - Provide digital self-service options for common customer interactions via a more interactive website.
- Maintain options to easily talk with us in person (front desk at new Ryrie Street head office) or by phone (locally based, personal Customer Call Centre).

How we will track our progress

Performance Measure	Current Performance – 2017	Target Performance – 2023
Number of customers who receive e-billing	14,500	54,000
First point resolution rate through the Customer Centre	80%	85%
Customers who are able to receive communications via SMS	62%	75%
Customer effort based on satisfaction, effort and would you recommend	77%	85%
Customers who have an unplanned water supply interruption have their water back on within 5 hours	96.5%	96.5%

Performance Measure	Current Performance – 2017	Target Performance – 2023
Customers who have a planned water supply interruption have their water back on within 5 hours	85%	85%
Number of customers who have more than five unplanned water supply interruptions in the year	1	1
Number of customers who have more than two sewer spills in a year	1	1
Customer satisfaction with the quality of drinking water	85%	85%
Number of water quality complaints / 1,000 customers	3	3
Number of complaints to Energy Water Ombudsman Victoria / 1,000 customers	0.65	0.65

What we will spend

Operating: $172.1 million

Capital: $3.7 million

A breakdown of these expenditures per action are shown below.

Action	Opex	Capex
Provide a positive service experience	$67.2m	$1.4m
Be easy to deal with	$104.9m	$2.3m

6.4 Outcome 3 – A healthier environment for all

What we heard

> "Deliver (water) services … in an environmentally and financially sustainable manner, meeting the community needs toward 2025 and over the next 50 years."
> (Community Panel – Outcome No. 3)

Key actions we will take

1. *Reduce our carbon emissions:*
   - Make significant progress toward our goal of 100% renewable energy by 2025 (Community Panel – preference #6). For example:
     - Build a new 1 MW solar plant at Black Rock (Stage 2 = $4.9 million);
     - Build on-site renewable energy generation on pump stations;
     - Build a shared investment with other Victorian water corporations in grid-based renewable energy solutions, although we recognise the cost of this project is still uncertain so we have not included it in our capex forecasts;
     - Build a shared investment with other G21 regional partners in a solar plant, although we recognise the cost of this project is still uncertain so we have not included it in our capex forecasts.
   - Develop and implement a One Planet Living action plan to reduce emissions.

2. *Reduce our waste:*
   - Deliver integrated water cycle management solutions for our community, by building strategic partnerships (Community Panel – preference #4).
   - Encourage greater use of recycled water (see Outcome 1).
   - Develop and implement a One Planet Living action plan to reduce waste.

3. *Support waterway and catchment health:*
   - Invest in better waterway and catchment health outcomes for the Barwon River and the Moorabool River (Community Panel – preference #7).
   - Support local community waterway and catchment health projects through 'Landcare', 'Riverhealth' and 'Waterwatch' programs.
   - Support sustainable water management across the State by increasing our environmental contribution to the Victorian Government.

How we will track our progress

Performance Measure	Current Performance – 2017	Target Performance – 2023
Total emissions produced (tCO2e)	42,986	28,742
Progress towards 100% renewable energy by 2025	0%	43%
Percentage of biosolids mass re-used	100%	100%
Percentage of 'unaccounted for' water	9%	9%
Percentage of industrial waste recycled (from BW operations)	tbd*	tbd*
Percentage of water treatment sludge re-used	tbd*	tbd*
Waste to energy capture (from BW operations)	tbd*	tbd*

** We are committed to developing measures that are important to our customers, rather than rely on what we can or do currently measure.*

What we propose to spend

Operating: $73.1 million

Capital: $15.4 million

All of our capital expenditure for Outcome 3 relates to the action of 'Reduce our carbon emissions'. We will spend this $15.4 million on renewable energy generation projects, which will contribute to the significant efficiency savings we have factored into our operating expenditure forecasts by lowering our electricity costs. The proposed expenditure is therefore largely self-financing; covering approximately 93% of the costs in present value terms, contributes to achieving our emission reduction targets in our Statement of Obligations; and (most importantly) is strongly supported by our customers.

A breakdown of these expenditures per action are shown below.

Action	Opex	Capex
Reduce carbon emissions	$4.4m	$15.4m
Reduce our waste	$26.5m	-
Support waterway and catchment health	$42.2m	-

6.5 Outcome 4 – Deeper knowledge and partnerships with our community

What we heard

> "(Ensure) whole community is more informed and educated on the complexities of harvesting and processing water; different ways to save and use water efficiently and effectively; and new water technologies available to them."
> (Community Panel – Outcome No. 4)

Key actions we will take

1. Build two-way community relationships:

- Build genuine partnerships with Traditional Owners and custodians and Aboriginal people to incorporate their values in our water management practices (Community Panel – preference #3).
- Support education programs in 74 schools and at community events (Community Panel – preference #2).
- Invest in an expanded 'water efficiency and literacy' program across our community (Community Panel – preference #2).
- Enhance and encourage recreational opportunities within our service area, including Stage 1 of the Aqueduct Park project ($1.7 m) to create a new community park on the Barwon River (Community Panel – preference #5).

2. Work collaboratively with stakeholders and industry

- Work with other agencies, especially local councils, on joint initiatives and projects to deliver better value to local communities.
- Bring a new focus on smart business practices that support regional economic growth, through research and industry partnerships (Community Panel – preference #8).

How we will track our progress

Performance Measure	Current Performance – 2017	Target Performance – 2023
Stakeholder perceptions (large customers / regional stakeholders / strategic partnerships)	tbd*	tbd*
Reduction in residential per capita water usage	tbd*	tbd*
New community green / open space provided	0 ha	20 ha
Increase in social media / digital media engagement	tbd*	tbd*
Diversity indicators (for BW organisation)	tbd*	tbd*

** We are committed to developing measures that are important to our customers, rather than rely on what we can or do currently measure.*

What we will spend

Operating: $23.5 million

Capital: $1.7 million

A breakdown of these expenditures per action are shown below.

Action	Opex	Capex
Build two-way community relationships	$15.9m	$1.7m
Work collaboratively with stakeholders and industry	$7.6m	-

6.6 Outcome 5 – Affordability for all of our customers

What we heard

> "Implement a fair and equitable pricing structure that takes into account different circumstances – i.e. smaller households, lower socioeconomic groups … and the needs of commercial customers."
> (Community Panel – Outcome No. 2)

Key actions we will take

1. Work hard to keep our costs down:

- Implement a strong capital works program maximising local suppliers and ensuring efficient delivery ($328.6 million over the next five years, compared to $411.7 million over the past five years, a reduction of 20%).
- Set ourselves a target to achieve more than $19 million of additional cost savings and operating efficiencies over the next five years, as part of our commitment to continual improvement (including our own productivity). This $19 million of savings is in addition to 'Business as Usual' ('BAU') or 'standard' annual efficiencies of 1.2% per annum, which are also included in our forecasts.
- Implement a price cap combined with a net revenue cap, so customers only pay for the additional costs of water if demand exceeds our forecast.
- Pre-pay and capitalise Melbourne headworks charges to deliver lower prices in the next regulatory period.
- Manage our finances prudently and responsibly to avoid the need for significant debt or price rises in future.

2. Help customers to manage their bills

- Give residential customers greater control over their bills by reducing water service charges by 25% (Community Panel – preference #13).
- Triple our financial assistance to support vulnerable customers that may have difficulty paying bills (Community Panel – preference #1).
- Maintain our current approach for determining sewerage charges (Community Panel – preference #15).
- Make automatic payment of $367 if we restrict a customer's water supply or take legal action before making reasonable efforts to contact and provide information about services available for customers experiencing difficulties paying their bills.
- Keep bills stable, certain and low for non-residential customers (Community Panel – preference #13).

How we will track our progress

Performance Measure	Current Performance – 2017	Target Performance – 2023
Number of customers engaged and supported through Barwon Water's hardship payment plans	1,150	1,500
Additional operating savings above our BAU target of 1.2% per annum	n/a	$19m
$ and time saved from continuous improvement for BW and customers	tbd*	tbd*
Capital works program on budget (+/- 10% tolerance, $ 2017-18)	$82.2m	$55.5m
Direct opex / FTE ($ 2017-18)	$318k	$313k
Direct opex / property ($ 2017-18)	$682	$629

Performance Measure	Current Performance – 2017	Target Performance – 2023
Customer affordability measure	tbd*	tbd*

** We are committed to developing measures that are important to our customers, rather than rely on what we can or do currently measure.*

What we will spend

Our expenditure plans in this price submission explain why the forecasts are prudent and efficient.

7. Balancing costs, services and risks (R&M)

- As a business, we are facing significant upward pressure on our costs as we move into the next regulatory period.
- We funded a Government rebate over the last four years of the current regulatory period ($80 in 2017-18) on top of prices going down 1.6% per annum for the last five years. We will maintain the effect of this rebate through lower water prices from 2018-19 onwards, by including the recurrent and sustainable cost savings that funded this rebate in our baseline year and targeting additional operating savings over the next regulatory period.
- Our submission represents our 'best offer' because the initiatives we have committed to mean that average residential prices will go down by 3.4% over the next five years (in real terms). Without these initiatives, these prices would instead go up by 8.0% over the next five years (in real terms).
- We engaged experienced and highly skilled consultants to assist in the development of our submission and provide assurance about the quality of the submission, including the quality of supporting information relating to forecast costs or projects.
- Collectively, our Executive Leadership Team and Board have demonstrated ownership and commitment to our submission by spending over 270 hours, in 31 ELT meetings and 13 Board meetings over the past 2 years, discussing all elements of our submission.

7.1 Delivering our 'best offer'

This chapter explains how we have ensured that our submission delivers our 'best offer' to our customers. It details how our price-service offering has been developed, demonstrating that at every step we have taken measures to ensure that our offer is the best it can be.

Our 'best offer' requires us to adopt prudent and efficient forecasts for each element of the 'building blocks' that determine our revenue requirement for the next regulatory period. In addition, the inputs and drivers to these building blocks – such as our demand forecasts; investment planning and governance processes; contractual arrangements with external labour; cost estimation and contingency allowances – must also be prudent and efficient. Looking forward, this means including efficiency initiatives; ensuring that contingencies and risk assessments are not too conservative; and excluding any capital projects that may not proceed in the next regulatory period.

Our Board and Executive Leadership Team have played an essential role in leading the business to ensure that this submission reflects our best possible offer. Collectively, they have spent over 270 hours in meetings, discussing all elements of our submission. Ideas, issues, concepts and proposals have been debated at length in 31 Executive Leadership Team meetings over the past two years. Papers, presentations and detailed discussions were held at 13 Board meetings over the past 18 months. As a result, our Board and Executive Leadership Team have complete ownership and commitment to our submission.

In leading the business, our Board has applied the PREMO framework and taken the steps they consider necessary to sign the ESC's attestation statement (see Executive Summary). Our robust attestation process included:

- Managers and key staff were required to make an attestation that information is complete and accurate, forecasts are robust and requirements of ESC Guidance Paper have been followed for each of the Supporting Papers upon which this submission is based;
- General Managers were also required to make the above attestation for each of the Supporting Papers;
- Harding Katz Pty Ltd were engaged to review the submission and financial template to ensure they are consistent and error free; and
- KPMG were engaged to conduct an external compliance review, ensuring compliance with the requirements of the ESC Guidance Paper.

To demonstrate that this submission is our 'best offer', the remainder of this chapter is structured as follows:

- Section 7.2 presents our demand forecasts;
- Section 7.3 explains our operating expenditure forecasts;
- Section 7.4 sets out our capital expenditure forecasts;
- Section 7.5 addresses the remaining building block components, being the cost of capital, regulated asset base, depreciation and corporate tax; and
- Section 7.6 explains our approach to risk management, and how our proposals to accept more risk of behalf of customers will save customers money.

7.2 Demand forecasts

- We have a strong track record in providing accurate water demand forecasts, with only a 1.4% variance between forecast and actual demand over the current regulatory period.
- Our models have been regularly updated with the assistance of external advice to ensure that the resulting forecasts are as accurate as possible.
- Over the next regulatory period, we are forecasting:
    - growth of 1.6% per year for both residential and non-residential water and sewerage customers;
    - an 8.1% increase in potable bulk water demand, from 34,964 ML in 2017/18 to 37,799 ML in 2022/23;
    - a 23.6% increase in billable recycled water demand.
- Our customer growth and sewer connections are consistent with the population and household projections in Victoria in Future 2016.
- We propose a form of control which means that we have no incentive to under-estimate our demand forecasts.
- We propose to accept demand forecasting risk, consistent with an 'Advanced' PREMO rating for risk.

7.2.1 Introduction

Demand for water and sewerage services are important drivers of our expenditure plans. Accordingly, demand forecasts are an integral component of our business planning process. Key drivers and trends in demand are summarised in this section. Demand forecasts for each tariff class are provided in the financial template. Further information about our demand forecasts and methodology are provided in Supporting Paper 3.

7.2.2 Customer growth and connections

Our projected increases in customer numbers and connections are consistent with the latest population and household projections in Victoria in Future 2016, the official Victorian Government projection of population and households.

Table 9 overleaf shows our water customer number forecasts for the period to 2027-28 alongside our recent actual data. Table 10 overleaf shows our sewer customer number forecasts for the period to 2027-28, alongside recent actual data.

Table 9: Water customer number forecasts

		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027/28
Residential customer numbers	133,999	136,427	139,492	142,232	144,499	146,823	149,240	151,693	154,135	156,629	159,174	161,741	164,352	167,009	169,711
% change from previous year	-	1.8%	2.2%	2.0%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Non - residential customer numbers	11,601	11,787	11,926	12,034	12,226	12,422	12,627	12,834	13,041	13,252	13,467	13,685	13,906	14,130	14,359
% change from previous year	-	1.6%	1.2%	0.9%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Total customers	145,600	148,214	151,418	154,266	156,725	159,246	161,867	164,527	167,176	169,881	172,641	175,425	178,258	181,139	184,069
% change from previous year	-	1.8%	2.2%	1.9%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%

Table 10: Sewer customer number forecasts

		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027/28
Residential customer numbers	121,564	123,730	126,292	128,566	130,615	132,716	134,901	137,118	139,325	141,579	143,880	146,200	148,561	150,962	153,404
% change from previous year	-	1.8%	2.1%	1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Non - residential customer numbers	9,054	9,147	9,269	9,286	9,434	9,586	9,744	9,904	10,063	10,226	10,392	10,560	10,730	10,904	11,080
% change from previous year	-	1.0%	1.3%	0.2%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Total customers	130,618	132,877	135,561	137,852	140,049	142,302	144,644	147,022	149,388	151,805	154,272	156,760	159,291	161,866	164,484
% change from previous year	-	1.7%	2.0%	1.7%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%

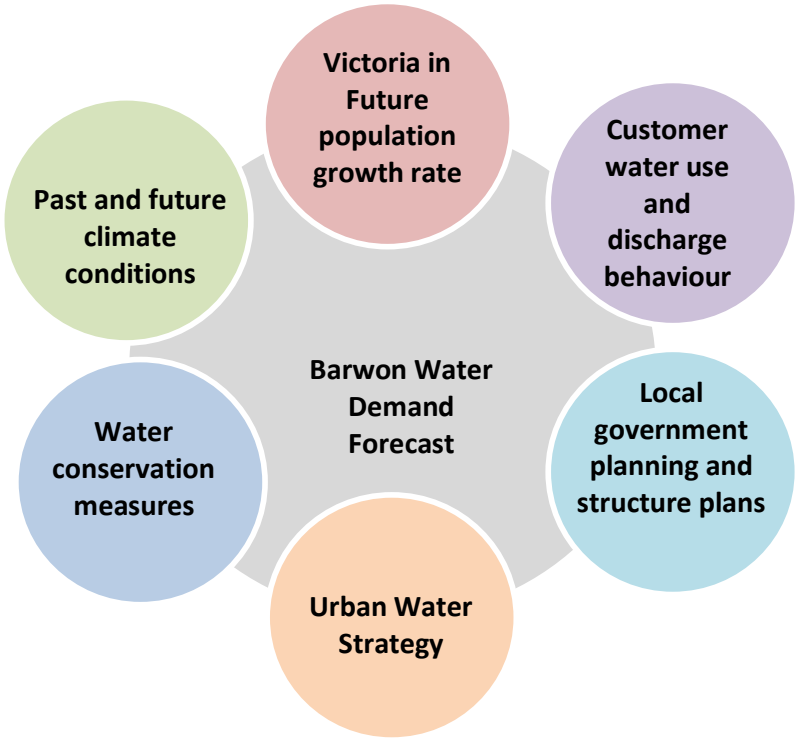
7.2.3 Potable water demand

Our objective is to prepare demand forecasts that are soundly based, accurate and unbiased. To achieve this objective, we use computer models, such as the Integrated Supply Demand Planning model for drinking water demand and eWater SOURCE to produce the forecasts. We have regularly updated our models, with external assistance as required, to ensure that our forecasts are as accurate as possible. We have a strong track record in forecasting water demand.

We use two models to forecast potable water demand, the Short Term Model and the Long Term Model. Both models were developed in 2011 by The Institute of Sustainable Future (ISF) for the previous Water Plan and subsequently updated to reflect the latest data. The Short Term Model uses a multiple linear regression to produce quarterly demand forecasts, 5-year bulk water demand and 10 year bulk water demand forecasts. The long term demand model produces forecasts beyond 10 years, but also provides a useful cross check of the assumptions and outputs from the short term demand model forecast.

In applying these models we consider a range of drivers and information sources as illustrated in Figure 11.

Figure 11: External and internal demand influencers



A key forecasting issue for the next regulatory period is the extent to which per capita water demand will 'bounce back' to levels that existed prior to water restrictions, which were imposed in Geelong from 1 July 2006 to March 2011. This period included four continuous years under Stage 4 water restrictions.

Our latest available evidence shows that customer behaviour has changed since water restrictions were imposed. Our forecasts reflect observed water use behaviours over the past five years, which have demonstrated only marginal 'bounce back' in per capita water usage since 2011 as shown in overleaf. This level of water use behaviour can only be sustained if the water efficiency initiatives that we propose, and that are supported by our customers, are implemented. Without these efficiency measures, we estimate that demand would be about 4 percent higher per annum.

Notwithstanding, demand for potable bulk water (including drinking water and non-revenue water) is expected to be 8.1% higher by the end of the next regulatory period, as shown in Figure 12 overleaf.

Figure 12 also illustrates the effect of annual weather variations, with the upper and lower bounds indicating wet and dry climates. For this submission, the median climate trend has been selected consistent with planning scenarios adopted for our Urban Water Strategy.

The recent historic data shown in Figure 12 demonstrates the effect of annual weather variations, which are beyond Barwon Water's control. Demand increased above the median line in 2015-16, which was a relatively dry year. Spring and summer rainfall in Geelong averaged 151mm in that year compared to historic average rainfall of 199mm. Despite this year-to-year variability, our actual billable potable water demand over the current five-year regulatory period is closely aligned with our 2013 Water Plan forecasts, with only a 1.4% variance between forecast and actual demand to date. This result provides confidence in our forecasting methodology and demonstrates our integrity in providing our best estimates.

The information in Figure 12 is presented in tabular format in Table 11 overleaf. Further details on the methodology used to develop our demand forecasts, including the relationship between climatic conditions and water consumption, the relationship between rainfall and water consumption, the price elasticity of demand impact and the ongoing impact of water efficiency programs is provided in Supporting Paper 3.

Figure 12: Summary of Historic and Forecast Potable Demand Forecast (1961 – 2026)

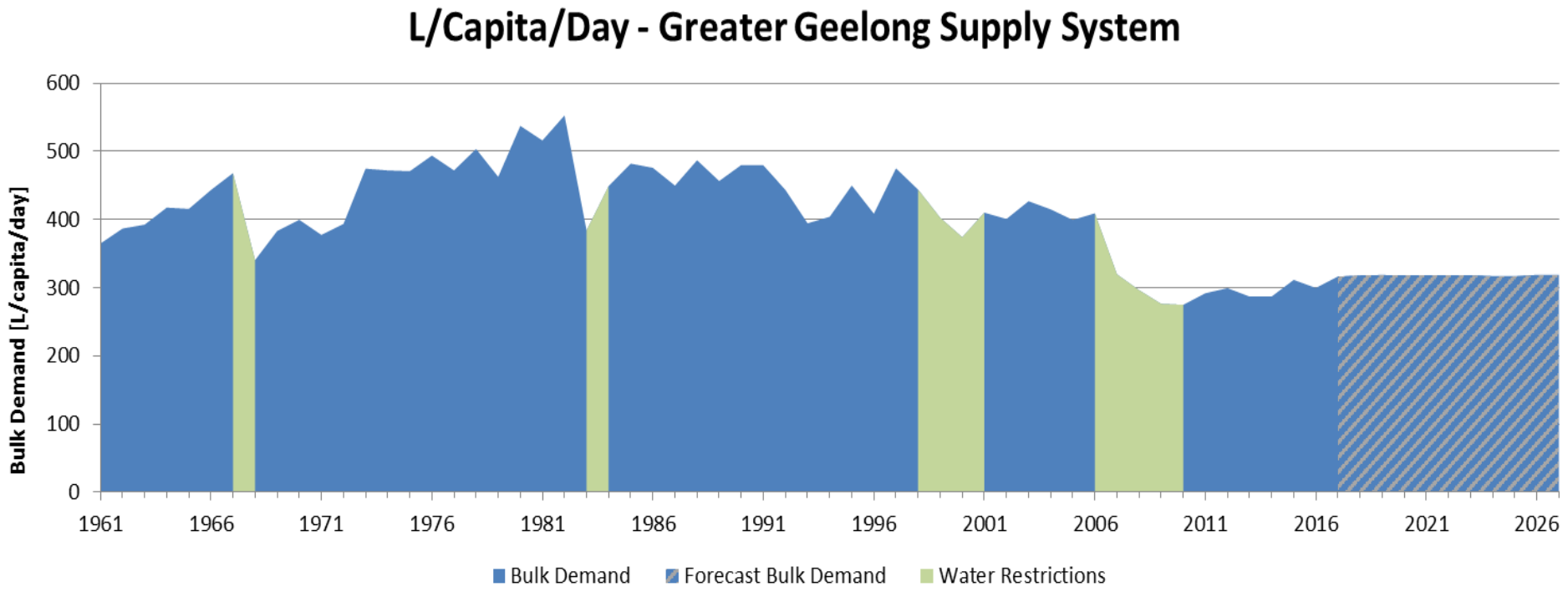


Figure 13: Summary of Historic and Forecast Potable Demand Forecast (2012/13 – 2027/28)

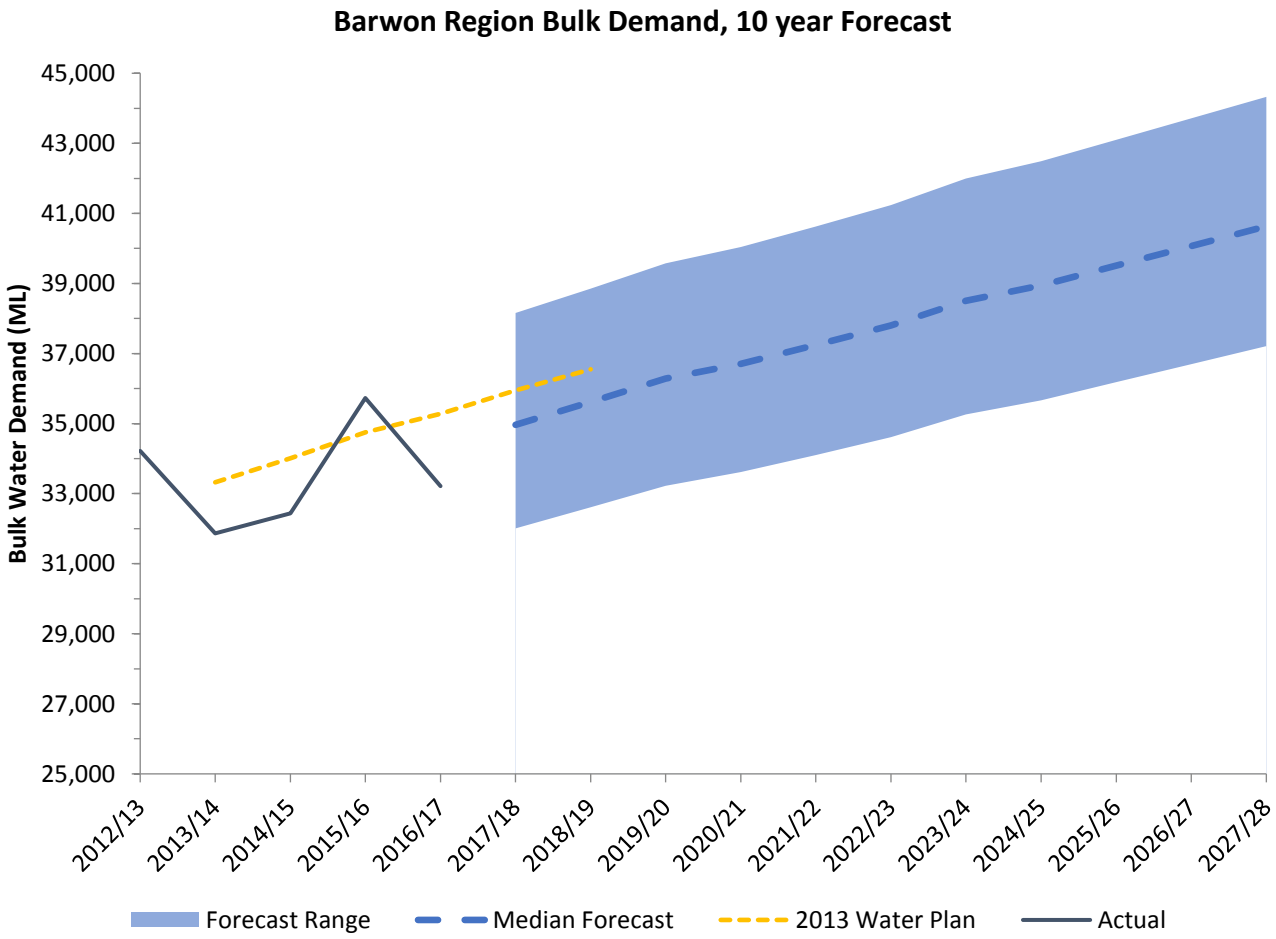


Table 11: Actual and Forecast Potable Water Demand in ML from 2012-13 to 2027-28

	Bulk			Billable			Status of
	Low	Median / Actual	High	Low	Median / Actual	High	data
2011/12		32729			29899		Actual
2012/13		34220			31261		Actual
2013/14		31865			29110		Actual
2014/15		32434			32434		Actual
2015/16		35729			32640		Actual
2016/17		33600			31729		Actual
2017/18	32,008	34,964	38,154	29,199	31,896	34,805	Forecast
2018/19	32,615	35,614	38,852	29,752	32,489	35,442	Forecast
2019/20	33,224	36,286	39,575	30,308	33,101	36,102	Forecast
2020/21	33,615	36,707	40,044	30,665	33,485	36,530	Forecast
2021/22	34,105	37,242	40,628	31,112	33,973	37,062	Forecast
2022/23	34,615	37,799	41,236	31,577	34,481	37,616	Forecast
2023/24	35,258	38,506	41,998	32,163	35,127	38,312	Forecast
2024/25	35,665	38,945	42,487	32,535	35,527	38,758	Forecast
2025/26	36,181	39,509	43,102	33,006	36,041	39,319	Forecast
2026/27	36,696	40,070	43,714	33,476	36,553	39,877	Forecast
2027/28	37,211	40,632	44,326	33,945	37,066	40,436	Forecast

7.2.4 Sewerage demand

In the next regulatory period, sewerage demand is expected to rise by 1.5% per annum, which reflects the forecast in sewerage connections consistent with Victoria in Future 2016 projections. Table 12 shows the forecast inflows to Barwon Water's water reclamation plants.[25]

Table 12: Water reclamation plant inflows (ML)

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Aireys Inlet WRP	157	159	161	164	166	168	170	173	175	178	180	183	185
Anglesea WRP	306	310	314	318	322	326	330	335	339	343	348	352	357
Apollo Bay WRP	376	381	387	392	397	403	408	414	420	426	431	437	443
Bannockburn WRP	159	163	166	167	171	175	179	180	181	182	183	184	185
Colac WRP	1453	1824	1993	2194	2206	2219	2231	2244	2257	2270	2283	2296	2309
Lorne WRP	284	285	286	287	288	289	290	291	292	293	294	295	296
Portarlington WRP	638	644	651	657	664	670	677	684	691	698	705	712	719
Winchelsea WRP	82	82	82	82	83	83	83	83	83	83	84	84	84
Black Rock WRP (Existing cust)	21978	22046	22411	22922	23397	23798	24080	24644	24644	24923	25208	25490	25772
Northern WRP	2810	2810	2810	2810	2810	2810	2810	2810	2810	2810	2810	2810	2810
Birregurra WRP	25	25	25	25	25	25	25	25	25	25	25	25	25
Total inflow	**28,267**	**28,728**	**29,286**	**30,018**	**30,528**	**30,966**	**31,284**	**31,882**	**31,916**	**32,233**	**32,550**	**32,868**	**33,186**

For trade waste customers, we reviewed the historical data for each of our major customers to determine forecast flows and analyte concentrations for the next regulatory period. For our largest customers, we discussed their particular circumstances and reflected this advice in our forecast flows and analyte data.

[25] The volume of sewerage flowing into Barwon Water's water reclamation plants is higher than the calculated amount based on the water used in each property, due to infiltration during rainfall events.

7.2.5 Recycled water demand

Diversifying water sources for fit-for-purpose use has contributed to reducing demand for drinking water and improving the liveability of our region. Recycled water, along with rainwater and stormwater, can form an important part of a 'portfolio' of resources, particularly in areas of new urban development.

We are currently developing a Recycled Water Strategy to further increase the use of recycled water in our region. The intent of this strategy is to set us on the path to meet our long-term ambition of achieving optimal use of our resources to the full extent possible, including reusing 100% of recycled water from our water reclamation plants by 2030.

In the short term, over the five years of the next regulatory period, we have set ourselves a target to increase the volume of recycled water allocated for productive use by 1,000ML per annum, from approximately 2,600ML in 2017/18 to 3,600ML in 2022/23. There are currently four main ways in which recycled water can be put to productive use in our region:

- Class C recycled water is used by commercial customers for irrigation purposes across our region;
- Class C recycled water is used by use for irrigation purposes at our water reclamation plant sites at Bannockburn and Black Rock;
- Class A recycled water is used at the Viva refinery in North Geelong, under contractual arrangements with Viva; and
- Class A recycled water can be supplied to residential customers in Armstrong Creek and Torquay North.

Table 13 overleaf shows our recycled water demand forecasts for the next two regulatory periods for these productive uses. It shows that Class C recycled water demand for irrigation on our own sites is not included in our financial template, nor is Class A recycled water demand for Viva refinery, since it is managed under separate contractual arrangements.

Table 13 also shows demand for Class C recycled water as part of treatment processes on our own sites, which is expected to fluctuate over the next regulatory period. This demand is not included as a productive use of recycled water and is also not included in our financial template.

Our forecast of total recycled water allocated for productive use over the next regulatory period, reaching our target of 3,600ML by 2023, is also shown in Figure 14 overleaf.

Estimates of billable Class A and Class C recycled water demand are included in the financial template for 2023/24 onwards, but these and all other forecast uses of recycled water are currently being reconsidered in the development of our Recycled Water Strategy. This strategy will be completed during the next regulatory period.

Each of these demands for recycled water are discussed further in the remainder of this section.

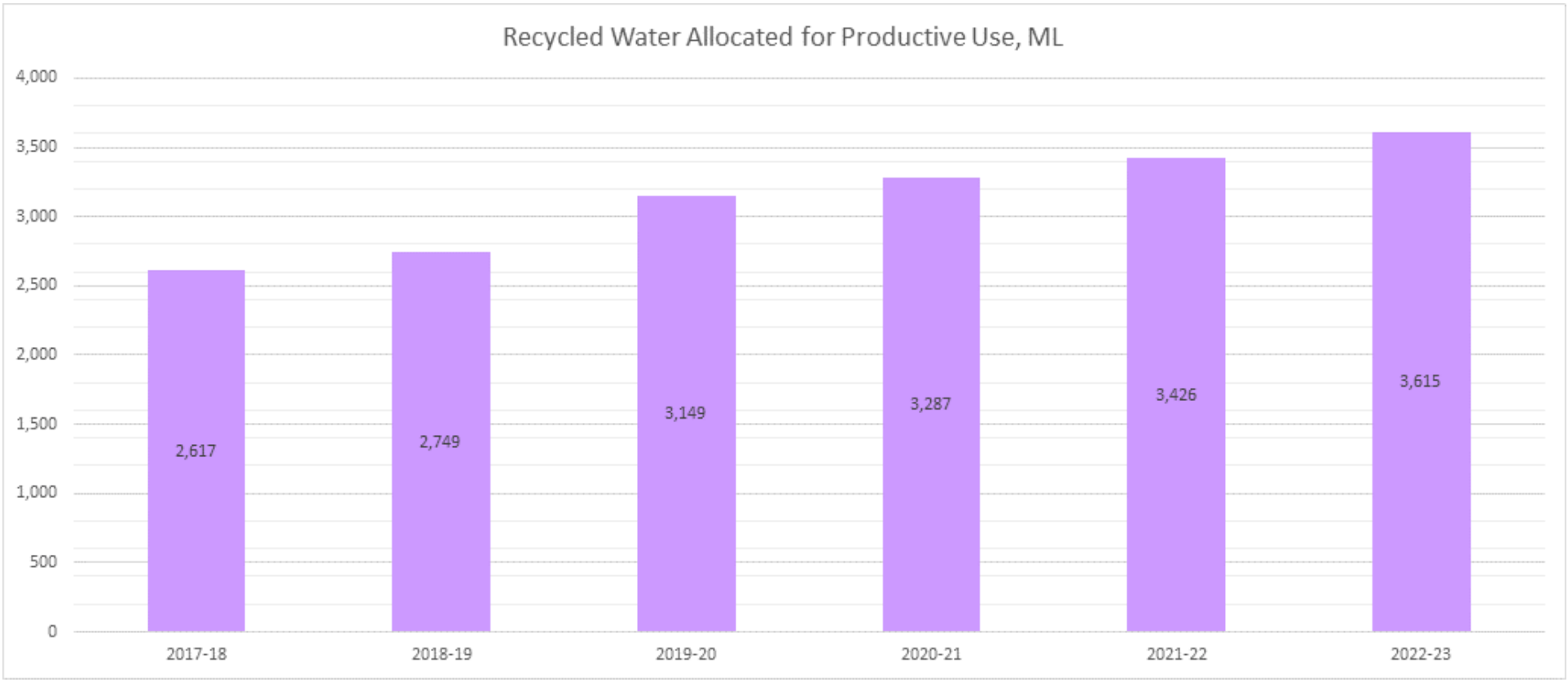
Table 13: Recycled water demand (ML)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Class A: Demand Forecast (financial template)	273*	324*	375	437	501	564
Class A: Reuse by Viva	1,257	1,257	1,257	1,258	1,257	1,257
Class C: Demand Forecast (financial template**)	1,360	1,382	1,404	1,426	1,449	1,472
Class C: Reuse by Barwon Water (irrigation)	0	110	113	166	216	322
Recycled water put to productive use	2,617	2,749	3,149	3,287	3,423	3,615
Class C: Reuse by Barwon Water (other)	2,964	1,935	1,953	2,023	2,091	2,210
Total recycled water	5,581	4,684	5,102	5,310	5,514	5,825

**Potable water supplied through the Class A recycled water network during 2017-18 and 2018-19 but charged at Class A recycled water prices (i.e. 80% and 70% of potable water price respectively), until demand increases sufficiently to warrant use of Class A recycled water treatment plant at Black Rock. This demand is reflected in our financial template as Class A recycled water demand but does not contribute towards our target of the amount of recycled water put to productive use.*

***Sum of demand across all Class C recycled water tariff baskets in the financial template, including – Black Rock, Portarlington, Winchelsea, Anglesea, Apollo Bay.*

Figure 14: Forecast of recycled water allocated for productive use (ML)



Class A recycled water for productive use

Currently, approximately 1,300ML of Class A recycled water from our Northern Water Plant is used at the Viva refinery each year to substitute for potable water. This represents about 4 per cent of our current annual potable water demand. Over the next regulatory period, the volume of Class A recycled water used by Viva is not expected to change.

Our residential customers in Armstrong Creek and Torquay North have a dedicated 'purple pipe' network to deliver Class A recycled water for non-potable residential purposes such as toilet flushing and watering gardens. Currently, potable water is being used in the network due to low demand but Class A recycled water will be used from 2019/2020 at the latest, as demand in these growth areas increases. The demand per lot forecast for the Class A dual pipe network is based on the observed consumption through the network in 2015/16 which was a relatively dry year (see Section 7.2.3). We believe this demand is a good estimate of the likely increase in average demand over the next regulatory period as we move to a lower Class A recycled water tariff, from 80 to 70 per cent of the potable water tariff. We are also projecting increases in total demand as development in Armstrong Creek and Torquay North continues. By the end of the next regulatory period, recycled water volumes at Armstrong Creek and Torquay North will be almost 600ML.

Class C recycled water for productive use

Class C recycled water customers use our water for many productive uses including irrigation of golf courses and sporting grounds, turf farms, market flowers, pasture for grazing and vineyards. We have forecast modest growth of 1.6 per cent per year or just over 100ML in total over the next regulatory period, in recognition of our proposed initiatives to increase the use of recycled water such as promoting its use and implementing a 'take-or-pay' price option along with reduced 'gate-prices' (see Sections 6.2 and 8.3). We expect the Recycled Water Strategy will drive more significant new demand in the longer term.

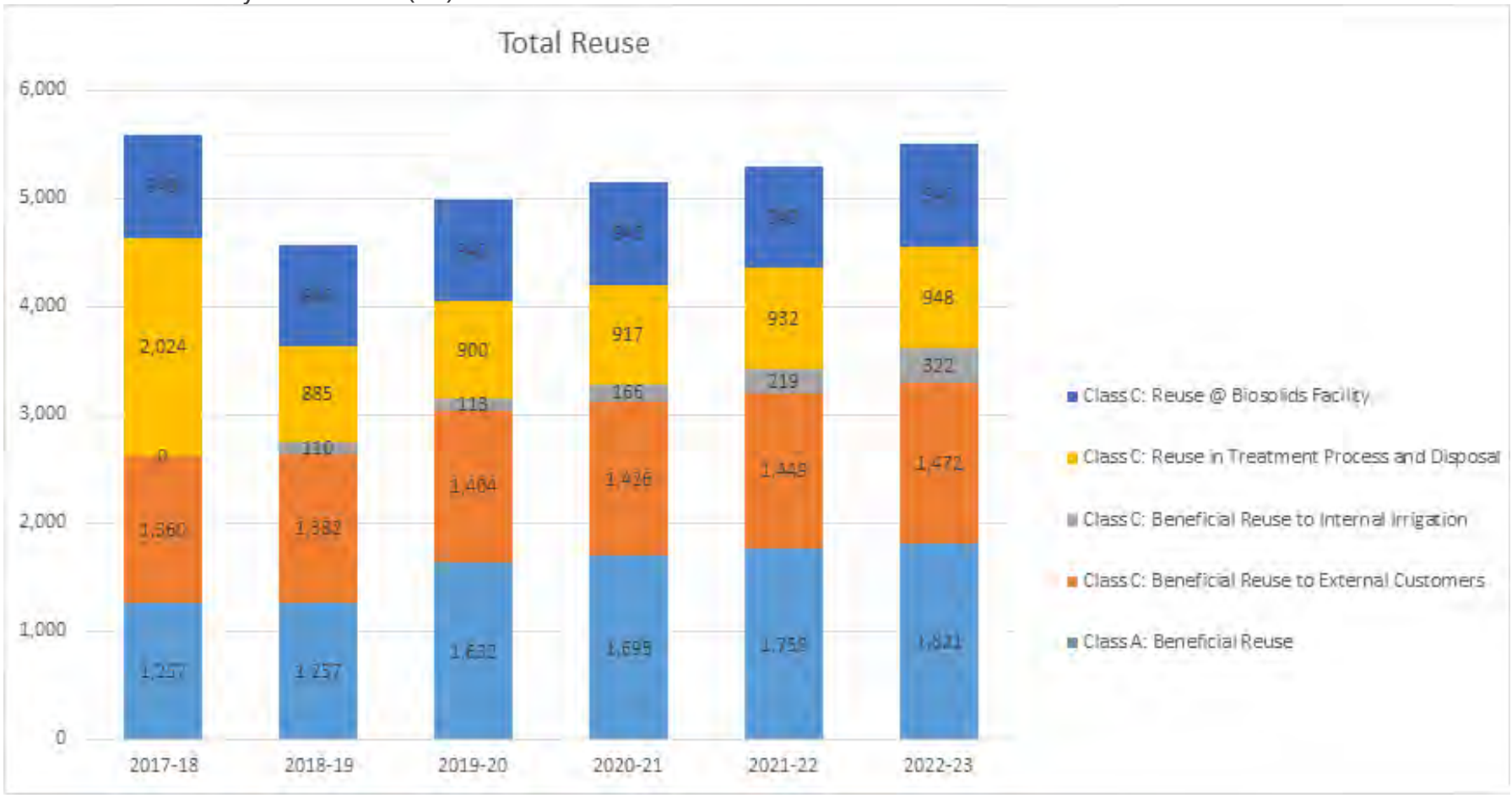
The use of Class C recycled water for productive use on our own sites is also forecast to increase in the next five years. We are committed to irrigation on our sites for productive agriculture as we further develop our water reclamation plant sites at Bannockburn and Black Rock. We expect to increase the annual volume allocated for irrigation on our own sites by more than 300ML over the next five years.

Class C recycled water for other use

Class C recycled water is also used at many of our water reclamation plants in the treatment process. A significant use of recycled water is the sludge treatment facility at Black Rock. This facility is being upgraded into a centrifuge in 2017/18 and the volume of recycled water used will fall by approximately 1,000ML per year. This extra 1,000ML will then become available for productive use either on the site or by customers in the region. At some other sites, the recycled water is also disposed of on tree plantations to ensure no discharge of reclaimed water offsite and ensure compliance with our EPA Licence.

Figure 15 overleaf shows our forecast of total recycled water use over the next regulatory period.

Figure 15: Forecast of total recycled water use (ML)



7.2.6 Further information

Supporting Paper 3 provides further detailed information on our demand forecasts, including:

- An explanation of the forecasting methodologies adopted;
- Details on why the demand forecasting approach contributes to an 'Advanced' PREMO rating;
- The ESC's information requirements in its Guidance Paper;
- The attestation that the relevant General Manager has made in relation to demand forecasts.

7.3 Forecast operating expenditure

- Industry benchmarking shows that our operating expenditure ($ per property) is already the second lowest in our national peer group.
- We will maintain the effect of the Government rebate we funded over the current regulatory period, by including the recurrent and sustainable cost savings that funded this rebate in our baseline year and targeting additional operating savings over the next regulatory period.
- Our Board and Executive Leadership Team have been actively engaged in driving further cost efficiencies for the next regulatory period:
    - Our operating expenditure forecasts reflect our commitment to ambitious targets of more than $19 million in additional operating savings and/or new revenue opportunities over the next five years, even though we have not identified all of the ways in which we will deliver these additional efficiencies at this stage.
    - These savings are in addition to our 'business as usual' or 'standard' annual efficiencies of 1.2% per annum, which are also included in our forecasts.
    - Together, these savings equate to an average annual efficiency improvement of 2.3% per annum in controllable operating costs. Given our present high level of efficiency, a further annual improvement of 2.3% represents a 'stretch target' for the business.
- We have taken measures to reduce price impacts on our customers arising from significant increases in uncontrollable costs, most notably by prepaying Melbourne headworks charges of $21.65 million at our expense in the current regulatory period and capitalising the remaining headworks charges that would otherwise apply in the next regulatory period.
- We accept the risk that our operating expenditure may exceed our forecasts, and we are not proposing any new pass-through arrangements.
- We have listened to our customers and tailored our operating expenditure plans to deliver the outcomes they value most highly.

7.3.1 Introduction

Our operating expenditure forecasts are an important component of our revenue requirement. This chapter provides an overview of our forecasts and the measures that we have taken to minimise the impact of cost pressures in the next regulatory period.

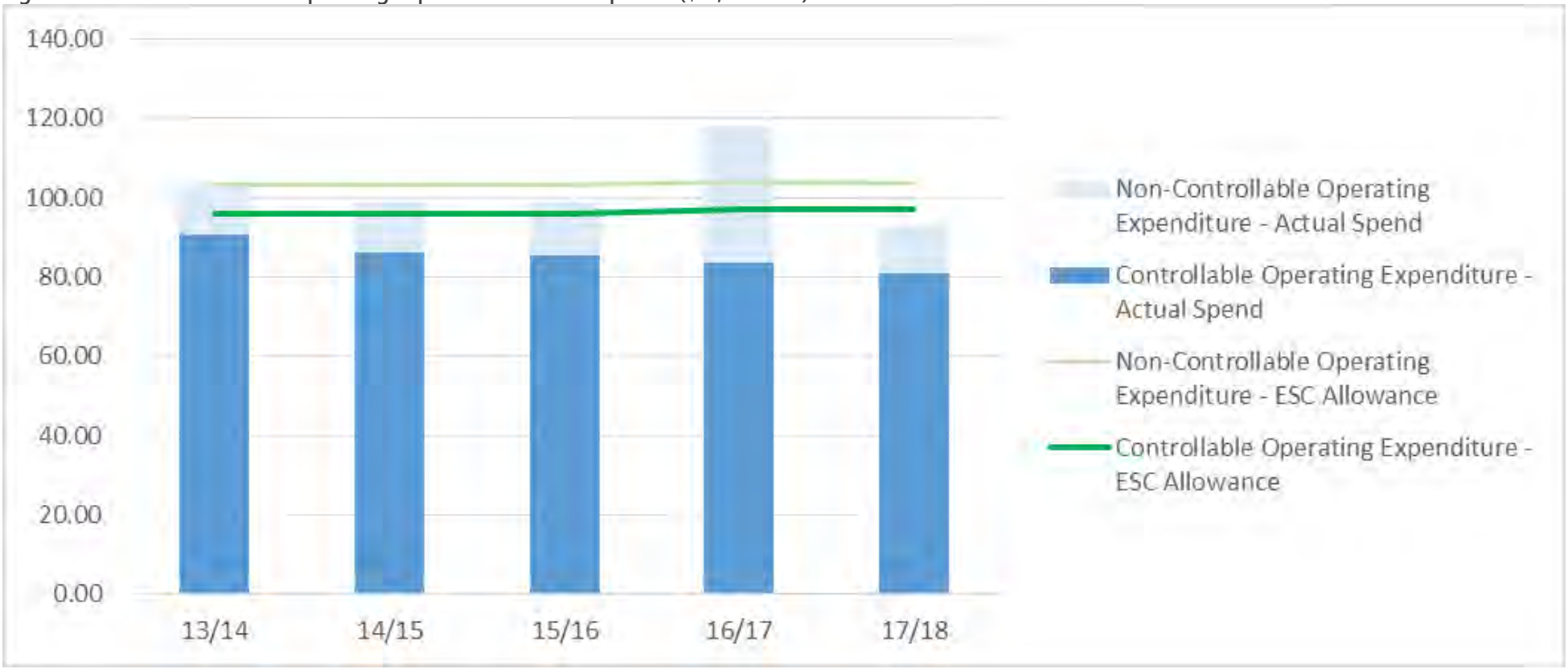
7.3.2 Actual and forecast operating expenditure

Figure 16 overleaf shows our actual and forecast operating expenditure for the current regulatory period alongside the ESC's allowance for the period. Our controllable operating expenditure is $15.2 million below the ESC's allowance in 2016-17, which is the ESC's 'base year' in its expenditure forecasting methodology. This means that our forecasts for the next period are already 15.5% lower than the ESC expected when it approved our water plan for the current regulatory period.

Figure 16 also shows that our total actual operating expenditure for the current period was $501.75 million, compared to the ESC's aggregate allowance of $517.50 million. This reflects very good cost performance, especially given the higher than expected non-controllable operating expenditure that was incurred during the current regulatory period.

The remainder of this section provides further details about our non-controllable and controllable operating expenditure forecasts and our approach to allocating shared costs.

Figure 16: Actual and forecast operating expenditure - current period ($M, 2017-18)



Uncontrollable costs

Melbourne Water's 2016 Price Determination[26], which followed the unbundling of the 'pooled' Melbourne bulk entitlements, introduced a new uncontrollable cost for our business. From 1 July 2016, we are required to pay our fair share of the costs of maintaining the Melbourne headworks system in return for the water security benefits of holding a 16,000 ML bulk entitlement to water from the Yarra-Thomson catchment in Melbourne. We can access this water via the Melbourne to Geelong pipeline to supplement local supplies, if needed.

Melbourne Water's 2016 Price Determination allowed us to defer payment of our share of Melbourne headworks costs until the next regulatory period in recognition that this significant cost was not known when our current prices were set in 2013[27]. However, we decided to pre-pay three years of our share of Melbourne headworks costs in 2016-17. We are also proposing to capitalise the remaining headworks charges that would otherwise apply in the next regulatory period (see Section 7.5). These initiatives reduce the cost pressure on our customers in the next regulatory period.

Controllable costs

In relation to controllable operating expenditure, we have worked hard to achieve efficiency improvements to fund the Government rebate on previous bills provided to our residential customers under the 'Fairer Water Bills' initiative. This rebate, provided to residential customers who paid the water volume charge, ranged from $50 to $90 per annum from 1 July 2014 (see Section 8.1.1). The principal sources of operating expenditure efficiencies to fund the Government rebate on previous bills included:

- The current Enterprise Bargaining Agreement, which contributed to productivity improvements;
- With the assistance of an external procurement specialist, we locked in electricity usage prices until June 2018; and
- Chemical dosing was continuously reviewed, with dosing optimisation resulting in cost reductions in 2014-15 and 2015-16.

However, since these efficiencies to fund the Government rebate on previous bills were identified in 2014, we have faced increased cost pressures including:

- Staff levels are now at 315 full-time employees (FTEs), which is lower than the 394 FTEs we had in 2013 but more than our forecast of 296 FTEs. These additional FTEs have been deployed across our organisation to enable greater customer engagement, improved business efficiency and strategic initiatives, consistent with the Victorian Government's water policy[28].
- IT licence fees will be $1 million per annum higher than expected, from 2017/18 onwards.

In addition, not all of the initiatives we undertook to fund the Government rebate on previous bills related to controllable operating expenditure. Some related to the deferral of capital expenditure, which represented a non-recurrent saving.

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[26] Essential Services Commission 2016, *Metropolitan Melbourne Water Price Revie 2016 Final Decision: Melbourne Water Determination*, June.

[27] Essential Services Commission 2016, *Metropolitan Melbourne Water Price Revie 2016 Final Decision: Melbourne Water Determination*, June, pg 19.

[28] State of Victoria Department of Environment, Land, Water and Planning 2016, *Water for Victoria, Water Plan*.

Table 14 overleaf shows our actual operating expenditure for the current regulatory period alongside our forecasts for the next period. It shows that controllable operating expenditure decreased in 2014-15 as we implemented efficiency improvements to fund the Government rebate on previous bills but gradually increased over 2016-17 and 2017-18, in light of the cost pressures identified above.

Notwithstanding, our controllable operating expenditure in 2016-17 was still less than the ESC's 2013 allowance. Table 14 shows this as $83.71 million, but for comparison purposes, we must also include $5.23 million relating to the financing lease costs of our partnership with Plenary to process and reuse biosolids, since this is classified as non-controllable operating expenditure in Table 14 but was considered controllable operating expenditure in the ESC's 2013 allowance. The resultant total of $88.94 million is then $8.14 million less than the ESC's 2013 allowance of $97.08 million.

In 2016-17, we funded a Government rebate of $90 to each residential customer that paid the water volume charge, at a total cost of $12.5 million. We targeted $10 million of operating efficiencies to fund this rebate, with the balance to be funded from capital efficiencies. Given that we realised $8.14 million of operating efficiencies, we consider we achieved just over 80% of our targeted operating efficiencies to fund the Government rebate in that year. Going forward, this means that 80% of the operating efficiency improvements we implemented to fund the Government rebate on previous bills can be considered recurrent and sustainable, since they have been reflected in our baseline year (2016-17) for the purposes of the regulatory model.

Table 14 also shows that our controllable operating expenditure over the next regulatory period remains at the same level as in 2017-18, despite growth and other cost increases, as we are targeting additional operating savings over the next regulatory period to maintain the effect of the Government rebate on previous bills.

Table 15 presents our actual and forecast controllable operating expenditure by service category.

Shared costs

The ESC's Guidance Paper requires us to explain how shared costs are allocated. Shared costs are allocated in a number of ways depending on the cost type. For example:

- Finance costs are allocated based on asset value across the business;
- Information Systems are allocated based on employee numbers within each department.

We submit a comprehensive list of all allocation methods to the ESC as part of our annual Regulatory Accounts submission. We used the same methods to allocate shared costs in this submission. Further details are available in Appendix 2 of Supporting Paper 4, which can be made available upon request.

Table 14: Actual and forecast operating expenditure ($M, 2017-18)

Controllable operating expenditure	13/14	14/15	15/16	16/17	17/18	3rd reg. period	18/19	19/20	20/21	21/22	22/23	4th reg. period	23/24	24/25	25/26	26/27	27/28	5th reg. period
Operations and maintenance	25.59	22.80	24.28	22.43	23.97	119.07	24.32	24.35	24.10	24.24	24.21	121.22	24.21	24.21	24.21	24.21	24.21	121.06
Treatment	25.99	26.23	25.22	23.42	25.89	126.75	26.90	26.63	25.95	25.68	25.37	130.53	25.37	25.37	25.37	25.37	25.37	126.87
Customer service and billing	7.95	6.61	6.03	5.59	6.41	32.58	6.42	6.43	6.43	6.43	6.43	32.14	6.43	6.43	6.43	6.43	6.43	32.16
GSL payments	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Corporate	25.53	25.31	24.73	32.25	30.07	137.90	28.91	28.50	29.35	30.24	30.30	147.29	30.30	30.30	30.30	30.30	30.30	151.51
Other operating expenditure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total controllable operating expenditure	85.06	80.95	80.26	83.71	86.34	416.33	86.54	85.91	85.83	86.58	86.32	431.18	86.32	86.32	86.32	86.32	86.32	431.59

Non-controllable operating expenditure	13/14	14/15	15/16	16/17	17/18	3rd reg. period	18/19	19/20	20/21	21/22	22/23	4th reg. period	23/24	24/25	25/26	26/27	27/28	5th reg. period
External bulk water charges (excl. temp. purchases)	0.02	0.00	0.14	21.65	0.00	21.80	0.00	0.00	0.00	0.00	0.00	0.00	5.52	5.52	5.52	5.52	5.52	27.59
External temporary water purchases	0.00	0.00	0.41	0.25	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Licence fees	0.42	0.36	0.34	0.37	0.46	1.95	0.46	0.46	0.46	0.46	0.46	2.29	0.46	0.46	0.46	0.46	0.46	2.29
Environmental contribution	7.14	6.96	6.87	6.79	6.65	34.41	8.20	8.00	8.20	8.00	7.81	40.23	7.81	7.81	7.81	7.81	7.81	39.05
Other non-controllable	5.56	5.40	5.33	5.23	5.07	26.60	4.88	4.67	4.44	4.19	3.92	22.10	3.92	3.92	3.92	3.92	3.92	19.62
Total non-controllable operating expenditure	**13.13**	**12.72**	**13.10**	**34.29**	**12.18**	85.43	**13.54**	**13.13**	**13.10**	**12.66**	**12.19**	64.62	**17.71**	**17.71**	**17.71**	**17.71**	**17.71**	88.55

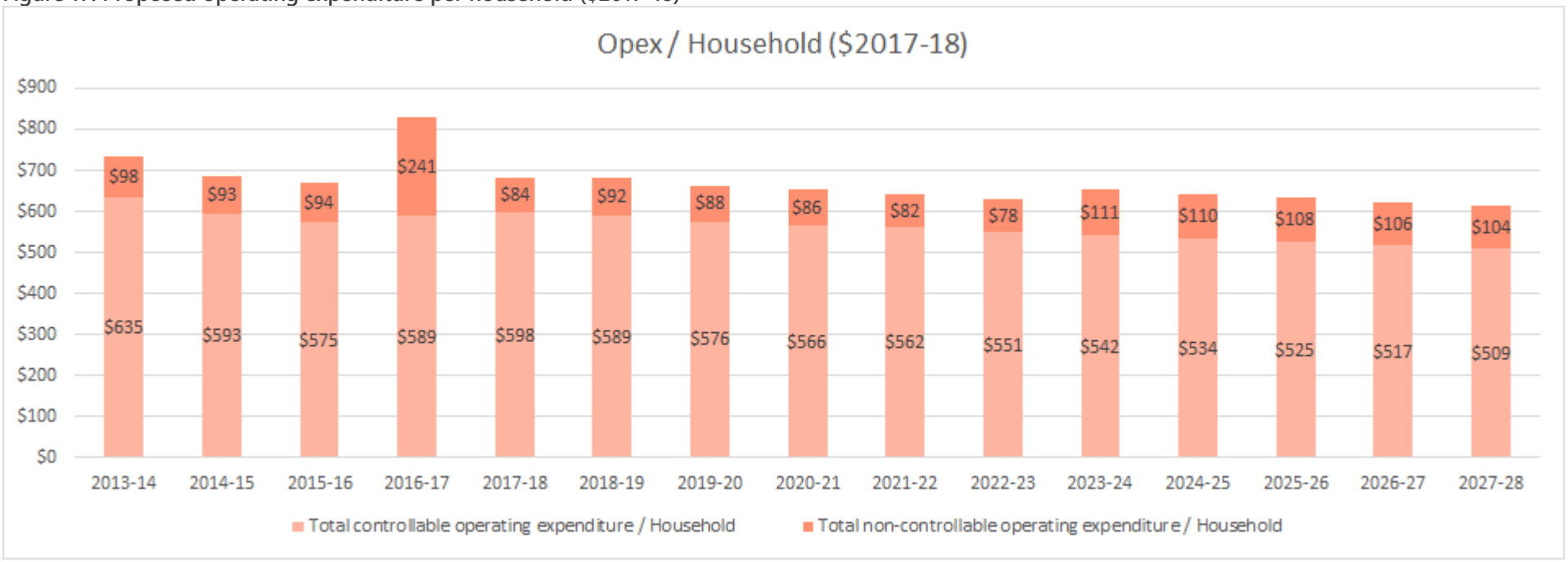
Total operating expenditure	98.20	93.67	93.36	118.00	98.52	501.75	100.08	99.04	98.93	99.24	98.51	495.81	104.03	104.03	104.03	104.03	104.03	520.15

Table 15: Actual and forecast controllable operating expenditure, by service category ($M, 2017-18)

Controllable operating expenditure by segment	13/14	14/15	15/16	16/17	17/18	3rd reg. period	18/19	19/20	20/21	21/22	22/23	4th reg. period	23/24	24/25	25/26	26/27	27/28	5th reg. period
Water	39.48	35.85	35.13	41.03	40.89	192.38	40.41	40.19	41.12	41.62	41.45	204.78	41.45	41.45	41.45	41.45	41.45	207.24
Sewerage	41.57	38.72	37.92	36.86	38.78	193.85	39.23	38.87	37.99	38.26	38.14	192.49	38.14	38.14	38.14	38.14	38.14	190.70
Recycled water	4.02	6.38	7.21	5.82	6.67	30.10	6.90	6.85	6.73	6.70	6.73	33.91	6.73	6.73	6.73	6.73	6.73	33.66
Rural water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bulk water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total controllable operating expenditure	85.06	80.95	80.26	83.71	86.34	**416.33**	86.54	85.91	85.83	86.58	86.32	**431.18**	86.32	86.32	86.32	86.32	86.32	**431.59**

Our proposed operating expenditure will also continue to decrease per household over the next two regulatory periods, with notable decreases in total controllable operating expenditure as shown in Figure 17.

Figure 17: Proposed operating expenditure per household ($2017-18)



7.3.3 Forecasting methodology and inputs

Our forecasting methodology is consistent with the ESC's preferred approach, which projects operating expenditure forward from the actual expenditure incurred in 2016-17, being the most recently completed base year. The key input assumptions in the ESC's model and the resulting expenditure forecasts are set out in the table below. It should be noted that our completed template information is consistent with the input assumptions shown in Table 16 below.

Table 16: Key inputs to, and outputs from the ESC's operating expenditure forecasting template ($M, 2017-18 unless stated otherwise)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total 2018/19 to 2022-23
Cost efficiency improvement rate (% per annum)	4.6%	2.6%	1.2%	0.8%	2.0%	Average of 2.3% per annum
Customer growth forecast (% per annum)	1.6%	1.6%	1.6%	1.6%	1.6%	Average of 1.6% per annum
Controllable operating expenditure forecast	86.54	85.91	85.83	86.58	86.32	431.18
Non-controllable operating expenditure forecast	13.54	13.13	13.10	12.66	12.19	64.62
Total prescribed operating expenditure forecast	**100.08**	**99.04**	**98.93**	**99.24**	**98.51**	**495.81**

Table 16 shows that we are projecting specific efficiency savings for each year, which average 2.3% per annum over the next regulatory period. Ordinarily, the ESC's forecasting model typically adopts a constant percentage efficiency saving in each year. For example, in the 2013 Water Plan, the ESC adopted an assumed efficiency savings rate of 1% per annum. Our higher efficiency savings vary year-by-year, which reflects an extra step (step 5) that we have added to the ESC's standard forecasting method, as explained below.

In our approach, we first applied the ESC's model using a base efficiency assumption of 1.2% per annum – substantially higher than the 1.0% adopted in the previous water plan. We describe these savings as our 'Business as Usual' (BAU) or 'standard' annual efficiencies.

Applying the 1.2% per annum BAU efficiency target, we followed the four steps in the ESC's method to derive a controllable operating expenditure forecast for each year.

The Board and Executive Leadership Team then applied a 'bottom up' review to drive additional savings from the business. Table 17 overleaf details how our forecasting methodology, applying the extra step, resulted in additional savings of more than $19 million over the five year regulatory period. The total prescribed operating expenditure forecast shown below reconciles exactly with the forecast shown in Table 16.

Table 17: Derivation of operating expenditure forecast ($M, 2017-18)

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Total
Step 1: Establish adjusted baseline 2016-17 controllable operating expenditure								
2016/17 prescribed operating expenditure	118.0							
Less non-controllable expenditure	(34.3)							
Less non recurrent expenditure	(0.4)							
Adjusted baseline 2016-17 controllable opex	83.3	83.3	83.3	83.3	83.3	83.3	83.3	416.4
Step 2: Establish adjusted baseline controllable operating expenditure forecast for each year of the next period assuming a 1.2% per year efficiency improvement rate								
add $ value of forecast cost efficiency improvement relative to 2016-17 baseline expenditure		(0.8)[(a)]	(1.8)	(2.8)	(3.9)	(4.9)	(5.9)	(19.3)
add $ value of customer growth forecast relative to 2016-17 baseline		1.3	2.7	4.1	5.4	6.8	8.2	27.2
Adjusted baseline controllable opex forecast		83.8	84.1	84.5	84.9	85.2	85.6	424.3
Step 3: Add forecast variations to baseline controllable operating expenditure for each year								
Total variations			5.3	5.4	5.0	5.1	5.2	26.0
Step 4: Add forecasts of non-controllable operating expenditure for each year of the next regulatory period								
Total non-controllable opex forecasts			13.5	13.1	13.1	12.7	12.2	64.6
Total prescribed operating expenditure forecast assuming a 1.2% per year efficiency improvement rate for the next regulatory period			102.9	103.0	103.0	103.0	102.9	514.9
Identify additional operating expenditure savings								
Total operating expenditure forecast using internal bottom up methodology			100.1	99.0	98.9	99.2	98.5	495.8
Additional savings proposed (compared to ESC's forecasting method and assuming a 1.2% per year efficiency improvement rate)			2.9	4.0	4.1	3.8	4.4	19.1

Note (a): The assumed efficiency improvement rate in the final year (2017-18) of the current regulatory period is 1%, in accordance with the ESC's 2013 Determination.

Totals may not reconcile exactly due to rounding.

In the remainder of this section we explain each of the steps in our forecasting methodology.

Step 1: Establish adjusted baseline 2016-17 controllable operating expenditure

Barwon Water's 2016/17 total prescribed operating expenditure is $118.00 million (in 2017 dollars). To establish an adjusted baseline controllable operating expenditure forecast (Step 1), non-controllable costs and non-recurrent costs are removed from the total prescribed operating expenditure, as shown in the tables below.

Table 18: Non-controllable costs incurred in 2016/17 ($M, 2017-18)

Expenditure item	Cost
Environmental contribution	6.79
Melbourne Water head works charge	21.65
Bulk water supplies volume charge for the Melbourne-to-Geelong Pipeline	0.25
Biosolids finance lease expense	5.23
Licence Fees	0.37
Total non-controllable costs incurred in 2016/17	$34.29

Table 19: Non- recurrent costs incurred in 2016/17 ($M, 2017-18)

Expenditure item	Cost
Rental reductions with the cessation of Malop and Mercer St rentals	0.43
Total non-recurrent costs incurred in 2016/17	$0.43

Step 2: Establish adjusted baseline controllable operating expenditure forecast for each year of the next period

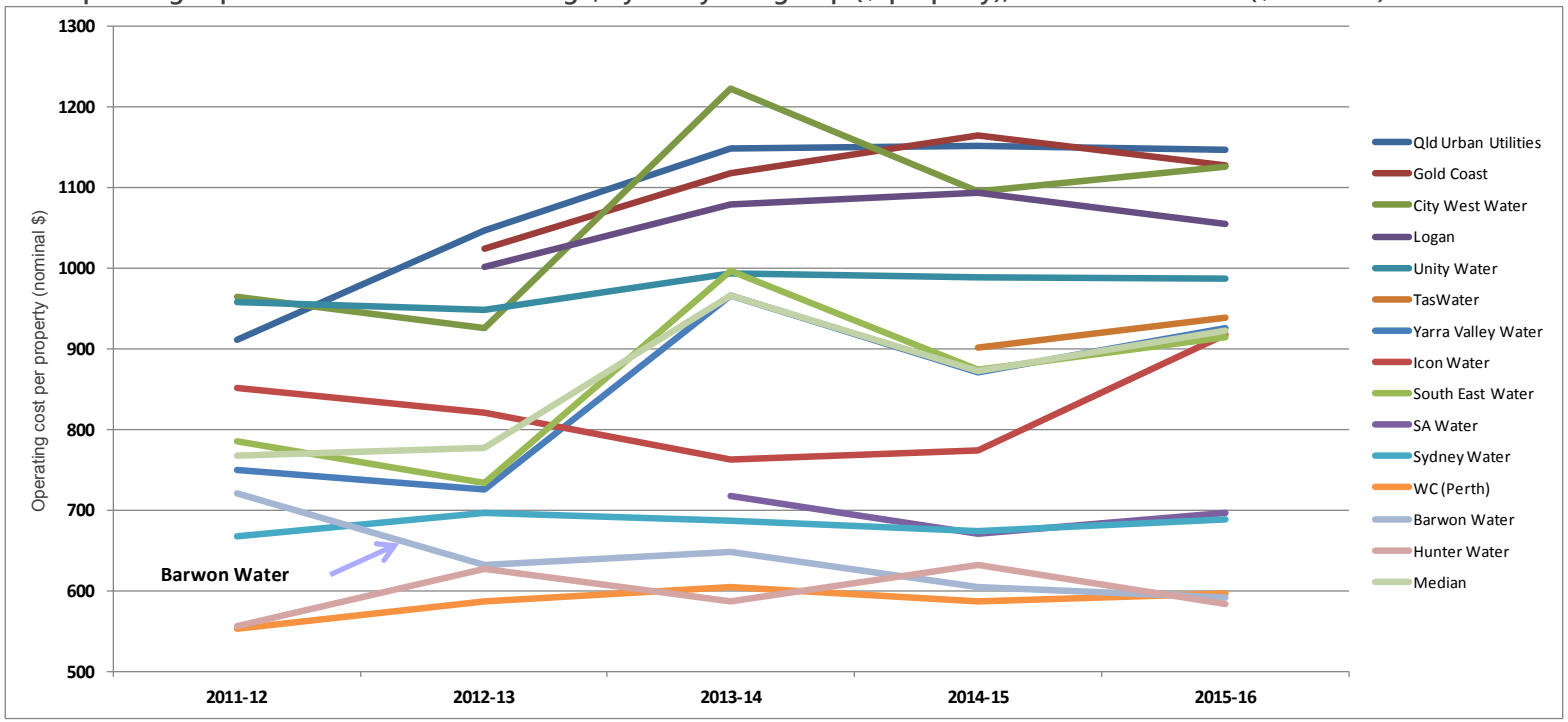
Step 2 of our forecasting methodology comprises:

- An efficiency factor; and
- A growth factor.

As previously explained, we adopted a BAU efficiency target of 1.2% per annum, prior to the Board and Executive Leadership Team applying a bottom up review to drive additional savings.

In adopting the 1.2% per annum BAU efficiency target, we considered our benchmark performance, which already compares very favourably with our peers. Figure 18 below shows data published by the Australian Government's Bureau of Meteorology National Performance Report for urban water utilities. It shows operating expenditure expressed as $ per property, with Barwon Water being the second best performer in its class, having delivered substantial year-on-year savings.

Figure 18: Combined operating expenditure: water and sewerage, by utility size group ($-property), 2011–12 to 2015–16 ($ nominal)[29]



[29]Bureau of Meteorology 2017, *National performance report 2015-16: urban water utilities, part A*, March, pg 73.

This independent benchmark indicates that we are already operating at the efficiency frontier and therefore a forecast BAU annual efficiency of 1.2% per annum is a challenging target, noting that:

- Our proposed efficiency factor exceeds the 1% per annum that the ESC required the water companies to achieve during the current regulatory period;
- Barwon Water has already delivered cost savings that exceeded the ESC's forecast for the current period, indicating that our costs are already efficient; and
- As explained in step 5, our methodology identifies further cost efficiencies through a bottom up approach.

Table 20 below shows our proposed BAU cost efficiency and the resulting annual savings in operating expenditure, relative to the 2016-17 adjusted baseline expenditure.

Table 20: Cost efficiencies in controllable operating expenditure forecast applying BAU annual efficiency target of 1.2% ($M, 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Cost efficiency improvement rate (% per annum)	1%	1.2%	1.2%	1.2%	1.2%	1.2%
Reduction in controllable operating expenditure relative to 2016-17 baseline due to BAU efficiency improvement	(0.8)[(a)]	(1.8)	(2.8)	(3.9)	(4.9)	(5.9)

Note (a): The assumed efficiency improvement rate in the final year (2017-18) of the current regulatory period is 1%, in accordance with the ESC's 2013 Determination. Totals may not reconcile exactly due to rounding.

The impact of customer growth (consistent with *Victoria in Future* 2016 projections) on our operating expenditure forecasts is set out below.

Table 21: Impact of customer growth on controllable operating expenditure forecast ($M, 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Customer growth forecast (% per annum)	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Increase in controllable operating expenditure relative to 2016-17 baseline due to customer growth	1.3	2.7	4.1	5.4	6.8	8.2

Step 3: Add forecast variations to baseline controllable operating expenditure for each year

Step 3 takes account of other factors that may affect recurrent operating expenditure in the next regulatory period. Importantly, this provides us with an opportunity to reflect community feedback in our forecasts, which may include specific initiatives or the impact of proposed changes to Guaranteed Service Levels (GSLs), for example. While many of the recommendations of our Community Panel can be delivered without increasing our operating expenditure allowance, others will require some additional funding. The specific initiatives that require additional funding are described in Table 22 overleaf, together with evidence of community support for these initiatives.

Table 22: Operating initiatives requiring additional funding ($2017-18)

Initiative	Forecast operating expenditure	Customer support
Increasing assistance to vulnerable customers	We will spend an additional $500,000 per annum on initiatives to support vulnerable customers that may have difficulty paying their bills, as we move towards our new proposed pricing structure. Our additional expenditure will proactively help vulnerable customers manage their bills and be more water efficient.	• Contributes to delivery of Outcomes 2 and 5, by implementing Community Panel preference # 1.
Expanding our water efficiency program	We will spend an additional $500,000 per annum on an expanded water efficiency and literacy program, which will include a Community Water Literacy and Efficiency Program, Schools Water Efficiency Program, Community Rebate Program (providing in-home water efficiency support to vulnerable customers) and Business Advice and Assistance Program.	• Contributes to delivery of Outcome 4, by implementing Community Panel preference # 2.
Protecting the environment through river restoration	We will spend an additional $112,500 per annum on investing in better waterway and catchment health outcomes for the Barwon River and the Moorabool River, which is the most flow-stressed river in Victoria. We will partner with local catchment management authorities or other agencies to ensure this expenditure generates the most environmental benefit.	• Contributes to delivery of Outcome 3, by implementing Community Panel preference # 7.
Creating a new 'sewer incident credit' scheme	We will spend up to an additional $175,000 per annum to allow payment of a 'sewer incident credit' on the next bill of any customer affected by a sewer incident. The value of the payment made will be reflective of the severity of the incident.	• Contributes to delivery of Outcome 2, by implementing Community Panel preference # 11.
Encouraging greater use of recycled water	We will further subsidise the cost of Class A recycled water to encourage its use by setting its $/kl price at 30% less than drinking water, and recover the shortfall through the price of drinking water from other supplies. We will also spend an additional $100,000 per annum on an education program to change community perceptions about using recycled water for various purposes, including drinking in the long-term future.	• Contributes to delivery of Outcome 1, by implementing Community Panel preference # 14.

Our expenditure on water efficiency programs is not only strongly supported by our customers, but will also help to offset other costs. We estimate that potable water demand would increase by 4% or about 1,270ML per year without this investment in water efficiency. This would mean our water supply costs would increase by approximately $100,000 per year or $500,000 over the next regulatory period under a median climate scenario, as we would have to source more water. In a dry year, where extra demand would have to be sourced from more expensive sources like groundwater or the Melbourne system, the cost to supply the additional demand would far exceed $100,000 per year.

In addition to the customer initiatives, we have also included forecast variations for the following cost items:

- Expected increases in gas and electricity prices, having regard to recent actual data and independent expert advice in relation to the likely future price path. Our forecast of total electricity purchasing costs has been reduced to reflect the forecast savings from our planned investment in renewable generation projects;
- The impact of the Enterprise Agreement, which provides for a nominal increase of 3.25% for employees in November 2016, followed by 3.00% increase for employees in November 2017 and November 2018; and
- The additional costs associated with a fourth treatment tank at Black Rock Water Reclamation Plant, which will be brought online in 2019/20.

Further information on each of these items is available in Supporting Paper 4.

Step 4: Add forecasts of non-controllable operating expenditure for each year of the next regulatory period

The final step in the ESC's methodology (Step 4) adds back forecast non-controllable operating expenditure, as shown in Table 23.

Table 23: Non-controllable operating expenditure forecast ($M, 2017-18)

Expenditure item	2018-19	2019-20	2020-21	2021-22	2022-23	Total
External bulk water charges	0.00	0.00	0.00	0.00	0.00	0.00
External temporary water purchases	0.00	0.00	0.00	0.00	0.00	0.00
Licence fees	0.46	0.46	0.46	0.46	0.46	2.29
Environmental contribution	8.20	8.00	8.20	8.00	7.81	40.23
Other non-controllable cost items	4.88	4.67	4.44	4.19	3.92	22.10
Total non-controllable operating expenditure	**13.54**	**13.13**	**13.10**	**12.66**	**12.19**	**64.62**

Each component of our non-controllable operating expenditure is explained briefly below.

- External bulk water charges – We have an obligation to pay a fixed service charge to Melbourne Water in relation to the 16,000 ML bulk entitlement we hold to water from the Yarra-Thomson catchment, which can be transferred to our service region via the Melbourne to Geelong pipeline. Our non-controllable operating expenditure forecasts are reduced to $0 because we have prepaid $21.65 million of headworks charges during the

current regulatory period and we are capitalising the remaining portion. Our approach to headworks charges is one of a number of initiatives we are undertaking to deliver lower prices to our customers in the next regulatory period (see Section 7.6).

- External temporary water purchases – We are not forecasting any costs associated with transferring the bulk water to which we are entitled from the Melbourne headworks via the Melbourne to Geelong Pipeline over the next regulatory period, nor are we forecasting any other operating expenditure related to bulk water purchases from external sources.
- Licence fees – We are not forecasting any increase in our current licence fees, which are payable in relation to the costs incurred by the:
    - Department of Human Services in administering the Safe Drinking Water Regulations.
    - Environment Protection Authority in administering discharge fees and work approvals.
    - Essential Services Commission in administering the economic regulatory framework.
- Environmental contribution – The environmental contribution is an initiative of the Victorian Government. Water businesses are required to contribute funding towards water related initiatives seeking to promote the sustainable management of water or address adverse water-related environmental impacts across the State. We have reflected the advice of DELWP regarding the environmental contribution that will apply for the next regulatory period.
- Other non-controllable cost items – Under a Public Private Partnership (PPP), Plenary Environment (Barwon) Pty Ltd operates a biosolids plant on behalf of Barwon Water in accordance with a 20 year agreement commencing in September 2012.

Additional step: Identify further operating expenditure savings (Step 5)

As already noted, after applying our 1.2% per annum BAU efficiency target, the Board and Executive Leadership Team applied a bottom up review to drive additional savings from the business. This final step resulted in our adoption of operating expenditure forecasts that reflect additional operational savings and/or new revenue opportunities of more than $19 million over the five years. In total, these combined savings equate to an average annual efficiency improvement of 2.3% per annum. Given our present high level of efficiency, an annual improvement of 2.3% represents a 'stretch target' for the business.

Table 24 below sets out our target operating expenditure savings and/or new revenue opportunities.

Table 24: Target operating expenditure savings ($M, 2017-18)

	2018-19	2019-20	2020-21	2021-22	2022-23	Total 2018/19 to 2022-23
Annual 1.2% efficiency savings (using the standard ESC method)	1.8	2.8	3.9	4.9	5.9	**19.3**
Additional efficiency savings	2.9	4.0	4.1	3.8	4.4	**19.1**

7.3.4 Delivering customer outcomes

We have listened to our customers and tailored our operating expenditure plans to meet the five outcomes we have agreed to deliver. Table 25 below summarises briefly the link between these outcomes and our expenditure plans over the next regulatory period. We have also undertaken a retrospective assessment of our operating expenditure in the current regulatory period against the five outcomes we have agreed to deliver in the next regulatory period, for comparative purposes. Figure 19 overleaf shows how our operating expenditure profile will change from the current regulatory period to the next regulatory period, in line with what our customers have asked for. Figure 20 overleaf shows our operating expenditure on key actions we will undertake to deliver each outcome in the next regulatory period.

Table 25: Community feedback and implications for our operating expenditure plans ($2017-18)

Outcome	Implications for our operating expenditure plans
A reliable, secure water future for our region	$227.1 million (46%) of our operating expenditure relates to this outcome. It is our 'business as usual' expenditure to operate our infrastructure and provide water, sewerage and recycled water services to our customers. Reflecting our asset values, the bulk of this expenditure relates to the provision of clean, safe drinking water.
Timely, innovative services for our customers	$172.1 million (35%) of our operating expenditure relates to this outcome. It reflects our expenditure on delivering an excellent customer experience. To this end, it includes our customer billing, support and liaison services and our approach to planning, managing and responding to infrastructure incidents experienced by our customers. It includes an additional $175,000 per annum to allow payment of a 'sewer incident credit' on the next bill of any customer affected by a sewer incident in accordance with the preferences of our customers (Community Panel preference 2). The value of the payment made will be reflective of the severity of the incident. It also includes an additional $500,000 per annum on initiatives to support vulnerable customers that may have difficulty paying their bills, as we move towards our proposed new pricing structure in accordance with the preferences of our customers (Community Panel preferences 1 and 13).
A healthier environment for all	$73.1 million (15%) of our operating expenditure relates to this outcome. A large portion of this expenditure are non-controllable costs, relating to our environmental contribution to the State Government ($40.2 million) and the financing lease costs of our partnership with Plenary to process and reuse biosolids ($22.1 million). The remainder reflects our costs to develop and deliver environmental initiatives, including an additional $112,500 per annum on investing in better waterway and catchment health outcomes for the Barwon River and the Moorabool River in accordance with the preferences of our customers (Community Panel preference 7).

Outcome	Implications for our operating expenditure plans
Deeper knowledge and partnerships with our community	$23.5 million (5%) of our operating expenditure relates to this outcome. It reflects our expenditure to educate, inform and partner with our community and stakeholders. It includes an additional $500,000 per annum on an expanded water efficiency and literacy program and an additional $100,000 per annum on an education program to change community perceptions about using recycled water for various purposes in accordance with the preferences of our customers (Community Panel preferences 2 and 4). Only a small component ($1.7 million) of our capital expenditure relates to this outcome, for Stage 1 of the Aqueduct Park project, which will ultimately create a new 66 hectare community park on the Barwon River around the heritage listed Barwon River Ovoid Sewer Aqueduct. This project will provide recreational, heritage and other social benefits for our community. The Community Panel initially asked us to maintain the same level of expenditure on providing recreational opportunities, but agreed with our proposed expenditure in light of strong community support .A survey of over 400 interested community members in March 2017 demonstrated strong support for the proposed park.
Affordability for all our customers	Our approach to operating expenditure forecasting, as set out in this section, demonstrates that we have worked hard to keep our services affordable for all of our customers.

Figure 19: Changes in operating expenditure to deliver outcomes ($2017-18)

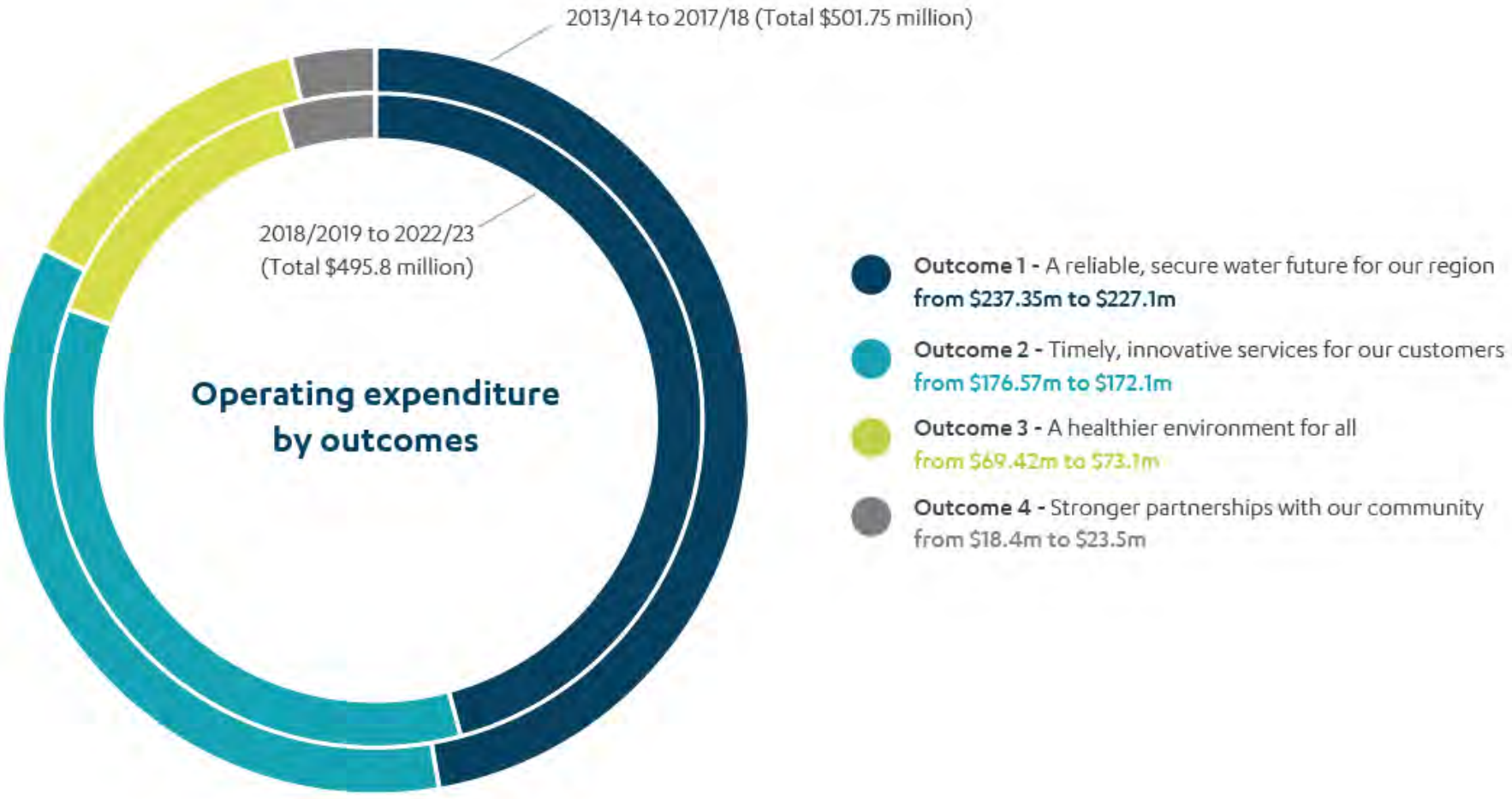
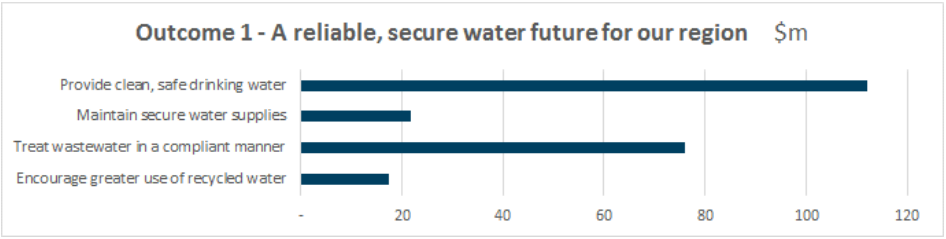
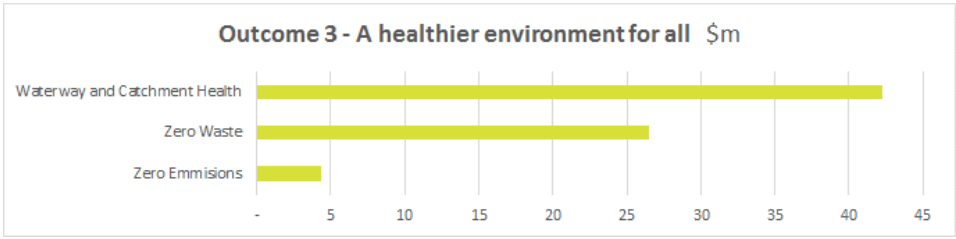
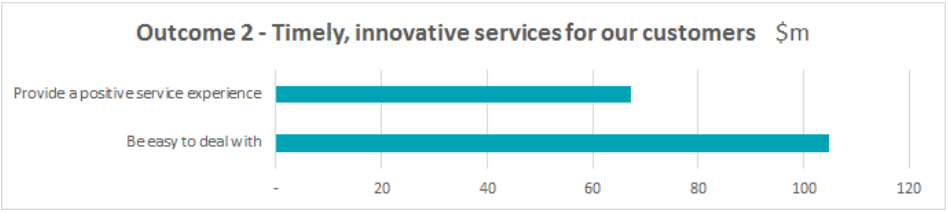
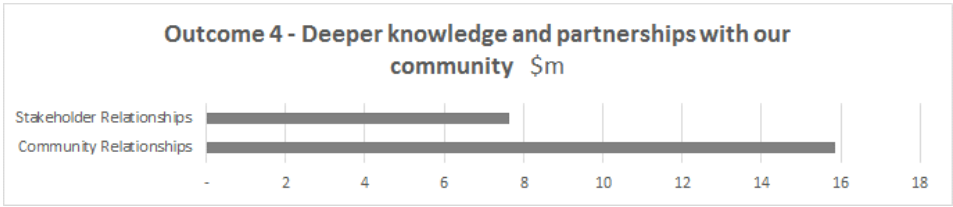


Figure 20: Operating expenditure per outcome ($M, 2017-18)









7.3.5 Further information

Supporting Paper 4 provides further detailed information on our operating expenditure forecasts and also sets out the attestation that the relevant General Manager has made in relation to these forecasts.

7.4 Forecast capital expenditure

- Our forecast gross capital expenditure for the next regulatory period is $328.6 million, which is $83.1 million (20%) lower than our actual expenditure in the current period. Our proposed allowance is also $51.6 million lower than the subsequent regulatory period (commencing in 2023/24). Our forecast net capital expenditure ($295.7 million) is also substantially lower than the current period, by $48.3 million or 14%.
- Renewal remains the largest capital expenditure category, comprising nearly half of our capital expenditure requirements, but is projected to be 11.7% lower than the current period.
- Growth is the second largest capital expenditure category for the next regulatory period:
    - Armstrong Creek, the major growth zone for the City of Greater Geelong, will require a further $21.2 million of works to service development in this area across a range of projects including water, sewerage and recycled water mains.
    - Torquay and Spring Creek growth areas require approximately $9.5 million of water and sewer infrastructure across a range of projects.
    - Several significant growth driven projects are required for Colac, with a forecast cost of approximately $13.9 million in the next regulatory period.
- We have excluded projects totalling approximately $60 million from our proposed allowance, as these projects are uncertain to proceed in the next regulatory period as they are currently in the project development phase. This approach ensures that our customers only finance projects that we regard as being certain to proceed, which means that our tariffs are lower than would otherwise be the case.
- Our forecast capital expenditure reflects P50 cost estimates and rigorous cost estimation processes. Our contingency allowances are generally lower than recommended by a review we commissioned from an infrastructure engineering advisory firm. No allowance has been made for any delays or cost overruns in the proposed capital projects. Our unit rates in our panel contract arrangements have been market tested through a competitive tender process.
- Our project assessment considers alternative options, including opportunities for operating expenditure substitution. Business cases for each major project are available on request.
- Our actual capital expenditure in the current period exceeded the allowance set by the ESC, which demonstrates that we do not exaggerate our capital expenditure requirements.
- We have listened to our customers and tailored our capital expenditure plans to meet the five outcomes we have agreed to deliver over the next regulatory period.

7.4.1 Actual and forecast capital expenditure

Our forecasts of gross capital expenditure for the next regulatory period and the subsequent five year period are shown in Figure 21 overleaf. For comparative purposes, our actual capital expenditure for the current period is also shown.

In total, our gross capital expenditure requirement for the next regulatory period (2018-19 to 2022-23) is forecast to be $328.6 million over the five-year period. This forecast is:

- $83.1 million lower than the previous regulatory period; and
- $51.6 million lower than the subsequent regulatory period.

Our total net capital expenditure over the next regulatory period (2018-19 to 2022-23) is forecast to be $295.7 million. This forecast is:

- $48.4 million lower than the previous regulatory period
- $50.6 million lower than the subsequent regulatory period.

These high-level comparisons provide confidence that our forecasts for the next regulatory period are reasonable. Table 26 overleaf provides further details of our historical and forecast gross and net prescribed capital expenditure. The remainder of this section explains the additional capital expenditure we undertook during the current regulatory period, and provides further details about our forecast capital expenditure.

In accordance with the ESC's Guidance Paper, our template data for 2017-18 reflects the ESC's allowance for that year. However, for the purpose of explaining Barwon Water's forecasts for the current regulatory period and the next regulatory period, the information in this price submission reflects Barwon Water's best estimate of our capital expenditure in 2017-18.

Figure 21: Actual and forecast annual gross capital expenditure by cost drivers ($M, 2017-18)

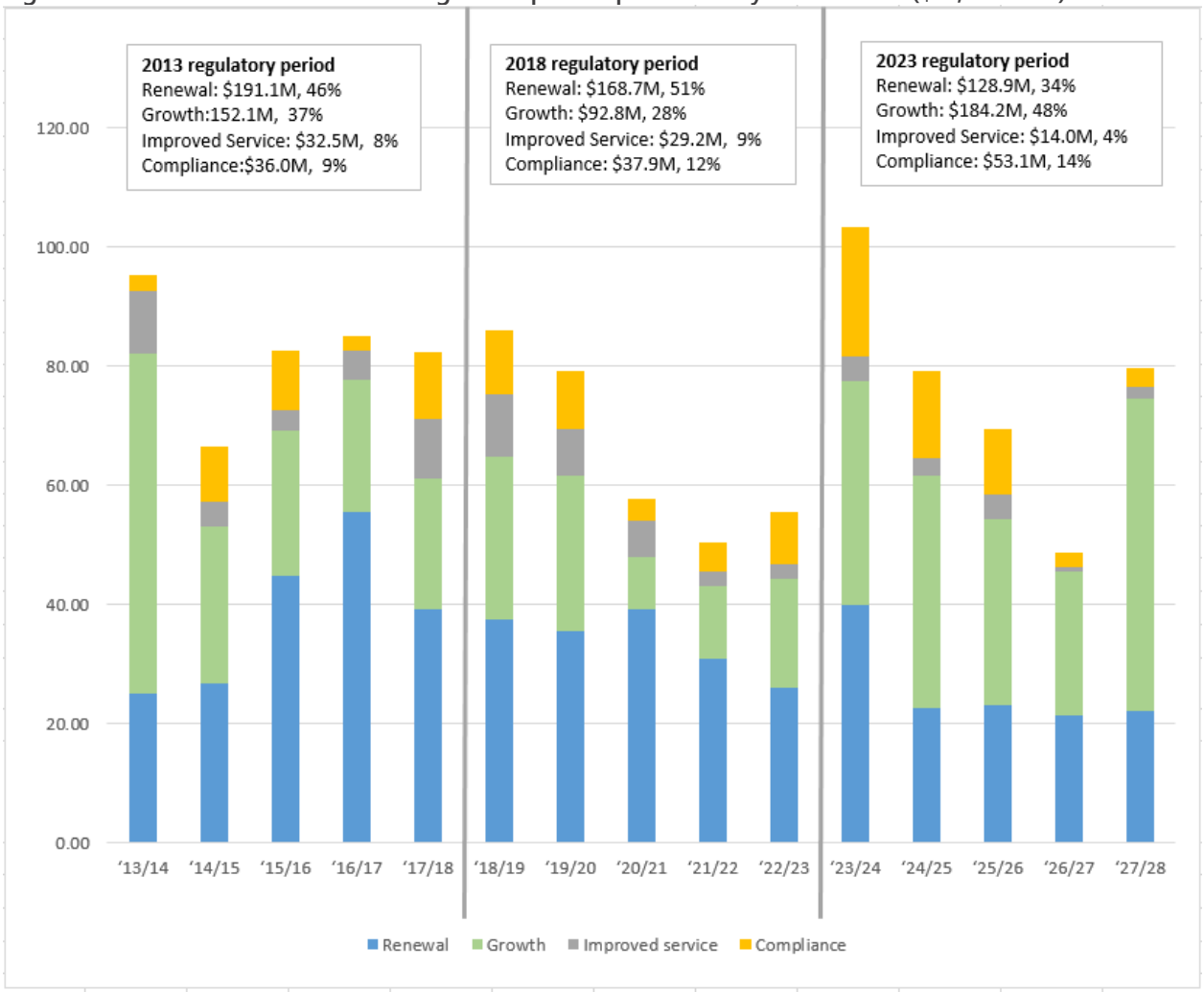


Table 26: Historical and forecast gross and net prescribed capital expenditure by driver ($M, 2017-18)

	'13-14 *Actual*	'14-15 *Actual*	'15-16 *Actual*	'16-17 *Forecast*	'17-18 *Forecast*	5 year Total *Act- Forecast*	'18-19 *Forecast*	'19-20 *Forecast*	'20-21 *Forecast*	'21-22 *Forecast*	'22-23 *Forecast*	5 year Total *Forecast*	'23-24 *Forecast*	'24-25 *Forecast*	'25-26 *Forecast*	'26-27 *Forecast*	'27-28 *Forecast*	5 year Total *Forecast*
Renewal	25.07	26.73	44.69	55.38	39.20	191.07	37.37	35.49	39.12	30.78	25.98	168.74	39.89	22.63	23.11	21.27	22.02	128.92
Growth	57.02	26.19	24.55	22.36	22.00	152.13	27.42	26.11	8.75	12.19	18.33	92.80	37.52	38.98	31.17	24.14	52.40	184.21
Improved service	10.38	4.16	3.39	4.72	9.88	32.52	10.36	7.85	6.11	2.41	2.43	29.15	4.18	2.94	4.02	0.78	2.03	13.96
Compliance	2.72	9.50	10.04	2.60	11.11	35.97	10.88	9.62	3.58	5.05	8.80	37.93	21.66	14.55	11.15	2.55	3.18	53.09
Gross Capex	**95.20**	**66.57**	**82.66**	**85.06**	**82.19**	**411.68**	**86.04**	**79.07**	**57.57**	**50.42**	**55.53**	**328.63**	**103.25**	**79.11**	**69.45**	**48.74**	**79.64**	**380.18**
Government Contributions	6.03	1.63	0.16	0.26	0.00	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Customer Contributions	6.66	13.06	15.73	11.83	12.25	59.52	6.31	6.56	6.66	6.62	6.77	32.91	6.77	6.77	6.77	6.77	6.77	33.83
Net Capex	**82.51**	**51.89**	**66.77**	**72.97**	**69.94**	**344.08**	**79.73**	**72.51**	**50.91**	**43.80**	**48.76**	**295.72**	**96.48**	**72.34**	**62.68**	**41.97**	**72.87**	**346.34**

Additional expenditure during current regulatory period

Table 27 below shows our actual and forecast gross and net capital expenditure during the current regulatory period, as compared to the 2013 ESC determination.

Table 27: Gross and net capital expenditure for the current period compared to ESC allowance ($M 2018)

	ESC 2013 allowance	Actual and forecast expenditure	Variance
Gross capital expenditure	376.67	411.68	35.01
Net capital expenditure	317.91	344.08	26.17

During the current period, we undertook the following significant projects that were not included in the ESC's capital expenditure allowance:

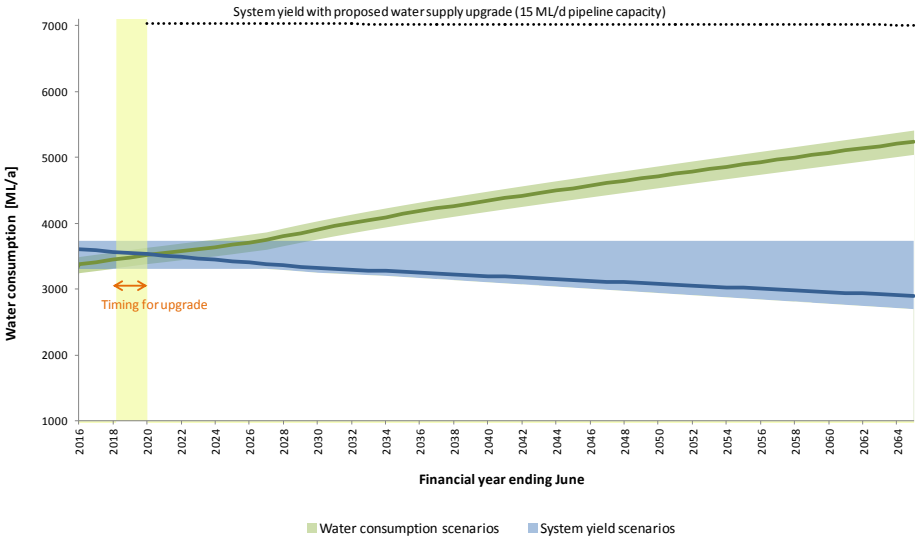
- Golden Plains Food Production Precinct Stage 1, which is a regional economic development initiative of Golden Plains Shire involving an $8.3 million investment in water infrastructure;
- The Colac Water Supply Upgrade project, which was advanced to address a serious water security shortfall in the Colac Water Supply System; and
- Refurbishment of our Ryrie Street office complex to accommodate all office based employees in a single location.

While these projects were not anticipated in the 2013 Water Plan, each project was supported by a well-developed business case. As already noted, the Golden Plains Shire supported the additional investment in water infrastructure – and it was right for us to respond.

In relation to the Colac Water Supply Upgrade, the primary concern related to the updated analysis regarding the supply-demand balance, as shown in Figure 22. This updates the supply-demand balance in the 2012 Water Supply Demand Strategy and illustrates the imminent requirement for a supply augmentation to securely meet future demand.

In addition to the worsening supply-demand balance, the single source of supply for Colac constrains system resilience, presenting a risk to security of supply from unplanned interruptions, such as bushfire or a landslip along the pipeline. For these reasons, we decided to proceed with the upgrade.

Figure 22: Forecast supply-demand balance for the Colac system



The refurbishment of our Ryrie Street head office enabled us to accommodate all our Geelong-based office employees under one roof. As a consequence, we are now benefitting from increased productivity, efficiencies and cost savings, including reductions of up to 45% on maintenance, operational and energy costs.

The additional gross capital expenditure incurred during the current regulatory period has been offset by additional Government contributions in the case of Golden Plains Food Production Precinct, and the sale of surplus property through the Property Realisation project in the case of our Ryrie Street head office refurbishment.

The Property Realisation project involves the development and sale of 30 surplus landholdings. We have maximised the market value of these surplus landholdings by obtaining appropriate rezoning and planning permits and, in some cases, undertaking physical development, to deliver socially and environmentally leading outcomes. The Property Realisation project is expected to deliver net proceeds of approximately $40.4 million over the period from 2013-14 to 2023-24.

Our goal has been to ensure that our higher than forecast capital expenditure during the current period would have no material impact on prices going forward. We have achieved this goal.

Details of expenditure over next regulatory period

Table 28 overleaf explains key drivers of our capital expenditure over the next regulatory period. A key change in our capital expenditure from the current regulatory period to the next regulatory period relates to the inclusion of our renewable energy program. Further explanation about this program is provided after Table 28.

Table 28: Key drivers of our capital expenditure forecast ($2017-18)

Category	Key drivers and expenditure trends
Renewal	Renewal comprises 51% of our total forecast capital expenditure for the next regulatory period. Forecast renewal capital expenditure is $168.74m, which is 11.7% lower than the current period. It reflects the efficient level of expenditure required to enable our assets to continue to provide service performance in accordance with community expectations. Our renewal capital expenditure forecasts are developed using a 'portfolio approach', whereby assets with like characteristics are grouped and assessed using a methodology appropriate for the nature of the asset network being considered and its business risk. We use innovative, risk-based software developed by the CSIRO (Pipeline Asset Risk Management System) and in-house (Sewer Infrastructure Management System), which enable us to ensure the timing of expenditure is optimised. Works are completed via competitive tendering through panels established by a public Expression of Interest process, although we retain the discretion to go to public tender if we consider it would be beneficial to do so. These arrangements help us to ensure a value for money approach to completing our renewal projects. Our renewal capital expenditure forecast includes: • $15.5 million for the replacement of water reticulation mains to ensure levels of service in relation to unplanned service interruptions are maintained. This is a reduction of 25% compared to the expenditure water reticulation mains renewal in the current period. • $21.7 million for the renewal of reticulation sewers. This level of expenditure is similar to that in the current period. • $11.1 million for main sewers relining program. This will extend the life of existing major sewer assets to ensure continued reliable supply of sewerage services.
Growth	Growth is the second largest capital expenditure category for the next regulatory period, with growth related capital expenditure forecast at $92.80m. During the previous two regulatory periods, significant investments were made to boost the region's water resources to cater for growth. Now that these investments have been completed, growth related expenditure is expected to return to a lower level in the next regulatory period. The major growth areas and the associated capital expenditure and infrastructure requirements over the next regulatory period are: • Armstrong Creek, the major growth zone for the City of Greater Geelong, will require a further $21.2 million of works to service development in this area across a range of projects including water, sewerage and recycled water mains. • Torquay and Spring Creek growth areas require approximately $9.5 million of water and sewer infrastructure across a range of projects. • Several significant growth driven projects are required for Colac, with a forecast cost of approximately $13.9 million in the next regulatory period.

Category	Key drivers and expenditure trends
Improved service	Our forecast capital expenditure for this category of $29.15m is consistent with the level in the current period. During the next regulatory period, we plan to undertake some significant projects that are aimed at improving service to our region, including: • The Colac Water Treatment Plant Clear Water Storage Upgrade, at a forecast capital cost of $6.1 million. The project will ensure sufficient security of supply of treated water for the township of Colac in the event of treatment plant outages. • The Geelong Pressure Management Program, at a forecast capital cost of $4.3 million. This program aims to reduce maintenance costs, reduce water leakage and ensure that the reliability of the system is maintained.
Compliance	We are forecasting an increase in compliance projects over the next regulatory period, with compliance related capital expenditure forecast at $37.93m as compared to $35.97m in the current regulatory period. The increase is driven by the inclusion of renewable energy projects, which will generate longer term savings as grid electricity prices rise and regulation of emissions becomes more stringent. The inclusion of renewable energy projects will also enable us to meet our emissions reduction obligations and target of 100% renewable energy by 2025. These projects total $15.4 million over the next regulatory period. Setting aside our compliance obligations, these projects are largely self-financing through lower future electricity costs for the life of the projects. Our operating expenditure forecast for the next regulatory period has been reduced to reflect the savings in electricity purchase costs that our planned investment in renewable generation projects will deliver. In present value terms, lower electricity prices will recover approximately 93% of our proposed renewable project costs. The 7% 'gap' would easily be bridged if a value is placed on intangible benefits or if electricity prices are higher than expected, for example as a result of new measures to reduce carbon emissions. Furthermore, our customers strongly support our proposed renewables program. The second major category of compliance works relates to dam safety upgrades, which are forecast to cost approximately $5.3 million. This expenditure is required to comply with engineering standards and minimise safety risk.

Renewable energy program

One of the main changes from our capital expenditure profile in the current regulatory period to the next regulatory period is the inclusion of $15.4 million in renewable energy projects, to directly reduce our grid electricity consumption and associated carbon emissions. In addition to being strongly supported by our customers, this expenditure will have a substantial cost-recovery component over the life of the projects (approximately 93%), through avoidance of all grid electricity volumetric charges for the energy produced and consumed, which include energy commodity, network and other charges.

The Community Panel supported our target of zero net emissions. Their recommendations specifically supported the additional capital expenditure necessary to deliver immediate and longer term operational savings, and to enable us to achieve our 100% renewable energy goal, towards a longer-term goal of zero net emissions (refer Community Panel – outcome #3 and preference #6).

We have developed a detailed Climate Change Mitigation Plan, which follows the EPA Emissions Reduction pathway. We will continue to invest in energy avoidance and efficiency measures through better technology, asset optimisation and good design. The plan requires that we:

- Take advantage of cost effective, bespoke scale renewable technology to be installed behind the meter at several of our largest electricity using sites (solar-wind-biogas and batteries);
- Establish a regional partnership with similar government agencies and institutions to investigate securing large scale renewable energy from within the G21 region at low cost given major economies of scale;
- Participate in a water sector wide partnership to secure large scale renewable energy, leveraging off the buying power of the sector as a whole.

Our renewable energy program is a key component of the Climate Change Mitigation Plan and has been developed based on a thorough understanding of how and where we use electricity, and the availability of renewable energy supplies. The program prioritises behind-the-meter projects as they offer the best operational cost savings, as every unit of energy generated and used on-site avoids the full suite of usage-based charges for electricity from the grid.

Despite best efforts, it is not feasible to achieve 100% renewable energy at every individual site. The remainder of our renewable energy needs will be met via grid based renewable energy partnerships. Purchasing renewable energy via GreenPower is not part of the Renewable Energy Program as it comes at an ongoing cost-premium over ordinary grid electricity. Modelling completed by ClimateWorks (for DELWP) showed that a shift to 100% renewable energy will have a declining impact on customer prices over time. By comparison, using 100% offsets to address all emissions would result in ongoing price increases. The ClimateWorks results indicate that renewable energy would have a lower price impact than carbon offsets within just three years.

To optimise our expenditure we consider the technical, planning and construction periods associated with small-medium scale behind-the-meter renewable solutions (taking up to two years each). We also consider project timing to ensure that we meet our emission reduction targets efficiently without compromising deliverability.

To directly reduce our grid electricity consumption and associated carbon emissions, generate savings and meet our target of 100% renewable electricity by 2025, we need to undertake investment in the next regulatory period. The $15.4m investment in nine different renewable energy projects will enable us to switch to

approximately 43% renewable electricity by 2022/2023. Benchmark prices published by the International Energy Agency, Australian PV Institute and others have been used in preparing cost estimates for our renewable energy program, together with an assumption of continued reduction in solar PV system pricing over the period.

Importantly, the projected customer price impact to 2023 is minor, with longer term savings expected as grid electricity prices rise and regulation of emissions increase. Whilst we recognise that there will be additional investment in the following regulatory period to meet our target of 100% renewable energy by 2025, the projected customer price impact to 2028 is again relatively minor. Over time, the net price impact to customers under the renewable energy program will be lower as the operational savings accumulate. Table 29 shows the indicative price impacts on customers associated with the renewable energy projects and the electricity savings they are expected to deliver over the longer term.

Table 29: Indicative impacts on customer prices due to renewable energy projects

Regulatory period	2018-2023	2023-2028	2028-2033	2033-2038	2038-2043
Impact on Customer Prices	0.14%	0.33%	0.08%	-0.16%	-0.82%

Our investment analysis shows that approximately 93% of the costs of the proposed renewables projects will be recovered through lower future electricity purchase costs over the life of each project, expressed in net present value (NPV) terms. This analysis does not include any allowance for intangible benefits, nor for the possibility that carbon pricing is introduced during the life of these projects. A modest change to these assumptions, or higher electricity prices, would deliver a positive NPV outcome.

Setting aside our obligations to reduce emissions, intangible benefits to the community and environmental benefits need to contribute only 7% of the project costs to justify proceeding with the full suite of proposed projects. Our view is that the strong community support for our proposed renewables projects easily bridges this gap. A formal business case setting out the justification for each project will be developed in accordance with our investment governance process.

The Black Rock Stage 2 solar project is one of our top ten major capital projects, which total $57.5 million over the next regulatory period, as shown in Table 30 overleaf.

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Table 30: Summary information on Major Projects ($M, 2017-18)

	Project name	Cost	Project justification and cost driver(s)	Start Date	Completion Date
1	Property Realisation (Scenic Rd Highton)	12.89	Improve Barwon Water's operational efficiency by realising properties which are no longer used operationally by Barwon Water and surplus to the business needs.	2017/18	2020/21
2	Colac Pipeline Upgrade	6.32	Supply failures pose an unacceptable risk to the supply of raw water to the Colac township, customers supplied directly from the pipeline, and the environment.	2017/18	2027/28
3	Colac WTP Clear Water Storage Upgrade	6.07	The existing Colac Clear Water Storage is currently undersized and provides insufficient security of supply to the township of Colac.	2017/18	2019/20
4	Gellibrand WTP Upgrade	5.14	The upgrade of the Gellibrand Water Treatment Plant will allow the continued supply of drinking water quality to the community. This project will reduce the risk of outages at the Water Treatment Plant due to failure of ageing infrastructure.	2019/20	2021/22
5	BRWRP Effluent Storage	5.05	This project is required to accommodate a forecast increase in demand for recycled water to service dual pipe recycled water customers, agriculture and other uses.	2021/22	2023/24
6	Black Rock Renewable Energy Project Stg 2	4.94	Barwon Water has established an Emissions Reduction Program, comprising a number of 'behind the meter' and regional collaborative projects to deliver ongoing savings through lower future electricity costs and achieving our emission reduction goals.	2018/19	2019/20
7	Telemetry RTU PLC HMI Hardware & Software	4.54	Existing telemetry equipment is reaching end of usable life and suffering poor reliability. Current hardware is only capable of working under the unsecure DNP3 protocol.	2020/21	2021/22
8	Forrest WTP Upgrade	4.48	The upgrade of the Forrest Water Treatment Plant will allow the continued supply of safe drinking water to the Forrest community, the demand for which is growing.	2020/21	2022/23
9	Colac WRP Sludge Dewatering Upgrade	4.21	Dewatering capacity is inadequate to cope with forecast inflow. Without this project, the Colac WRP biological treatment process will be compromised under forecast loads, resulting in unacceptable risk of non-compliance with EPA licence.	2017/18	2019/20
10	Property Realisation (Thornhill Rd Highton)	3.87	Thornhill Road Highton redevelopment is part of the wider property realisation project, which is expected to realise approximately $40.4 million in net revenue (following expenses).	2017/18	2018/19
	Total	57.52			

7.4.2 Efficient asset management processes

We aim to continually improve the efficiency of delivering the services that our customers want through the use of appropriate asset management techniques, including an integrated system for long term planning and appropriately scaled systems and tools for operational asset management decision making.

In 2016, the Water Services Association Australia (WSAA) ran an international asset management process benchmarking study. The aim of the benchmarking study was to create "an international utility knowledge base that drives world class asset management and delivers enhanced customer value"[30]. This study provides an opportunity for businesses to gauge their asset management maturity as well as providing a platform to identify, showcase and share leading practices.

The international benchmarking process was aligned to incorporate principles of the Asset Management Standard, ISO 55001:2014, and for the first time non-water services sector representatives were invited to participate. Barwon Water performed well against the participants as shown in Figure 23.

The benchmarking results show that Barwon Water's relative strengths are in 'asset acquisition', 'asset operation' and 'asset maintenance' functions (all three being within the top 10% across all participants).

One area for improvement relates to the alignment of asset management systems and framework to national and international standards, which we will address by:

- Aligning our asset management systems to ISO 550001 and the DTF's Asset Management Accountability Framework
- Updating our asset management systems and associated documents with participation from key asset management resources across Barwon Water
- Preparing and implementing an asset management systems improvement plan.

Figure 23: Barwon Water's benchmark performance[31]

[30] AECOM 2017, *AMCV Project, Participant report for Barwon Water*, February, pg i.

[31] AECOM 2017, *AMCV Project, Participant report for Barwon Water*, February, pg i.

While Barwon Water is continuing to drive improvement in its asset management, the international benchmarking results provides confidence that our current arrangements will deliver prudent and efficient investment.

Our capital expenditure plans for the next regulatory period reflect the application of both our asset management plans and our ten year Capital Works Investment Plan (CWIP). The CIWP is reviewed and updated annually. The review process imposes a 'top down' discipline in the development of the expenditure forecasts, and provides opportunities for the Board and Executive Leadership Team to challenge the forecasts, to ensure that they reflect efficient and prudent expenditure.

The process includes the following steps:

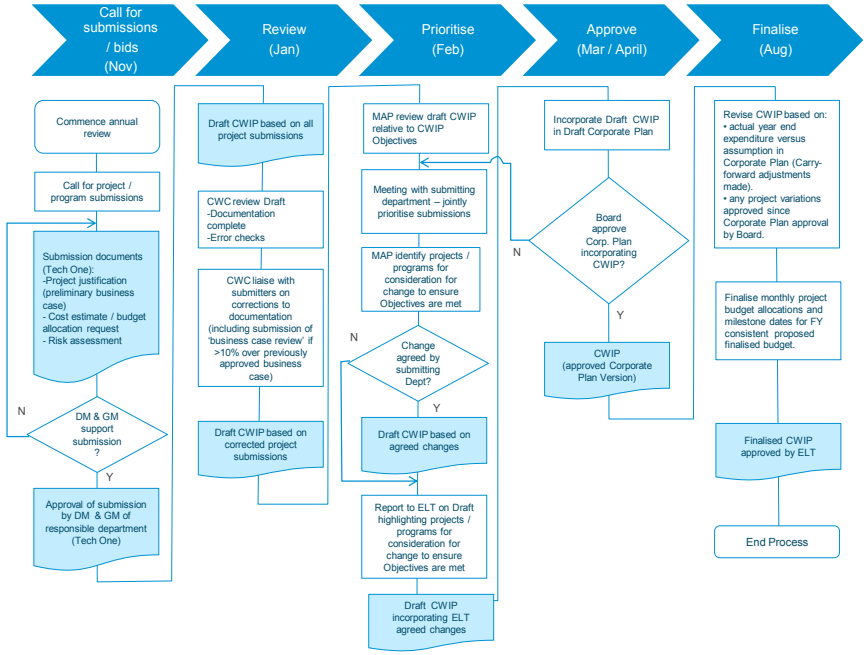
1. Call for submissions on potential projects for inclusion in the 10 year CWIP.
2. Endorsement of project submissions for consideration for inclusion in the 10 year CWIP by the Manager and General Manager of Departments from which the submissions originate.
3. Meet with Department Managers to determine the prioritisation and ranking score of projects.
4. Refinement of CWIP to meet CWIP Objectives for consideration and endorsement by the executive leadership team (ELT).
5. Board endorsement of annual Corporate Plan which includes the updated 10 year CWIP.
6. Finalisation of the CWIP, including financial year-end adjustments.

The review process is shown in Figure 24.

In addition to applying our CIWP process, we have engaged consultants to review our capital expenditure plans to ensure that only prudent and efficient expenditure is included in our forecasts for the next regulatory period:

- Inside Infrastructure were engaged to ensure that our business case information supports the proposed capital expenditure for major capital projects;
- CMP were engaged to undertake P50 cost estimates for our major capital projects and key capital programs, and to review our standard estimating tools and templates in relation to contingency allowances.

Figure 24: Capital works investment planning process



7.4.3 Measures to ensure prudent and efficient capital expenditure

We have taken all reasonable measures to ensure that our forecast capital expenditure is prudent and efficient:

- Our capital planning and governance process imposes a 'top down' discipline in the development of the expenditure forecasts, and provides opportunities for the Board, Executive Leadership Team and senior management to challenge the forecasts, to ensure that they reflect efficient and prudent expenditure;
- Our project assessment considers alternative options, including opportunities for operating expenditure substitution;
- A number of projects, totalling approximately $60 million, have been excluded from our proposed capital expenditure allowance, ensuring that customers only pay for projects that have sufficient certainty around scope and costs at this stage. Projects we have excluded are:
    - Renewable energy projects ($13.8 million);
    - Infrastructure for new major growth areas in the north and west of Geelong ($20 million);
    - Transition to digital water meters ($20 million);
    - Wastewater management in Forrest township ($5 million);
    - Out of sequence development infrastructure - Barwon Water's assets ($5 million);
- Our forecast capital expenditure includes minimal contingencies and reflects P50 cost estimates and no allowance has been made for any delays or cost overruns in the proposed capital projects;
- Our panel arrangements with external service providers ensures that our projects are competitively priced, and our forecasts are therefore also based on efficient costs;
- Our current unit rates were tested in the market through a competitive tender process, and therefore should be regarded as efficient;
- We have engaged consultants Inside Infrastructure and CMP to review our capital expenditure plans to ensure that only prudent and efficient expenditure is included in our forecasts for the next regulatory period;
- Our actual capital expenditure in the current period exceeded the allowance set by the ESC, which demonstrates that we do not exaggerate our capital expenditure requirements; and
- Our total gross and net capital expenditure forecasts are substantially lower than our current capital expenditure.

In view of these considerations, we believe that we have met the ESC's criteria for prudent and efficient capital expenditure.

7.4.4 Delivering customer outcomes

We have listened to our customers and tailored our capital expenditure plans to meet the five outcomes we have agreed to deliver. Table 31 below summarises briefly the link between these outcomes and our expenditure plans over the next regulatory period. We have also undertaken a retrospective assessment of our capital expenditure in the current regulatory period against the five outcomes we have agreed to deliver in the next regulatory period, for comparative purposes. Figure 25 overleaf shows how our capital expenditure profile will change from the current regulatory period to the next regulatory period, in line with what our customers have asked for. Figure 26 overleaf shows our capital expenditure on key actions we will undertake to deliver each outcome in the next regulatory period.

Table 31: Community feedback and implications for our capital expenditure plans ($2017-18)

Outcome	Implications for our capital expenditure plans
A reliable, secure water future for our region	$307.8 million of our capital expenditure relates to this outcome. It is our 'business as usual' expenditure for renewals, growth, improved service and compliance, as detailed previously. We are not proposing any additional capital expenditure to meet this outcome other than that identified through our BAU planning process. The Community Panel asked that our level of investment in the reliability of our system remain the same, and asked us to focus on a partnership (rather than infrastructure) approach to water security by helping all customers to use less water . We have reflected these recommendations in our capital expenditure plans.
Timely, innovative services for our customers	$3.7 million of our capital expenditure relates to this outcome. This expenditure relates to known projects such as the Customer Relationship Management System and business intelligence/reporting. The Community Panel asked us to encourage customer participation and interaction through digital channels, without increasing bills. For this reason, we are only proposing a modest amount of capital expenditure in relation to this outcome.
A healthier environment for all	$15.4 million of our capital expenditure forecast relates to this outcome. The Community Panel supports our target of zero net emissions and the expenditure required to achieve this. We will therefore make new investments in renewable energy projects to generate immediate and longer term savings as grid electricity prices rise and regulation of emissions increases, and reduce the net price impact to customers as the operational savings accumulate. We have also had careful regard to the electricity purchase savings each project will achieve, and we have factored these savings into our operating expenditure efficiency forecasts. Our investments will also help meet our compliance targets that will be included in our Statement of Obligations.

Outcome	Implications for our capital expenditure plans
Deeper knowledge and partnerships with our community	$1.7 million of our capital expenditure relates to this outcome. The Aqueduct Park project will create a new 66 hectare community park on the Barwon River around the heritage listed Barwon River Ovoid Sewer Aqueduct. This project will provide recreational, heritage and other social benefits for our community. The Community Panel initially asked us to maintain the same level of expenditure on providing recreational opportunities, but agreed with our proposed expenditure in light of strong community support. A survey of over 400 interested community members in March 2017 demonstrated strong support for the proposed park.
Affordability for all our customers	Our approach to capital expenditure forecasting is focused on delivering the outcomes that customers want at the minimum efficient cost, because our Community Panel highlighted the importance of keeping our services affordable. With this objective in mind, we have a rigorous planning and forecasting process that produces forecasts based on probability based P50 estimates for all major projects and programs, with no contingency allowances. For smaller projects and programs where probability based cost estimates have not been undertaken, minimal contingency allowances have been included in estimates to ensure that estimates are consistent with what would be expected for a P50 estimate. Our contract panel arrangements ensure that competitive pressures drive our costs down, and that our unit rates are market tested. We have also excluded projects from our proposed capital expenditure allowance that may not proceed in the next regulatory period, so that customers only finance those projects that are certain to proceed. In total, we estimate that exclusion of these projects has reduced our capital expenditure forecast by approximately $60 million.

Figure 25: Capital expenditure to deliver outcomes ($2017-18)

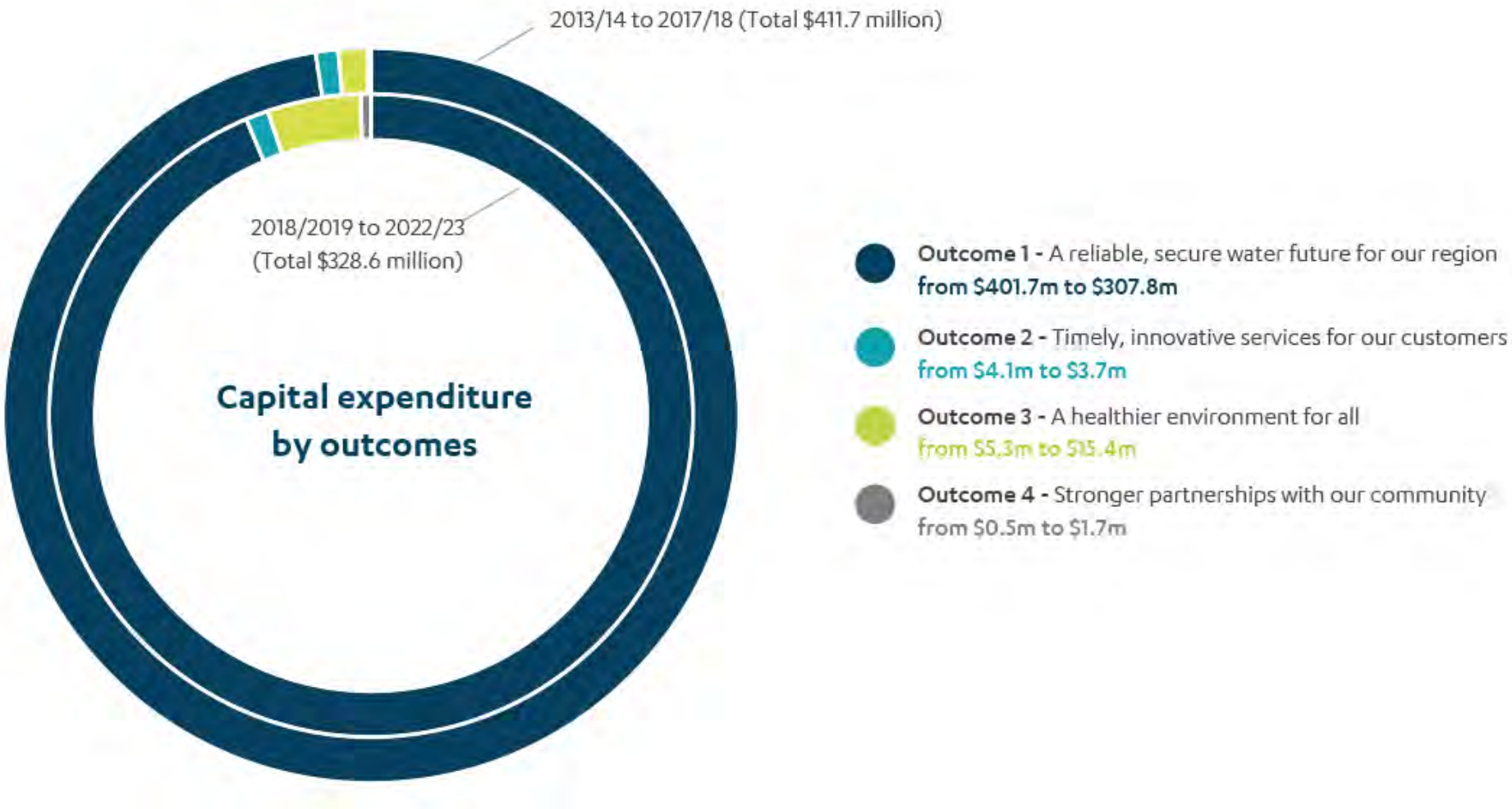
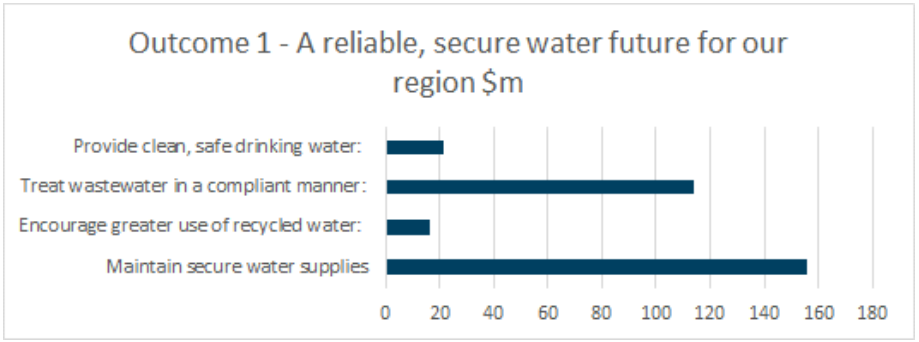
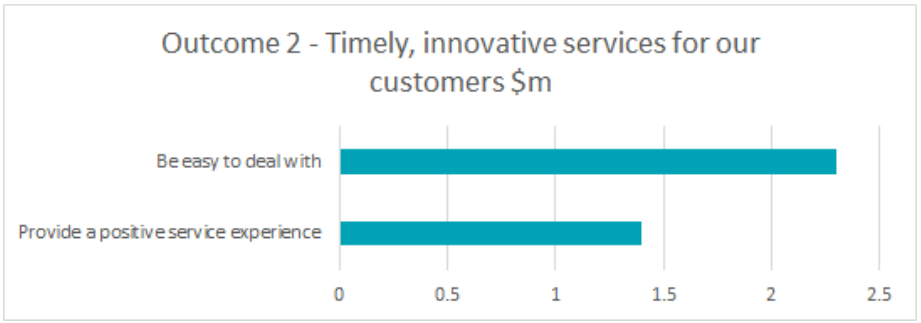
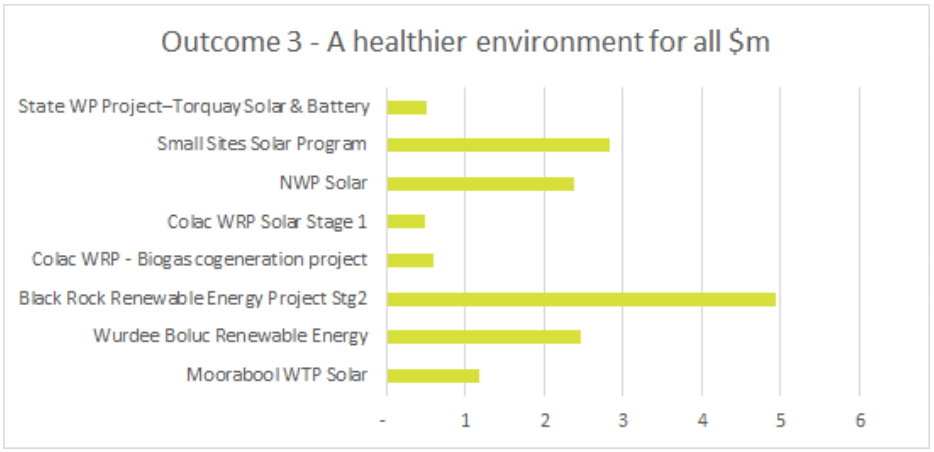


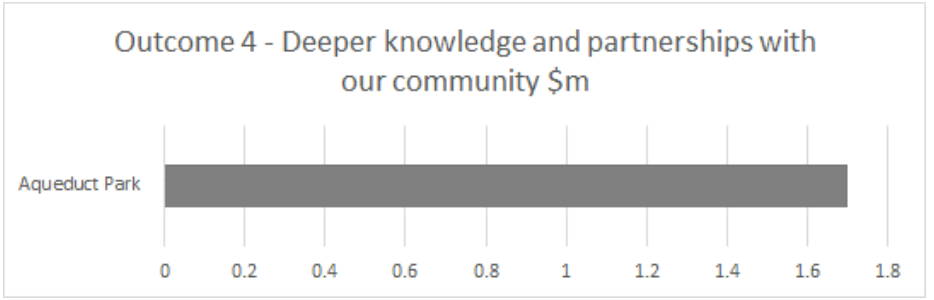
Figure 26: Capital expenditure per outcome ($2017-18)







All of our Outcome 3 capital expenditure is under the action "Reduce our emissions"



All of our Outcome 4 capital expenditure is under the action "Build two-way community relationships"

7.4.5 Further information

Detailed information and evidence to substantiate these matters are provided in Supporting Paper 5 (Capital Expenditure). This Supporting Paper also contains the detailed information requirements specified in the ESC's Guidance Paper and the attestation provided by the relevant General Manager.

7.5 Building block revenue requirement

7.5.1 Forecast regulatory asset base and depreciation

Forecast RAB

Table 32 overleaf sets out the forecast regulatory asset base (RAB) and depreciation for the period to 2027-28. It has been prepared in accordance with the ESC's Guidance Paper, and the supporting information is provided in the completed ESC financial templates, which form part of our submission.

We propose to capitalise a portion of the Melbourne headworks charge that would otherwise apply in the next regulatory period. This charge relates to the 16,000 ML bulk entitlement we hold to water from the Yarra-Thomson catchment, which can be transferred to our service region via the Melbourne to Geelong pipeline. We do not propose to transfer any of this bulk water over the next regulatory period, therefore we propose to capitalise a portion of the associated headworks charge to ensure customers of today are not paying the full costs associated with this asset. Instead, we propose to profile the ongoing fixed costs associated with this asset to align with customer usage patterns, so that the costs associated with the asset are paid by customers when they receive the benefit of the asset. This measure, together with prepaying $21.65 million headworks charges in the current regulatory period, mean that average residential customer bills are $51 per annum lower than would otherwise be the case (see Section 7.6).

The capitalisation of a portion of the headworks charge means that it is included in the regulatory asset base. The capitalised value will be reduced over time as these costs are recovered in subsequent regulatory periods. To give effect to this approach, we have included the capitalised headworks charges as a 'negative disposal' and reflected this amount in the 'disposals' line item in Table 32.

Depreciation

We have adopted a straight-line approach to depreciation, which is the ESC's preferred methodology. Our proposed regulatory depreciation allowance for existing assets has been calculated in accordance with the ESC's Guidance Paper and reflects our approved RAB, 'rolled forward' to include net capital additions in accordance with the ESC's model. Our remaining asset lives for some asset classes have been increased to reflect the latest available information, which has the effect of reducing our annual regulatory depreciation. A detailed breakdown of our depreciation calculation is provided in the financial template.

We also propose to adjust our depreciation allowance to reflect the actual utilisation of key infrastructure, based on capacity utilised over the period and frequency of operation. This approach means that customers pay lower total costs for infrastructure that is not yet fully utilised, thereby providing appropriate price signals and cost recovery profile. The effect of this asset utilisation adjustment is to reduce our average annual depreciation allowance by 12.5% or $5.4 million per annum. As a result of this adjustment, average residential customer bills are $35 per annum lower than would otherwise be the case (see Section 7.6). Further information on our depreciation allowance is set out in the financial template as required and additional information can be made available to the ESC on request.

Table 32: Forecast RAB and depreciation ($M, 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Opening RAB	1,338.24	1,312.94	1,321.24	1,342.30	1,356.20	1,360.88	1,370.96	1,422.05	1,448.69	1,463.87	1,456.84
plus Gross capex	50.63	86.04	79.07	57.57	50.42	55.53	103.25	79.11	69.45	48.74	79.64
less Govt contributions	-	-	-	-	-	-	-	-	-	-	-
less customer contributions	12.25	6.31	6.56	6.66	6.62	6.77	6.77	6.77	6.77	6.77	6.77
less disposals	28.58	33.76	11.18	(5.49)	(5.12)	(5.13)	0.38	0.37	0.36	0.35	0.34
less depreciation	35.09	37.68	40.27	42.51	44.24	43.80	45.01	45.33	47.14	48.66	50.10
Closing RAB	1,312.94	1,321.24	1,342.30	1,356.20	1,360.88	1,370.96	1,422.05	1,448.69	1,463.87	1,456.84	1,479.26

Capital contribution forecasts

Table 33 below explains the basis of our forecasts of government and customer contributions, and gifted assets.

Table 33: Basis of capital contributions and gifted assets forecasts

Contribution type	Basis of forecast
Government contributions	As shown in the Table 32 above, we are not forecasting any Government contributions in the next regulatory period
Customer contributions	Our forecast customer contributions are based on our projected growth in new customers and the application of our new customer connections (NCC) charges, which are set in accordance with the ESC's guidelines. As explained in section 6.8, we propose to apply lower NCC charges for 'Infill' developments versus 'Greenfield' developments.
Gifted assets	Our forecasts are consistent with historic data, where gifted assets primarily arise in relation to sewer connections.

Table 34 overleaf sets out our forecast level of gifted assets over the regulatory period.

Table 34: Forecast gifted assets ($M, 2017-18)

2018-19	2019-20	2020-21	2021-22	2022-23
16.38	17.27	17.87	18.23	18.97

7.5.2 Rate of return and tax

Rate of return

Our rate of return is calculated in accordance with the requirements of section 3.9 of the Guidance Paper, which explains the:

- Return on equity reflected in prices will be established via the PREMO rating process.
- Benchmark cost of debt is determined based on a trailing average approach.
- Regulatory rate of return reflects a benchmark gearing level of 60:40 debt to equity.

In accordance with section 3.9.4 of the Guidance Paper, we have applied a return on equity of 4.9% real, which reflects our self-assessed PREMO rating of 'Advanced'.

Our cost of debt allowance for the next regulatory period has been determined in accordance with section 3.9.3 of the Guidance Paper and is set out in Table 35 below, resulting in a 10 year trailing cost of debt of 6.04%. It is noted that:

- The cost of debt for 2016-17 and 2017-18 will be updated to reflect annual averages based on actual data, prior to the ESC's final decision.
- During the next regulatory period, the cost of debt (and our price cap) will be updated annually, using the adjustment mechanism set out in section 3.4 of Supporting Paper 7 - Form of price control and price adjustments.

Table 35: Cost of debt (Nominal)

2018-19	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Cost of debt	6.92%	7.36%	7.05%	6.31%	5.27%	7.05%	5.36%	5.27%	4.91%	4.91%

Tax

Our proposed total tax allowance for the next regulatory period is $0. Table 36 below shows our proposed tax allowance for each year of the next regulatory period, along with an estimate for each year after the next regulatory period up until 2027-28.

Table 36: Tax allowance ($M, 2017-18)

2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.86	8.52

Our tax allowance for the next regulatory period has been calculated in accordance with the criteria and the calculation methodology set out in the ESC's Guidance Paper. Our tax allowance forecasts assume that the corporate tax rate remains at 30% for the duration of the next regulatory period.

Section 3.10.3 of the ESC's Guidance Paper requires us to provide the latest corporate forecasts for annual tax payments for the next regulatory period. Table 37 below shows we are not forecasting any tax payments in the next regulatory period.

Table 37: Corporate forecasts for annual tax payments ($M, 2017-18)

2018-19	2019-20	2020-21	2021-22	2022-23
$0	$0	$0	$0	$0

Information on the basis for these forecasts can be provided to the ESC on request.

7.5.3 Revenue requirement

Table 38 below sets out our forecast annual revenue requirement for the period to 2027-28.

Table 38: Building block revenue requirement ($M, 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Operating expenditure		100.08	99.04	98.93	99.24	98.51	104.03	104.03	104.03	104.03	104.03
Return on assets		55.32	55.93	56.67	57.06	57.37	58.65	60.29	61.16	61.33	61.66
Regulatory depreciation of assets		37.68	40.27	42.51	44.24	43.80	45.01	45.33	47.14	48.66	50.10
Adjustments from last period		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-prescribed revenue offsets of revenue requirement		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tax liability		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.86	8.52
Total revenue	**197.22**	**193.08**	**195.24**	**198.11**	**200.54**	**199.68**	**207.69**	**209.64**	**212.34**	**217.88**	**224.31**

A combination of operating efficiencies and an efficient capital program contribute to a revenue requirement which increases by an average of only 0.3% per annum over the next regulatory period. This revenue requirement means that we will keep average residential customer bills flat in 2018-19, as a result of an average price decrease of 7.4% for residential owner-occupiers in 2018-19, followed by modest increases of 0.9% per annum for the remainder of the next regulatory period.

7.5.4 Financial position

The financial model has been populated in accordance with the ESC's Guidance Paper. As noted in the Guidance Paper, the model calculates four financial indicators for each year to 2027-28, which enables the ESC to assess our financial position in the context of our proposed price submission. As per the template, all four indicators over the 2018 Price Submission period are within acceptable financial limits. The Guidance Paper also requires us to provide the findings of any independent ratings assessments conducted by an independent credit ratings agency since 1 July 2013. Barwon Water is currently undertaking an independent rating assessment, which should be completed in October 2017. We will provide the ESC with the findings of the ratings agency when the assessment is complete.

7.6 Risk management

We have utilised AS/NZS ISO 31000 Risk Management – principles and guidelines and the Victorian Government Risk Management Framework as the basis for developing our risk management framework. Under the our framework, risks are managed operationally as dynamic, tactical risks impacting individual activities and projects. Risks are also managed holistically, through the identification of Key Business Risks. Risks relating to the price submission were considered under Key Business Risk 5: Financial Sustainability. Key Business Risks are identified and managed at the executive level and overseen by the Board Risk Management Sub-committee. Tactical risks are managed at the project and senior management level with oversight from the Executive Leadership Team.

In preparing this submission, in addition to identifying and managing risk, we have taken steps to ensure that we are sharing risk appropriately with our customers. We recognise that total costs are minimised if risk is allocated to the party best able to manage it. For example, through our education and water conservation programs, customers can make an important contribution to managing the risk to security of supply by taking measures to improve water efficiency. Our tariff changes are designed to further encourage positive changes in this regard, and are strongly supported by our community.

In many other respects, however, we think it's fairer and more efficient for us to take on more risk, particularly with a focus on ensuring that our submission is our 'best offer'. In this regard, as already noted in earlier sections of this submission, we have taken the following initiatives to shield customers from risk:

- Exclusion of $60 million of capital projects that are uncertain to proceed;
- Minimal contingencies and P50 cost estimates in our capital expenditure forecasts;
- Operating expenditure forecasts that include more than $19 million of (as yet) unidentified additional savings;
- Depreciation adjustments to better reflect asset utilisation;
- A form of control that protects customers from the downside risk of lower than expected demand, but passes on the upside if demand is higher than expected;
- A performance incentive scheme that ensures customers only pay for an 'Advanced' PREMO service if we deliver on our promises; and
- No new price adjustments for unforeseen events or risks (apart from those already provided for in our current determination).

These initiatives ensure that risk is allocated to the party best able to manage it, and ensures that our submission represents our 'best offer'. Figure 27 overleaf shows the net benefit of these initiatives on average residential owner-occupier bills in 2018/19.

Figure 27: Impact of initiatives in our submission on average residential owner-occupier bills in 2018/19 ($2017-18)

8. Setting fair and equitable prices (M&R)

- We will maintain the effect of the Government rebate on previous bills that we funded over the current regulatory period. We will fairly share the benefits of the recurrent and sustainable cost savings we made to fund this rebate, together with the additional operating savings we are targeting over the next regulatory period, across all customers through lower water charges.
- Residential prices will decrease by an average of 3.9% over the five year price period and non-residential prices will remain the same (in real terms).
- Average residential owner-occupier bills in 2017-18 will be lower than 2016-17 and $154 less than they were in 2013-14 (in real terms).
- Average residential owner-occupier bills in 2018-19 will be the same as in 2017-18 (in real terms), the last year of the Government rebate on previous bills. Average residential owner-occupier bills will then gradually rise by 0.9% in real terms or an average of $9 per year, or by a total of $37 by 2022/23.
- We will provide a Transitional Rebate Adjustment so that average residential tenant bills in 2018-19 will also be the same as in 2017-18 (in real terms), as is the case for average residential owner-occupiers. Average residential tenant bills will then also rise by a total of $37 by 2022/23, as is the case for average residential owner-occupiers.
- We will maintain our current water and sewerage tariff structures over the next regulatory period.
- We will change the mix of fixed and volume based tariffs for residential water services to give customers greater control over bills, in line with preferences of our customers.
- We are incentivising the use of recycled water in line with preferences of our customers. We will discount the price for Class A recycled water relative to potable water and offer a 'take or pay' price for Class C recycled water to encourage increased take up.
- We are proposing some changes to our New Customer Contributions (NCCs) to reflect our latest capital expenditure forecasts, and to introduce separate NCCs for greenfield and infill developments. This initiative will deliver better outcomes for our customers by providing lower prices for infill developments.

8.1 Our objective of fair and equitable prices

We are committed to delivering fair and equitable prices for all of our customers, because we believe this is the right thing to do. Our customers believe this, too.

One of the five outcomes that our customers asked us to deliver was affordability of services. Our Community Panel explained this outcome as "implement a fair and equitable pricing structure that takes into account different circumstances, i.e. smaller households, lower socio-economic groups, future developments that Barwon Water is undertaking within the region and the needs of commercial customers"[32]. Our Community Panel also made specific recommendations about increasing the water volume charge and decreasing the water service (fixed) charge accordingly for residential customers.

In line with what our customers have asked for, our approach to delivering our outcome of affordability for all customers is threefold. We will:

- Implement a pricing structure under which all customers pay the same $/kL price for water by 2022/23;
- Give residential customers greater control over their bills, by changing the proportion of fixed and variable water charges on residential bills; and
- Fairly implement these changes by actively managing bill impacts for tenants and vulnerable customers.

These three elements to our approach are explained further in the remainder of this section.

8.1.1 Implementing same $/kL price for water

Under our 2017/18 tariff schedule, both residential and non-residential customers currently pay $2.2591 per kilolitre of water used.

Over the past four years, we have also funded a Government rebate to our residential customers. Going forward, we will maintain the recurrent and sustainable cost savings we made to fund the Government rebate on previous bills plus target additional operating savings from further business efficiencies (see Section 7.3).

However, we will pass these cost savings on to customers in the form of lower water charges, rather than a rebate on all residential bills. We are making this change because, going forward, we want to fairly share the benefit of the cost savings we make across all customers. We also want a fair and equitable pricing structure, where everyone effectively pays the same price for water regardless of whether they are an owner-occupier, tenant, business, commercial or industrial customer.

The Government rebate on previous bills was given to residential customers who paid the water volume charge, and was provided on their first quarterly bill of the financial year. The Government rebate on previous bills delivered a reduction of:

- $50 in 2014-15
- $80 in 2015-16
- $90 in 2016-17
- $80 in 2017-18 (the final year of the current regulatory period).

[32] Community Panel 2017, Barwon Water Price Submission, Community Panel Report, 5 August, pg 4.

From 2018-19 onwards, we will share the benefit of the cost savings we make across all residential customers by reducing both the water volume and water service charges. In 2018-19, these charges will reduce by 16.6% and 11.6% respectively, so that average residential owner-occupier bills in 2018-19 will remain the same as in 2017-18 (in real terms). To help smooth the transition for residential customers, the Government rebate is $80 in 2017-18, rather than the $100 that was planned originally. This means that (in real terms) average residential owner-occupier bills do not change from the last year of the current regulatory period to the first year of the next, rather than increasing by $20 as would have been the case with a $100 rebate.

Non-residential customers will also benefit because there will be no change to their water volume and water service charges over the next five years, whereas water volume charges for residential customers will gradually rise from 2019-20 onwards (in real terms).

By 2022-23, both non-residential and residential customers will again pay $2.2591 per kilolitre of water used, as in 2017-18 (in real terms).

Our approach to absorbing the Government rebate on previous bills into lower water charges means:

- Changes will be introduced gradually, to give residential customers time to adjust to differences in their bills and to identify opportunities to reduce their future bills by partnering with us to save water in the home; and
- In five years' time, homes and business will again pay the same water volume charge as we fairly share the benefits of the cost savings we make.

8.1.2 Changing the proportion of fixed and variable water charges on residential bills

Again and again, across all phases of our engagement, residential customers told us they wanted to pay less in fixed charges and more in variable charges. For example:

- There was a strong sense amongst residential customers spoken to during the Test Phase in June 2016 that current tariffs offered little incentive to save water, and should be more "user pays"[33];
- 74% of residential customers surveyed during the Main Phase over November to December 2016 supported increasing the variable portion and reducing the fixed portion of the bill[34];
- Our Community Panel recommended in March 2017 that we increase the water volume charge by 10% above 2017-18 levels and decrease the water service charge accordingly, with an understanding that this would increase bills for average larger households[35].

In response to this feedback, we carefully considered how we might change the proportion of fixed and variable water charges on residential bills. We wanted to strike the right balance between giving customers greater control over their bills and avoiding adverse impacts on certain customer groups, particularly tenants. As discussed above, creating a smooth transition from the Government rebate on previous bills to lower residential water charges was also important.

[33] Newgate Australia 2016, *Barwon Water 2018 Price Submission, Customer and Stakeholder Engagement Plan*, August, pp 37-39.

[34] EY Sweeney 2017, *Community consultation report, Quantitative and qualitative report*, January, pg 67.
[35] Community Panel 2017, *Barwon Water Price Submission, Community Panel Report*, 4 March, pg 11.

The preferences of our customers were central to our decisions about changing the proportion of fixed and variable water charges on residential bills. Our Community Panel initially recommended in March 2017 that we increase the water volume charge by 10% above 2017-18 levels and decrease the water service charge accordingly, as noted above. However, as we worked through the implications of this recommendation, we realised there would also be significant impacts on tenants who only pay the water volume charge. These impacts were exacerbated for low water-using tenants by the transition from a Government rebate of $80 in 2017-18 (regardless of water usage) to lower water volume and water service charges from 2018-19 onwards.

We convened a special workshop with members of our Customer and Environmental Consultative Committees in May 2017 to seek feedback on how we should equitably and fairly manage changes in our residential water charges. Together, we worked through the potential impacts of different options on different customer groups. Workshop participants strongly supported our proposal to change the proportion of fixed and variable water charges on residential bills but were concerned about potential impacts on tenants and financially vulnerable customers[36]. They supported a gradual approach to introducing changes, coupled with more financial assistance to support vulnerable customers, in order to help lessen bill shock and allow customers time to adjust. They also raised new ideas about how to implement the changes, for example, by providing a "small lump sum off customer bills each quarter … [which] would mean that customers still have $ incentive for behavioural change of using less water but the effect of the fixed rebate could be phased out over time"[37].

In response to this feedback, we designed the following proposed approach to changing the proportion of fixed and variable water charges on residential bills:

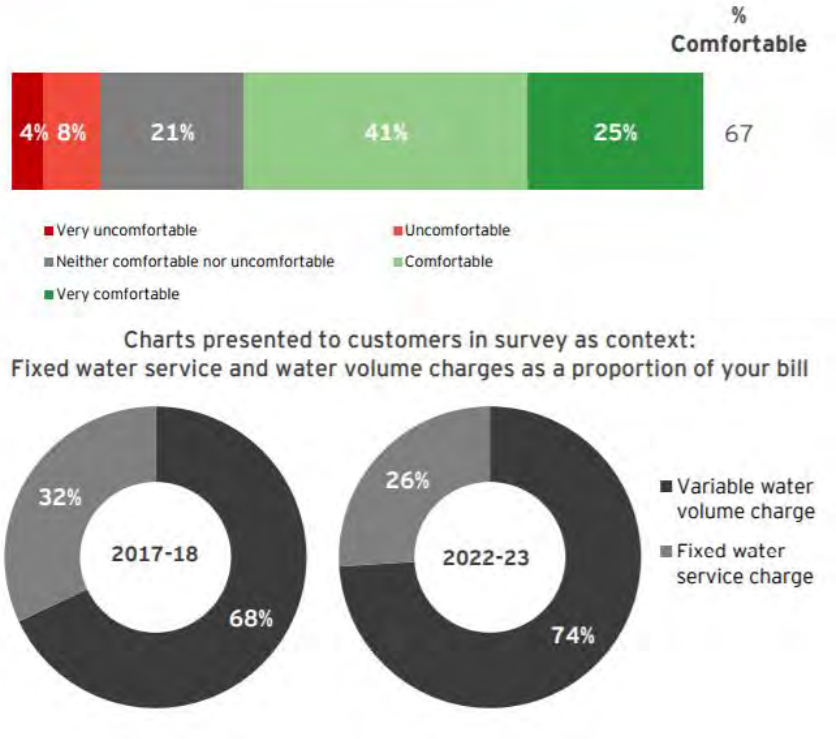
- Reduce the water volume charge by 16.6% in 2018-19, and then gradually increase it over the following four years until it returns to the same level as in 2017-18 (in real terms);
- Reduce the water service charge by 25% (in real terms) over the five years;
- Maintain the sewerage service charge at the same level (in real terms) over the five years; and
- Introduce a one-year Transitional Rebate Adjustment of $20 for tenants who use up to 200 kL of water in 2018-19 (i.e. $5 credit on quarterly bills if usage is less than 50 kL in that quarter), to help offset bill increases facing low water-using tenants as we move from current lump sum rebate arrangements to our proposed new pricing structure.

We tested our proposed approach as part of our Draft Submission phase of engagement (see Section 5.2). The quantitative research we undertook in July 2017 showed that residential customers were comfortable with our proposal to change the proportion of fixed and variable water charges on residential bills, so that they have more control over their bills. 67% of residential customers surveyed were comfortable with the proposed changes, with only 12% uncomfortable, as shown in Figure 28. In light of these findings, the Community Panel supported our proposed approach when they reconvened in August 2017, noting that "the Barwon Water proposal is equitable for residential customers"[38].

[36] Mosaic Lab 2017, *Barwon Water ECC/CCC Joint Meeting, Workshop Notes*, 17 May.
[37] Mosaic Lab 2017, *Barwon Water ECC/CCC Joint Meeting, Workshop Notes*, 17 May, pg 17.
[38] Community Panel 2017, Barwon Water Price Submission, Community Panel Report, 5 August, pg 20.

On this basis, we propose to adjust residential water volume and service charges in the same way as we publicly tested in July 2017. However, to fairly implement these changes, we propose to do more to manage irregular bill impacts for tenants than we proposed in July 2017 (see Section 8.1.3).

Figure 28: Levels of comfort with proposed changes to fixed and variable charges[39]



8.1.3 Managing bill impacts for tenants and vulnerable customers

Findings from our Draft Submission phase of engagement in July 2017 showed there were high levels of comfort with our proposal to change the proportion of fixed and variable charges on residential bills, but that to fairly implement these changes, we need to actively manage bill impacts for tenants and vulnerable customers. By doing so, we will deliver our outcome of affordability for all customers.

Irregular bill impacts for tenants

About 25,385 (or 18%) of our residential customers are tenants. Changing the proportion of fixed and variable water charges on residential bills creates irregular bill impacts for tenants, who only pay the water volume charge.

Under our original proposal, publicly tested in July 2017, tenant bills would have increased more than owner-occupier bills in both real and proportionate terms, despite the proposed one-year Transitional Rebate Adjustment for some tenants. For example, by 2022-23, all tenants would have had a $80 increase in bills (in real terms) as the water volume charge would return to the same level as in 2017-18, but without provision of the $80 Government rebate as in 2017-18. In comparison, average owner-occupiers would have had a $37 increase in bills (in real terms).

The quantitative research we undertook in July 2017 showed that tenants were far less comfortable about proposed bill impacts than owner-occupiers as a result, as shown in Figure 29 and Figure 30 overleaf.

Specifically, it was evident that comfort across all tenants drops significantly when considering bill impacts from 2019-20 onwards (35% comfortable) compared to bill

[39] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August, pg 20.

impacts in 2018-19 (63% comfortable). This is because the reduction in water volume charges in 2018-19, coupled with our proposed one-year Transitional Rebate Adjustment for some tenants, meant that average and large water using tenants would see their bills stay the same or decrease in 2018-19, but increase significantly thereafter (in real terms). Support for our proposed one-year Transitional Rebate Adjustment was also evident by high levels of comfort about proposed bill impacts in 2018-19 amongst average tenants (85% comfortable) for whom this adjustment had the greatest impact on bills.

In light of these findings, we will extend our Transitional Rebate Adjustment, beyond what was proposed in the Draft Submission phase of engagement in July 2017, so that:

- It is available to all tenants, rather than just tenants who use less than 200kL each year; and
- It helps to mitigate bill shock over all five years of the next regulatory period, rather than in just 2018-19.

The Transitional Rebate Adjustment will increase each year in order to help offset corresponding increases to the water volume charge for residential customers. The Transitional Rebate Adjustment will be set at:

- $20 in 2018-19;
- $32 in 2019-20;
- $36 in 2020-21;
- $40 in 2021-22; and
- $43 in 2022-23.

Extending our proposed Transitional Rebate Adjustment in this way means that bills for a tenant who uses 160 kL of water each year will change by the same amount as bills for an owner-occupier who uses this same amount of water. In other words:

- In 2018-19, average residential tenant and owner-occupier bills will both remain the same as in 2017-18 (in real terms);
- By 2022-23, average residential tenant and owner-occupier bills will both increase by $37 (in real terms).

We believe that this approach is the best way to transition from the current lump sum rebate arrangements in a fair and equitable manner. It allows us to smooth the transition to our proposed new pricing structure, under which residential customers will have greater control over their bills, without creating adverse impacts on tenants compared to owner-occupiers. It also leaves us well-placed to resolve any last remaining bill irregularities over the following regulatory period, from 2023-24 onwards, by significantly reducing the number of residential customers who receive a lump sum rebate and halving the dollar amount of the rebate given by 2022-23. We commit to examining and resolving any such bill irregularities, whilst further working towards our objective of fair and equitable prices, as part of our submission at that time.

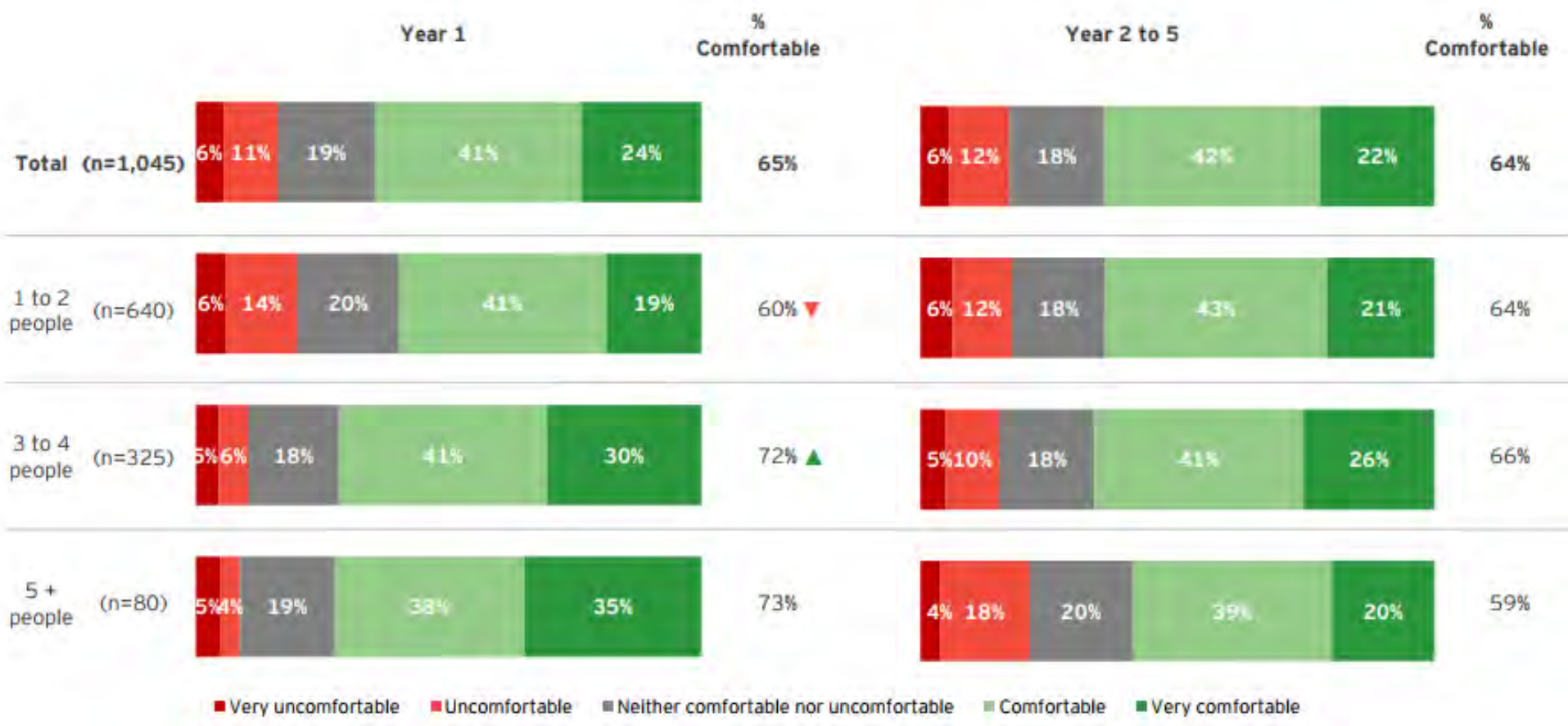
Table 39 overleaf shows the impact of our approach to addressing irregular bill impacts for tenants through an extended Transitional Rebate Adjustment as reflected in this final submission, compared to our draft proposal in July 2017. We have reflected the Transitional Rebate Adjustment in the financial template as a continuation of the 'tariff revenue efficiency rebate' on the Revenue Tariff Basket sheet.

Table 39: Impact of our residential tariff adjustments on different customers ($ 2017-18)

	Owners (average)	Owners (large)	Tenants (average)*	Tenants (large)*
Submission, September 2017:				
Year 1 (2018/19)	No change	↓ $56 (-4%)	No change	↓ $56 (-9%)
Year 5 (2022/23)	↑ $37 (4%)	↑ $37 (3%)	↑ $37 (13%)	↑ $37 (6%)
Proposal, July 2017:				
Year 1 (2018/19)	No change	↓ $56 (-4%)	No change	↓ $36 (-6%)
Year 5 (2022/23)	↑ $37 (4%)	↑ $37 (3%)	↑ $80 (28%)	↑ $80 (13%)

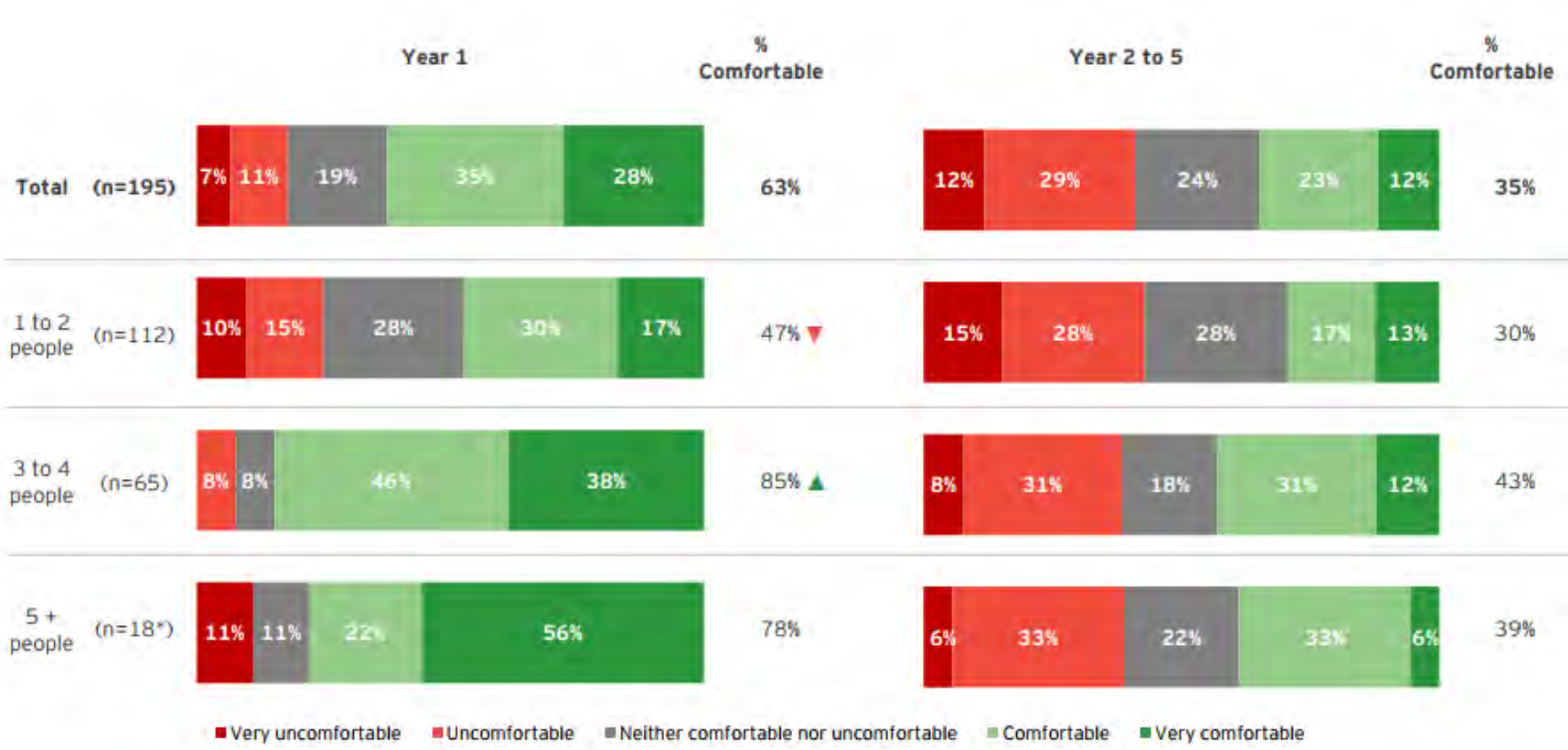
**Includes effect of Transitional Rebate Adjustment*

Figure 29: Levels of comfort with proposed bills – residential owner-occupiers[40]



[40] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August, pg 18.

Figure 30: Levels of comfort with proposed bills – residential tenants[41]



[41] EY Sweeney 2017, *Barwon Water, Proposed prices and services research*, 4 August, pg 21

Vulnerable customers

We acknowledge that, under our proposed new pricing structure, different residential customer groups will experience different bill impacts in 2018-19 but that all will face a $37 bill increase by 2022-23 (in real terms). We also acknowledge that everyone's circumstances are different, and that people facing financial hardship can come from a range of circumstances – whether they be home owners, tenants, large families or single person households.

We will triple our financial assistance to vulnerable customers who need it the most, over the next regulatory period. We will spend an additional $500,000 per annum on initiatives to support customers that may have difficulty paying their bills, as supported by our customers (see Section 7.3). Our support involves a number of strengthened initiatives, which include (but are not limited to):

- 'Arrange and Save' payment plans – a flexible payment plan that provides a bonus 'credit' of one instalment payment each time the customer meets their instalment arrangement for several consecutive periods;
- Hardship water savings assistance program;
- Centrepay or direct debit payment options;
- Referral to a local financial counselling organisation for further advice and support;
- Extension of bill due dates and payment plans; and
- Utility Relief Grants – assistance in applying for this government-funded grant.

About 41,000 (or 29%) of our customers are also concession card holders, who will also continue to receive additional assistance of up to $305 per annum from the Victorian Government ($ 2017-18).

We will also partner with all residential customers to help them save water, and thereby reduce their bills, over the next regulatory period. We will spend an additional $500,000 per annum on an expanded water efficiency program, as supported by our customers (see Section 7.3). Under our new proposed pricing structure, any residential water user able to reduce their annual water usage by 16.5 kL by 2022-23 will not see any increase in their bills (in real terms), as shown in Table 40. This equates to a 10% reduction in water usage for an average household. As part of our expanded water efficiency program, we will provide residential customers with the skills, knowledge and support to help them to achieve this saving.

Table 40: Residential customer water usage per annum for no annual bill movement (kL)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	Reduction in water usage	
							kL	%
Owner-occupier	160.0	160.0	155.4	151.0	147.0	143.5	-16.5	-10.3%
	110.0	100.0	98.1	96.2	94.6	93.5	-16.5	-15.0%
	308.0	337.5	325.0	313.0	301.8	291.5	-16.5	-5.4%
Tenant	160.0	160.0	159.0	153.9	148.9	143.5	-16.5	-10.3%
	110.0	100.1	101.8	99.2	96.6	93.5	-16.5	-15.0%
	308.0	337.5	328.6	316.0	303.8	291.5	-16.5	-5.4%

8.2 Water, sewerage and Class A recycled water

8.2.1 Tariff structures

For the next regulatory period, we will maintain our current water and sewerage tariff structures. Residential customers will continue to be charged via a two-part water tariff (a fixed charge and a volumetric component) and one-part sewerage tariff (a fixed charge). Non-residential customers will continue to be charged via a two-part water tariff (a fixed charge and a volumetric component) and two-part sewerage tariff (a fixed charge and a volumetric component, based on a percentage of the amount of water used).

However, over the next five years, we will make some adjustments to our water, sewerage and Class A recycled water tariffs:

- We will reduce our fixed water service charge and increase our water volume charge accordingly for residential customers because, as discussed above, our residential customers asked us to reduce fixed charges and give them greater control over their bills;
- Our residential sewerage charge will remain the same as in the current regulatory period because customers told us they were happy with that approach; and
- Our Class A recycled water charge will be set at 70% of the water volume charge because customers asked us to make recycled water even cheaper for those who have access to it, so that we can further encourage its use.

Our non-residential tariff structures will remain the same as in the current regulatory period because business customers told us it was important that the cost of our services remain stable.

8.2.2 Tariff and bills for residential customers

Table 41 below shows our proposed prices for residential owner occupiers for the next regulatory period. For comparative purposes, our prices for the last year of the current period (2017-18) are also shown.

Table 41: Residential water and sewerage tariffs ($ 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water volume (per kilolitre)	**$2.2591**	**$1.8840**	**$1.9715**	**$2.0630**	**$2.1588**	**$2.2591**
Change from previous year	-	-16.6%	4.6%	4.6%	4.6%	4.6%
Water service (yearly)	**$171.70**	**$151.70**	**$146.85**	**$141.71**	**$135.90**	**$128.97**
Change from previous year	-	-11.6%	-3.2%	-3.5%	-4.1%	-5.1%
Sewerage service (yearly)	**$553.07**	**$553.07**	**$553.07**	**$553.07**	**$553.07**	**$553.07**
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%
Class A recycled water (per kilolitre)	**$1.8072**	**$1.3188**	**$1.3800**	**$1.4441**	**$1.5112**	**$1.5814**
Change from previous year	-	-27.0%	4.6%	4.6%	4.6%	4.6%

We have carefully chosen our proposed price path to avoid 'bill shock' for residential customers as we move from current lump sum rebate arrangements to our proposed new pricing structure. In particular, we propose to reduce water charges in 2018-19 to the extent necessary such that average residential bills do not increase (in real terms) from the last year of the current pricing period to the first year of the next pricing period, followed by moderate increases of 0.9% (or $9) per annum for the following four years. By introducing changes gradually, we will give residential customers time to adjust to differences in their bills and to identify opportunities to reduce their future bills by partnering with us to save water in the home.

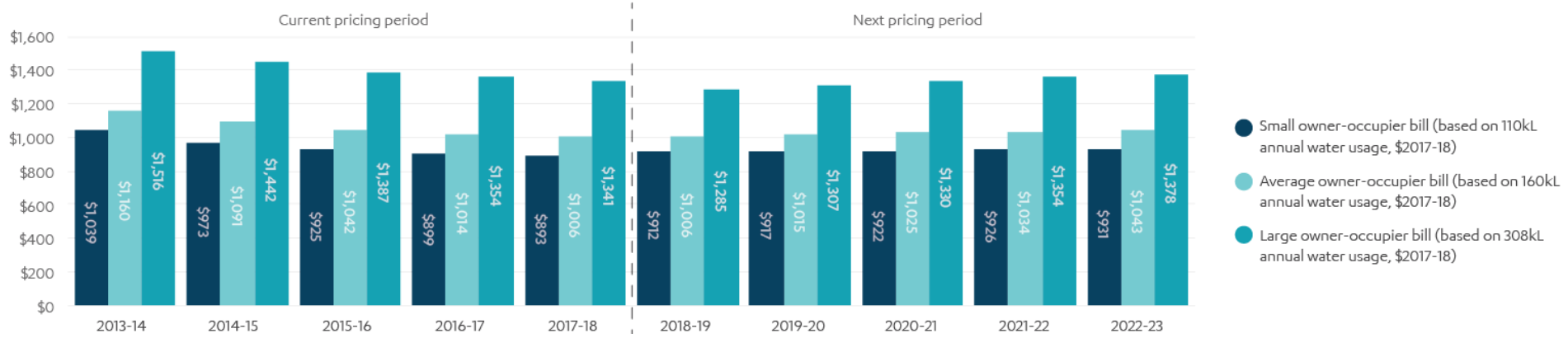
Figure 31 and Figure 32 overleaf show residential bills for small / average / large residential customers (both owner-occupiers and tenants) over the current and next regulatory period. As annual water consumption can vary from year to year for small, average and large residential customers, we have used a combination of our actual consumption data in recent years and independent studies of different sized households water usage patterns[42] to determine average annual water usage of:

- 110 kL for small households;
- 160 kL for average households; and
- 308 kL for large households.

Although not shown in the figures overleaf, landlords will see a reduction in their bills (in real terms) commensurate with the reduction in water service charges. The bill information in these figures is also included in a tabular form in Table 42 overleaf for the next regulatory period.

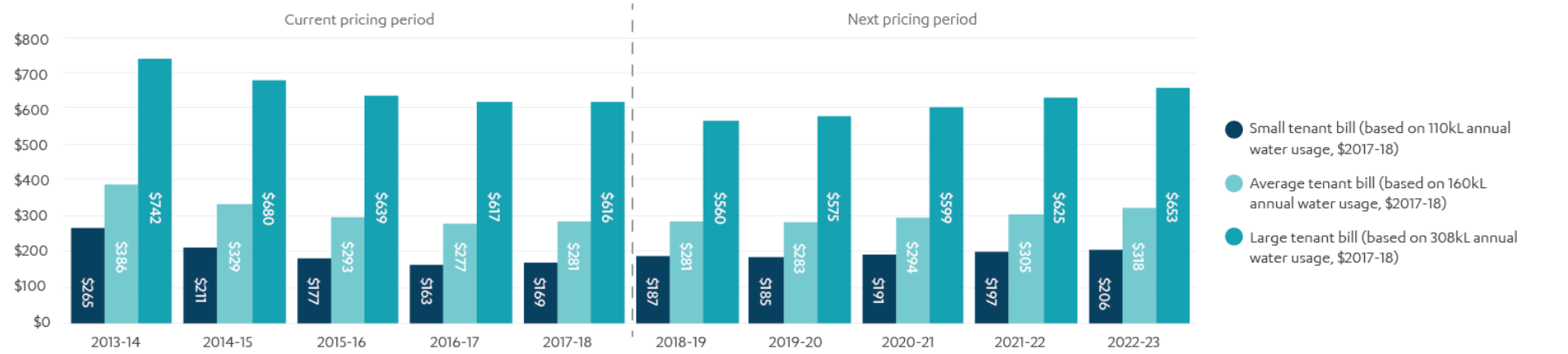
[42] https://www.yvw.com.au/yvw/groups/public/documents/ document/yvw1003346.pdf

Figure 31: Residential owner-occupier bills over current and next regulatory bill ($ 2017-18)



These amounts are rounded.

Figure 32: Residential tenant bills over current and next regulatory bill ($ 2017-18)



These amounts are rounded and include the application of the Transitional Rebate Adjustment.

Table 42: Residential bills over next regulatory period ($ 2017-18)

	Current 2017/18	Year 1 2018/19	Years 2 to 5 2019/20	2020/2021	2021/22	2022/23
Owner/Occupier						
1-2 people = 110 kL/year	$893.27	$912.01	$916.78	$921.71	$926.44	$930.54
		Bill is $18.74 more than in 2017/18	Bill increases by an average of $4.63 (or 0.5%) per year, or $37.27 by 2022/23			
2-4 people = 160 kL/year	$1,006.23	$1,006.21	$1,015.35	$1,024.86	$1,034.38	$1,043.49
		Bill is $0.02 less than in 2017/18	Bill increases by an average of $9.32 (or 0.9%) per year, or $37.26 by 2022/23			
5+ people = 308 kL/year	$1,340.57	$1,285.04	$1,307.13	$1,330.19	$1,353.84	$1,377.84
		Bill is $55.53 less than in 2017/18	Bill increases by an average of $23.20 (or 1.8%) per year, or $37.27 by 2022/23			
Tenant						
1-2 people = 110 kL/year	$168.50	$187.24	$184.86	$190.93	$197.47	$205.78
		Bill is $18.74 more than in 2017/18	Bill increases by an average of $4.64 (or 2.5%) per year, or $37.28 by 2022/23			
2-4 people = 160 kL/year	$281.46	$281.44	$283.44	$294.09	$305.42	$318.74
		Bill is $0.02 less than in 2017/18	Bill increases by an average of $9.32 (or 3.3%) per year, or $37.28 by 2022/23			
5+ people = 308 kL/year	$615.80	$560.27	$575.22	$599.42	$624.92	$653.08
		Bill is $55.53 less than in 2018/19	Bill increases by an average of $23.20 (or 4.1%) per year, or $37.28 by 2022/23			

8.2.3 Tariff and bills for non-residential customers

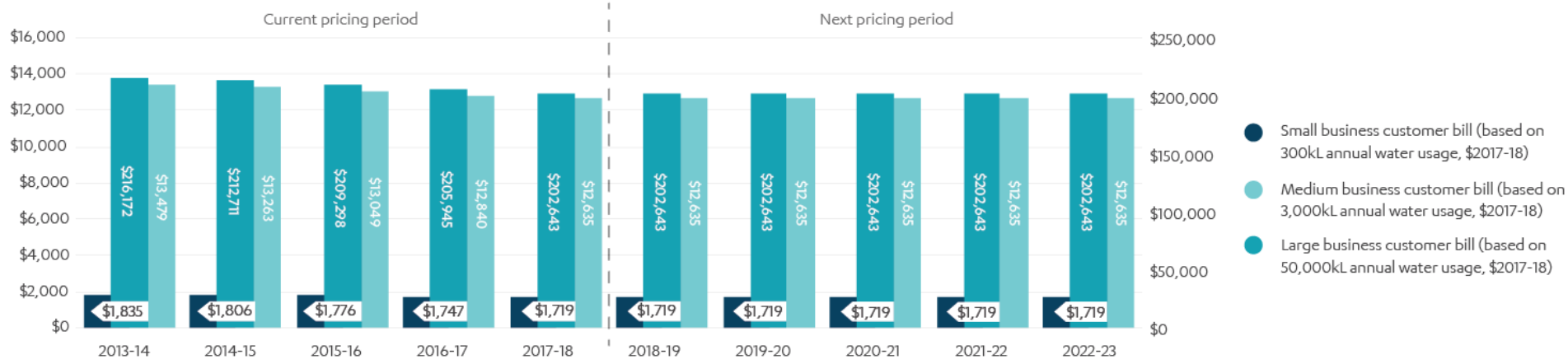
Non-residential water and sewerage tariffs will remain at their 2017-18 levels in real terms over the whole of the next regulatory period, as shown in Table 43 below. For comparative purposes, our prices for the last year of the current period (2017-18) are also shown.

Table 43: Non-residential water and sewerage tariffs ($ 2017-18)

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water volume (per kilolitre)	2.2591	2.2591	2.2591	2.2591	2.2591	2.2591
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%
Water service (yearly)	171.70	171.70	171.70	171.70	171.70	171.70
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%
Sewage volume (per kilolitre)	1.8775	1.8775	1.8775	1.8775	1.8775	1.8775
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%
Sewerage service (yearly)	334.65	334.65	334.65	334.65	334.65	334.65
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%
Class A recycled water (per kilolitre)	1.8072	1.8072	1.8072	1.8072	1.8072	1.8072
Change from previous year	-	0.0%	0.0%	0.0%	0.0%	0.0%

Figure 33 overleaf shows non-residential bills for small / medium / large non-residential customers over the current and next regulatory period.

Figure 33: Non-residential bills (small, medium, large) over current and next regulatory bill ($ 2017-18)



These amounts are rounded.

8.3 Class C recycled water

To encourage greater use of recycled water, consistent with Community Panel preference 14, we propose to encourage a greater uptake of Class C recycled water. We are undertaking several initiatives to help facilitate this goal, including:

- Proposing a take-or-pay option for Class C recycled water to promote increased usage;
- Planning to increase marketing and promotion of available Class C recycled water to help drive awareness and demand for the product; and
- Working with regional partners and industry by providing input to the G21 Region Sustainable Agribusiness Strategy and Surf Coast Shire Rural Hinterland Strategy, which are considering recycled water as an important factor to grow agriculture in the region.

We are also proposing 'gate-prices' that are on average 50% less than the current class C recycled water price based on feedback from customers.

The proposed price path for Class C recycled water, starting 1 July 2018 is provided in Table 44.

We are also proposing a $300.00 per ML 'take-or-pay' pricing option for Class C recycled water customers. This would enable customers to lock-in an annual volume of Class C recycled water at a reduced rate that would be paid regardless of whether the customer utilises their full allocation.

Customers will be able to access additional recycled water volumes above their 'take-or-pay' agreement allocation, but at the higher standard price. Availability of such additional volumes will be dependent on demand from other customers and will not be guaranteed.

This pricing option will help us to plan recycled water allocations with greater certainty and better determine volumes of recycled water available and future costs of providing that water for potential new Class C recycled water customers. The $300 per ML take-or-pay is calculated using a higher Class C recycled water uptake rate over the next regulatory period. The model assumes a growth rate of approximately 4% per annum, resulting in a total annual demand of 1,775 ML by the fifth year of the regulatory period (2022/23). This growth rate is consistent with adopting greater risk while driving greater customer value commensurate with a higher level of ambition under the PREMO pricing model. There is also strong alignment with our aspiration for 100% water recycling by 2030.

Table 44: Class C Recycled Water Tariff over 2013 and 2018 Pricing Submission periods $/ML ($2017/18)

	2017-18	Change	2018/19	2019/20	2020/21	2021/22	2022/23
Black Rock	$460.68	-15.8%	$387.89	$387.89	$387.89	$387.89	$387.89
Black Rock 'take-or-pay'*	$300.00	0.0%	$300.00	$300.00	$300.00	$300.00	$300.00
Portarlington	$460.68	-50.2%	$229.32	$229.32	$229.32	$229.32	$229.32
Winchelsea	$460.68	-50.2%	$229.32	$229.32	$229.32	$229.32	$229.32
Anglesea	$460.68	-78.9%	$97.28	$97.28	$97.28	$97.28	$97.28
Apollo Bay	$460.68	-78.9%	$97.28	$97.28	$97.28	$97.28	$97.28

**took effect in 2017/18.*

8.4 Trade waste

We propose to maintain our existing Trade Waste Quality charges in real terms over the next regulatory period, as shown in Table 45. This will enable us to recover the cost of this service, and provide certainty and stability to the large business customers who use this service. These customers told us that keeping prices certain, stable and low was important.

Table 45: Trade Waste Quality Charges to apply from 1 July 2018 until 30 June 2023 ($2017-18)

	Geelong region ($/kg)	Colac region ($/kg)
Chemical Oxygen Demand Charge greater than 1200 mg/l	0.2660	0.4621
Suspended Solids Charge greater than 500 mg/l	0.1990	0.2686
Nitrogen Charge greater than 60 mg/l	1.1611	1.3983
Sulphur Charge greater than 50 mg/l	1.2690	N/A
Phosphorous Charge greater than 14 mg/l	N/A	3.2800

We have assessed our proposed tariffs against the principles set out in the ESC's Guidance Paper. Our assessment indicates that our proposals accord with those pricing principles, and are consistent with the requirements of the WIRO.

8.5 New customer contributions

8.5.1 Standard connections

We have worked closely with local councils and the G21 Alliance in our region to ensure that our infrastructure planning aligns with regional growth plans and council forward planning strategies.

We propose to introduce a lower new customer contribution (NCC) for 'Infill' developments versus 'Greenfield' developments, as shown in Table 46 overleaf. This change aligns our approach with that of the Melbourne retail water corporations and Western Water, and will ensure that Barwon Water's charges for Infill developments are competitive with those in Melbourne. Our new approach will provide a better outcome for our customers and will support regional prosperity by making our region even more attractive for investment.

Under our new approach, a development would be considered an Infill development if it could be serviced by existing infrastructure at the site. If the development requires new infrastructure or triggers a capacity upgrade of the network it would be deemed a Greenfield development.

Table 46: Standard New Customer Contributions per lot ($2017-18)

Service	Existing Standard NCCs (2013-18 pricing period)*	Proposed NCCs (2018-23 pricing period)
Water (incl Recycled Water) - Infill	2,820.07	602.11
Water (incl Recycled Water) - Greenfill	2,820.07	2,985.48
Sewer - Infill	908.09	0.00
Sewer - Greenfill	908.09	0.00
Total per equivalent residential lot	$3,728	Greenfield $2,985 Infill $602
Total NCC revenue forecast in pricing period	$40.1 million	$32.9 million

**We did not differentiate between Infill and Greenfill in 2017-18, only showing for comparative purposes.*

8.5.2 Future major growth areas

Geelong's long term western and northern growth areas are not yet ready for urban development. The City of Greater Geelong is currently working on Framework Plans for the sites and there are no timelines for residential development. For this reason, we currently have no capital budget allocation for servicing of the long term growth areas in our 10 year Capital Works Plan.

A specific NCC will be developed for these growth areas by applying ESC pricing principles when there is more certainty around the extent and timing of development in these areas. It is likely there will be three geographic growth areas where a specific negotiated NCC charge will be required in the future. These are Lovely Banks, Batesford South and Bell Post Hill West.

Our proposed NCCs conform with the NCC pricing principles set out in the ESC's Guidance Paper.

8.6 Further information

Supporting Paper 6 provides further detailed information on tariffs and prices:

- To address the ESC's information requirements in its Guidance Paper; and
- Setting out the attestation that the relevant General Manager has made in relation to tariffs and prices.

8.7 Form of price control and price adjustments

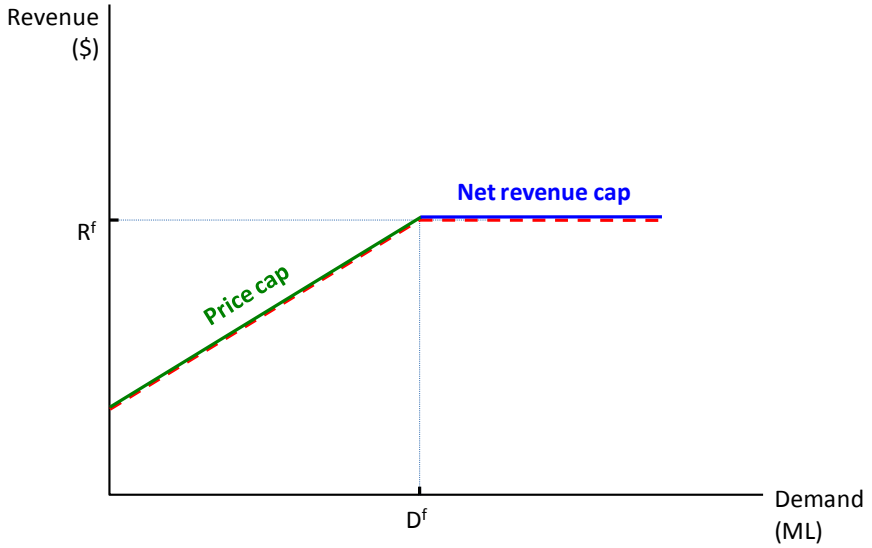
- We want to propose a change in the form of control that delivers a better outcome for customers and is simple to administer.
- Our approach builds on the ESC's autonomous demand model by removing the incentive to under-estimate water demand.
- Our approach combines a price cap with a revenue cap – so that we do not obtain any benefit from selling additional water.
- It provides a better outcome for customers because we face the downside risk of lower sales, but no benefit from increased sales.
- We are not proposing any changes to the current price adjustment arrangements, apart from introducing an adjustment for the trailing average cost of debt.

8.7.1 Form of control

We propose a modification to the current form of control, so that we combine a price cap with a 'net revenue cap'. The operation of our proposed form of control is illustrated in Figure 34.

The net revenue cap will allow us to recover the additional costs of selling water above the forecast level, D^f, (shown in Figure 34) but returns any additional revenue in excess of those costs to customers. The application of the net revenue cap means that Barwon Water will earn additional revenue for higher water sales - to recover the incremental cost of the additional water sales - but will not earn any additional profit.

Figure 34: Net revenue cap model



In developing this model, we considered the ESC's 'autonomous demand model'. We believe that our proposal will deliver a better outcome for customers while giving effect to the objectives of the ESC's model. In particular, during the current regulatory period, we incurred significant costs in purchasing additional water to address lower than expected inflows. The net revenue cap protects us from these additional costs, which we believe is reasonable. In contrast to the ESC's model, we do not propose any 'buffer' to compensate us for the revenue cap element of the control. As a result, we expect our proposed form of control would deliver lower prices to our customers compared to the model suggested by the ESC.

We have not consulted customers directly on the form of control for the following reasons:

- It is a technical regulatory matter that may be difficult to explain to customers and is better left to the ESC to determine;
- The ESC has consulted on its 'autonomous demand model', which has positive incentive properties compared to the current form of control;
- Our proposed net revenue cap will deliver an even better outcome for our customers compared to the 'autonomous demand model' for the reasons already explained; and
- Our proposed form of control will ensure prices remain as low as possible if demand is higher than expected, helping us to deliver our outcome of affordability for all customers.

To ensure that the implementation of the proposed form of control is as simple as possible, any net revenue will be returned to customers in the subsequent regulatory period, commencing in 2023-24. To ensure that it operates over five years and is based on actual data, the net revenue cap will apply from the final year of the current period to the fourth years of the next regulatory period, being 2022-23. The net revenue cap will apply to the total over the five years.

8.7.2 Price adjustment

We are not proposing any changes to the existing price adjustment mechanisms, apart from the introduction of a change to accommodate the ESC's trailing average cost of debt.

We propose to update the cost of debt each year in accordance with the formula set out below, and to input the updated cost of debt into the financial model provided by the ESC, to determine the updated building block revenue requirement for each regulatory year. We do not propose to adjust the prices during the next regulatory period, but the net effect of the cost of debt adjustments would be included as an adjustment in the building block requirement for the subsequent regulatory period.

The allowed return on debt for each regulatory year within a regulatory control period will be calculated in accordance with the following formula:

$$ {}_{x}kd_{x+1} = \frac{1}{10} \cdot \sum_{t=1}^{10} {}_{x-10+t}R_{x+t} $$

Where:

- ${}_{x}kd_{x+1}$ refers to the allowed return on debt for regulatory year x+1
- ${}_{x\text{-}10+t}R_{x+t}$ refers to the estimated rate of return on debt that was entered into in year (x-10+t) and matures in year (x+t) (in the formula above all debt has a ten year term)
- weights of 1/10 apply to each element of the trailing average.

Supporting Paper 7 sets out further information on the rationale for the proposed form of control, along with detailed information explaining how the control will operate. We also propose a minor amendment to clarify how the net revenue cap dovetails with the existing price adjustment mechanisms.

9. Promising to deliver (P&R)

- Collectively, our Board and Executive Leadership Team have demonstrated ownership and commitment to our submission by spending over 270 hours, in 13 Board meetings and 31 ELT meetings over the past 2 years, discussing all elements of our submission.
- We have fundamentally overhauled our performance management framework so that we can be sure we are delivering the outcomes customers have asked for.
- We propose to introduce a performance incentive scheme, under which we will compensate customers if we obtain an 'Advanced' PREMO rating, but do not deliver the outcomes that we have promised. This means that delivery risks will fall to us, not our customers.
- We have made a new commitment to annual performance reporting, under which we will regularly and transparently report our progress in meeting performance and achieving targets back to our customers.
- We also propose to continue using deliberative democratic processes (like our Community Panel) so that our customers can decide what to do with any money that is to be returned to them (due to our proposed performance incentive scheme and/or net revenue cap).

9.1 A new approach to performance management

During 2017, we redesigned the performance management framework we apply across our organisation. Our intent was to ensure that, as an organisation, we are working towards delivery of the outcomes that our customers have asked for and the strategic direction we have set through *Strategy 2030*.

We adopted a Balanced Scorecard approach, which is a tried and tested strategy performance management tool. It allows us to measure and monitor progress towards our strategic targets, under four quadrants – customer and community; processes and projects; people; financial and governance.

The key performance indicators we have included in our Balanced Scorecard were workshopped with our Board at their August 2017 meeting, sense-checked with KPMG at an executive workshop in early September 2017 and confirmed by our Board at their September 2017 meeting.

We specifically chose indicators that match the priorities of our customers and better reflect the experience of our customers. Some indicators reflect areas of performance that we do not currently measure. However, as these areas are important to our customers, we commit to understanding our current performance and setting new targets for these areas. We are starting to gather baseline data about our performance, and we commit to measuring our performance in these areas within the first twelve months of the next regulatory period.

A total of 29 indicators were agreed, as shown in Table 47 below. Six indicators depend on our performance against a number of sub-indicators. Table 48 overleaf shows how the majority of these indicators and sub-indicators reflect the performance measures and targets we have set to track our progress in delivering outcomes that our customers have asked for. Those indicators where our current performance and target performance are yet to be determined are shown as tbd, but we are starting to gather baseline data about our performance and commit to measuring our performance in these areas within the first twelve months of the next regulatory period. We are committed to developing measures that are important to our customers, rather than rely on what we can or do currently measure.

Table 47: Balanced Scorecard – key performance indicators

Customers and Community • Customer Service Index (aggregate of 5 measures) • Customer Perception Index (aggregate of 2 measures) • Stakeholder Perception Index (aggregate of 3 measures) • Increase in social media / digital media engagement • New community green / open space provided	**Processes and Projects** • Zero Emissions (total emissions, tCO2e by 2022/23) • Progress towards 100% renewable energy by 2025 • Zero Waste (additional volume of recycled water allocated for productive use by 2022/23) • Zero Waste Index (aggregate of 6 measures) • Compliance Index (aggregate of 5 measures) • Network Performance Index (aggregate of 6 measures)
People • % of people skilled against their specific competencies for their role • Engagement and alignment survey • Unplanned leave / employee • Employee turnover • Diversity indicators • $ and time saved from continuous improvement for BW and customers • Life score • TRIFR	**Financial and Governance** • Additional operating savings • New profit • Capital funded from operating cashflow • Capital works program on budget • Direct opex / FTE • Opex / property • Completing risk management treatments on time • Procurement process compliance • Compliance with policies and legislation • MAAPs completed on time

Table 48: Balanced Scorecard – full suite of indicators, targets and relevant outcomes

Key Performance Indicator	Current Performance – 2017	Target Performance – 2023	Outcome				
			1	2	3	4	5
Customers and Community							
Customer Service Index							
Number of customers engaged and supported through Barwon Water's hardship payment plans	1,150	1,500					✓
Number of customers who receive e-billing	14,500	54,000		✓			
Number of complaints to Energy Water Ombudsman Victoria / 1,000 customers	0.65	0.65		✓			
First point resolution rate through the Customer Centre	80%	85%		✓			
Customers who are able to receive communications via SMS	62%	75%		✓			
Customer Perception Index							
Customer satisfaction with the quality of drinking water	85%	85%		✓			
Customer effort based on satisfaction, effort and would you recommend	77%	85%		✓			
Stakeholder Perception Index							
Large customers	tbd	tbd				✓	
Regional stakeholders	tbd	tbd				✓	
Strategic partnerships	tbd	tbd				✓	
Increase in social media / digital media engagement	tbd	tbd				✓	
New community green / open space provided	0 ha	20 ha				✓	
Processes and Projects							
Zero Emissions (total emissions, tCO2e by 2022/23)	42,986	28,742			✓		
Progress towards 100% renewable energy by 2025	0%	43%			✓		
Zero Waste (volume of recycled water allocated for productive use by 2022/23)	2,600 ML	3,600 ML	✓				

Key Performance Indicator	Current Performance – 2017	Target Performance – 2023	Outcome				
			1	2	3	4	5
Zero Waste Index							
Percentage of biosolids mass re-used	100%	100%			✓		
Percentage of unaccounted for water	9%	9%			✓		
Percentage of industrial waste recycled (from BW operations)	tbd	tbd			✓		
Percentage of water treatment sludge re-used	tbd	tbd			✓		
Waste to energy capture (from BW operations)	tbd	tbd			✓		
Reduction in residential per capita water usage	tbd	tbd				✓	
Compliance Index							
Compliance with EPA licence parameters	100%	100%	✓				
Percentage of population receiving drinking water that meets E.coli standards	100%	100%	✓				
Percentage of population receiving drinking water that meets turbidity standards	100%	100%	✓				
Percentage of population receiving drinking water that meets disinfection by-products standards	100%	100%	✓				
Compliance with bulk entitlement and licence conditions	100%	100%	✓				
Network Performance Index							
Compliance with water security statement: "Barwon Water will not run out of water in a drought. We may need to be on water restrictions in a dry period, but we plan for this to occur less than 5 percent of the time"	n/a	100%	✓				
Customers who have an unplanned water supply interruption have their water back on within 5 hours	96.5%	96.5%		✓			
Customers who have a planned water supply interruption have their water back on within 5 hours	85%	85%		✓			
Number of customers who have more than five unplanned water supply interruptions in the year	1	1		✓			
Number of customers who have more than two sewer spills in a year	1	1		✓			
Number of water quality complaints / 1,000 customers	3	3		✓			

Key Performance Indicator	Current Performance – 2017	Target Performance – 2023	Outcome				
			1	2	3	4	5
People							
% of people skilled against their specific competencies for their role	tbd	tbd					
Engagement and alignment survey	tbd	tbd					
Unplanned leave / employee	7.2	<8.2					
Employee turnover	10%	5-8%					
Diversity indicators	tbd	tbd				✓	
$ and time saved from continuous improvement for BW and customers	tbd	tbd					✓
Life score	72.7	>85					
TRIFR	24.25	<5					
Financial and Governance							
Additional operating savings New profit	n/a	$19m					✓
Capital funded from operating cashflow	50%	70%					
Capital works program on budget (+ / - 10% tolerance, $ 2017-18)	$82.2m	$55.5m					✓
Direct opex / FTE ($ 2017-18)	$318k	$313k					✓
Direct opex / property ($ 2017-18)	$682	$629					✓
Completing risk management treatments on time	tbd	tbd					
Procurement process compliance	tbd	tbd					
Compliance with policies and legislation	tbd	tbd					
MAAPs completed on time	tbd	tbd					
Customer affordability measure	tbd	tbd					✓

We will use our Balanced Scorecard to assess the performance of our organisation on a monthly basis, and report this to our Board. To simplify our reporting procedures, our Balanced Scorecard includes six high-level indicators (or indexes) that are based on our performance against a number of sub-indicators. We will assess our performance against each of these sub-indicators individually. We are yet to determine how these sub-indicators will then be weighted and aggregated to provide an overall assessment of our performance for the relevant high-level indicator, but it is possible that we will adopt a simple average approach. Regardless of the method used, the intent is to express our performance for high-level indicators as a % against our targets.

For example, our Compliance Index is an aggregate of five sub-indicators relating to our compliance with health, safety and environmental requirements. Each of these sub-indicators has a target of 100% compliance. Our overall assessment for our Compliance Index is likely to reflect an average % compliance across all five sub-indicators, evenly weighted. So, if we achieve 100% compliance against four sub-indicators and 95% compliance against the fifth, our performance against our Compliance Index will be 99%.

Notwithstanding our use of high-level indicators for internal reporting purposes, we commit to reporting annually to our customers on our performance against all 39 of the indicators and sub-indicators relevant to our delivery of outcomes, as shown in Table 48. Section 9.3 provides further details on our proposed arrangements for reporting performance to customers.

Our Balanced Scorecard does not include a number of the 26 service standards we presented in our last price submission. This is because we have chosen a new suite of performance measures that match the priorities of our customers and better reflect the experience of our customers. However, many of the service standards we have not included describe asset performance and therefore remain relevant to our ability to achieve the targets we have set ourselves. We will continue to capture and track our performance against these internally and for the purpose of national performance reporting.

Table 49 shows which of the 26 service standards from our last price submission have been reflected in the Balanced Scorecard, and which we will continue to monitor internally.

Table 49: Service standards in 2013 price submission

No.	Performance Measure	Target	Included in Balanced Scorecard?
Core service standards			
1	Unplanned water supply interruptions (per 100km main)	25.0	Contributes to Network Performance Index
2	Average minutes to respond to bursts and leaks (priority 1)	26.7	Contributes to Network Performance Index
3	Average minutes taken to attend bursts and leaks (priority 2)	43.4	Contributes to Network Performance Index
4	Average minutes taken to attend bursts and leaks (priority 3)	226	Contributes to Network Performance Index
5	Unplanned water supply interruptions restored within 5 hours (per cent)	96.5	✓
6	Planned water supply interruptions restored within 5 hours (per cent)	85.0	✓
7	Average unplanned customer minutes off water supply (minutes per customer)	20.0	Contributes to Network Performance Index
8	Average planned customer minutes off water supply (minutes per customer)	42.0	Contributes to Network Performance Index
9	Average unplanned frequency of water supply interruptions (per customer)	0.16	Contributes to Network Performance Index
10	Average planned frequency of water supply interruptions (per Customer)	0.22	Contributes to Network Performance Index
11	Average duration of unplanned water supply interruptions (minutes)	125	Contributes to Network Performance Index
12	Average duration of planned water supply interruptions (minutes)	210	Contributes to Network Performance Index
13	Customers experiencing more than 5 unplanned water supply interruptions in the year	1	✓
14	Unaccounted for Water (per cent)	9.0%	✓
15	Sewer blockages per 100km of Sewer Main (per 100km main)	37.0	Contributes to Network Performance Index
16	Average time to attend sewer spills and blockages (minutes from notification)	52.5	Contributes to Network Performance Index
17	Average time to rectify a sewer blockage (minutes from notification)	178	Contributes to Network Performance Index
18	Spills contained within 5 hours (per cent of Spills) (Priority 1)	100	Contributes to Network Performance Index
19	Customers receiving more than 3 sewer blockages in the year (GSL)	1	✓
20	Complaints to Energy Water Ombudsman Victoria (EWOV) (per 1000 customers)	0.65	✓
21	Telephone calls answered within 30 seconds (accounts line) (% of calls)	90.0	✓

No.	Performance Measure	Target	Included in Balanced Scorecard?
Additional service standards			
22	Biosolid mass reused (tonnes)	100%	✓
23	Compliance with Environment Protection Authority licence parameters (%)	100%	✓
24	Percent of population receiving water meeting E. Coli standards (%)	100%	✓
25	Percent of population receiving drinking water meeting turbidity standards	100%	✓
26	Percent of population receiving drinking water meeting disinfection by-products standards	100%	✓

9.2 A new performance incentive scheme

We consider our submission meets the requirements of an 'Advanced' rating under the PREMO framework (see Chapter 10). Our commitment to deliver the outcomes our customers have asked for is one of the fundamental reasons why we consider our submission 'Advanced'. We therefore believe if we do not deliver the outcomes we have promised, we should compensate our customers accordingly.

We propose to hold ourselves accountable for our performance in delivering outcomes through a new performance incentive scheme. Under this scheme, we propose to put at risk approximately $2.3 million per annum (or $11.5 million over the five-year regulatory period), which equates to the difference in our revenue requirement under an 'Advanced' PREMO rating compared to a 'Standard' PREMO rating.

We propose four key performance indicators that will measure our performance in delivering outcomes, as shown in Table 50. We have purposefully chosen performance measures that align with customer priorities (as evidenced by the recommendations of our Community Panel) and corresponding targets that require us to stretch ourselves – either by maintaining current high standards of performance despite reductions in our operating expenditure, or improving our performance in those areas where customers have asked us to do more.

For some indicators, such as the volume of recycled water that is put to productive use, our performance is best measured at the end of the period, as the target will take time to achieve. For other indicators, such as customer service, our performance should be measured as an average over the period – as our performance in each year matters equally. We will determine the total amount of revenue to be returned to customers at the end of the pricing period, rather than on an annual basis, in recognition that some targets will take time to achieve.

Table 50: Key indicators for performance incentive scheme

Outcomes	Key Performance Measure	Target
A reliable, secure water future for our region	Zero Waste (volume of recycled water allocated for productive use by 2022/23)	3,600 ML
Timely, innovative services for our customers	Customer Service Index (aggregate of 5 measures)	100%
	Network Performance Index (aggregate of 6 measures)	100%
A healthier environment for all	Zero Emissions (total emissions, tCO2e by 2022/23)	28,742 tCO2e
Deeper knowledge and partnerships with our community	*We currently do not measure performance in this area, and so we have not included an indicator against this outcome in our performance incentive mechanism – however, our Balanced Scorecard shows how we propose to design and implement appropriate metrics.*	
Affordability for all of our customers	*Bills are an outcome of the proposals set out in this submission, and so we have not included an indicator against this outcome in our performance incentive scheme – however, our Balanced Scorecard shows how we propose to monitor and measure progress.*	

The amount of revenue we will hand back under our proposed performance incentive scheme will depend on the extent to which we have missed our performance targets – the bigger the miss, the more revenue we will return to customers. The key elements of our proposed scheme are:

- We will stake 100% of the difference in our revenue requirement under an 'Advanced' PREMO rating compared to a 'Standard' PREMO rating (i.e. $11.5 million over the five-year regulatory period), and apportion this evenly across targets against the four key performance indicators shown in Table 50 (i.e. $2.875 million per target);
- To determine how much of this 100% stake would be returned to customers if performance is below target, we will compare:
    - Actual performance at the end of the next regulatory period (i.e. 2023) to a linear sliding scale for targets that require time to achieve – volume of recycled water put to beneficial use by 2022/23 and total emissions tCO2 by 2022/23; and
    - Average performance over the five years to a linear sliding scale for targets that reflect ongoing performance – Customer Service Index and Network Performance Index;
- We will determine the total amount to be returned to customers at the end of the regulatory period (i.e. 2023).

The sliding scale and amount of revenue to be returned under relative performance against each key performance indicator are shown in Table 51.

Table 51: Sliding scale for performance incentive scheme

% Achieved	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Revenue return ($Million)	$ 2.875	$ 2.588	$ 2.300	$ 2.013	$ 1.725	$ 1.438	$ 1.150	$ 0.863	$ 0.575	$ 0.288	$ 0
Volume of recycled water put to productive use (ML)	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600
Total emissions (tCO_2e)	40,195	39,050	37,904	36,759	35,614	34,469	33,323	32,178	31,033	29,887	28,742
Network Performance Index	95.0%	95.5%	96.0%	96.5%	97.0%	97.5%	98.0%	98.5%	99.0%	99.5%	100.0%
Customer Service Index	95.0%	95.5%	96.0%	96.5%	97.0%	97.5%	98.0%	98.5%	99.0%	99.5%	100.0%
Total ($Million)	**$ 11.5**										**$ 0**

The worked example in Table 52 shows how the scheme would operate in practice. In this example, the actual performance against each target is shaded in orange and the amount to be repaid to customers is shown in the final row of the table, making a total of $5.751 million.

Table 52: Performance incentive scheme – worked example ($M, 2017-18 unless otherwise stated)

% Achieved	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Revenue return ($Million)	$ 2.875	$ 2.588	$ 2.300	$ 2.013	$ 1.725	$ 1.438	$ 1.150	$ 0.863	$ 0.575	$ 0.288	$ 0
Additional recycled water put to productive use (ML)	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600
Total emissions (tCO_2e)	40,195	39,050	37,904	36,759	35,614	34,469	33,323	32,178	31,033	29,887	28,742
Network Performance Index	95.0%	95.5%	96.0%	96.5%	97.0%	97.5%	98.0%	98.5%	99.0%	99.5%	100.0%
Customer Service Index	95.0%	95.5%	96.0%	96.5%	97.0%	97.5%	98.0%	98.5%	99.0%	99.5%	100.0%
Revenue returned per measure				$ 2.013	$ 1.725		$ 1.150	$ 0.863			
Total revenue returned	$5.751										

As shown in the above example, our proposed performance incentive scheme is simple to operate and apply. We have calculated our revenue at risk based on the difference in our revenue requirement under an 'Advanced' PREMO rating compared to a 'Standard' PREMO rating. We would need to reconsider the amount of revenue we would be prepared to put at risk, if our revenue requirement was substantially different between our submission and the ESC's draft determination.

We propose that the return of any money owing to customers will be made in the following regulatory period (commencing 2023-24) to avoid any complicated annual adjustments and in recognition that some targets will take time to achieve. We also propose to continue using deliberative democratic processes (like our Community Panel) so that our customers can decide what to do with any money that is to be returned to them due to our proposed performance incentive scheme and/or net revenue cap (see Section 9.3).

9.3 Reporting on our performance to customers

We have an ongoing and deeper commitment to our customers. Over the next five year price period, we commit to:

- Continually involving our customers and the broader community in our decision making;
- Holding ourselves to account and honouring what we said we would deliver;
- Continually 'checking in' with our customers and community to ensure their values are aligned with our service; and
- Ensuring our actions align with what our customers wants us to do.

We will do this by:

- Publishing an annual scorecard – We will report back on our progress in delivering the outcomes our customers asked for via a yearly tool that will outline the outcomes we have committed to delivering, the actions we have undertaken to date and our progress against the performance measures and targets we have set ourselves. Our annual scorecard will be designed and formatted so that it is easy to read and understand for our customers. It will also be promoted to our customers through a variety of channels. For example, it will be published and highlighted as one of our 'key talking points' on our website; it will be emailed to all customers for whom we have email addresses; it will be promoted through our social media accounts. We will also work with DELWP to advocate for its inclusion in our Annual Report.
- Continuing to use deliberative democratic processes (like our Community Panel) – We will use deliberative democracy to allow our customers to decide what to do with any money that is to be returned to them (due to our proposed performance incentive scheme and/or net revenue cap). We will also apply the principles of deliberative democracy to other community engagement processes, such as community reference groups for specific projects and reformatted Customer Consultative Committee.
- Undertaking regular qualitative and quantitative research – We will undertake research activities such as annual customer perception and values surveys, forums and focus groups.
- Continuing to hold targeted conversations – We will continue our dialogue with specific customer groups including major water users, developers, trade waste and recycled water customers.

9.4 Guaranteed Service Levels

Our guaranteed service level (GSL) scheme compensates customers who receive a level of service that does not meet community expectations.

Our GSLs are designed so that they reflect the main service priorities and concerns of customers, as informed by customer engagement; and provide incentives for the business to deliver efficient service levels to all customers.

Our current GSLs are notably more generous than our peers, for example:

- The payment we make to customers experiencing more than three unplanned sewerage service interruptions is more than 50% above that offered by our peers, as we offer $80 compared to $50[43]; and
- The payment we make if we fail to meet the guaranteed level of service in relation to hardship is 20% higher than that offered by our peers, as we offer $367 compared to $300[44].

In addition to our GSL payments, we also pride ourselves on working proactively to assist customers who experience an issue with our service. For example, the management of sewage spills internally and externally to a customer's property is determined by the consequence of the spill. Our maintenance provider, PFM, is the primary respondent to all reported sewage spills, however for high consequence spills, the customer interface is escalated to our staff. Our staff assist customers by informing them of processes best followed to achieve the most favourable outcome. Where insured, the customer is supported by Barwon Water to pursue clean up / restoration works through their insurer to achieve the best outcome in terms of replacement value. In the event a customer is uninsured, Barwon Water will engage specialist contractors to facilitate clean up and catalogue any property / content loss. Fair consideration is given to an ex-gratia payment for any out of pocket expenses incurred by the customer. We may also contribute financially to part or all of any non-return valve plumbing works, depending on the specific circumstances. Our service and management in this area is considered industry leading.

We are keen to ensure that our GSL scheme continues to be leading the sector. We therefore consulted customers to see whether they supported a more generous set of arrangements or a different focus for our GSLs.

The recommendations of our Community Panel were that we should focus our resources on other programs, rather than implementing a more generous GSL scheme or changing its focus. An exception related to compensation for sewer spills, so that in future a 'sewer incident credit' scheme will be implemented, whereby customers will receive some level of compensation for any sewer incident. The amount of compensation will be based on a sliding scale reflective of the scale of incident. The total compensations paid would be limited to $175,000 per annum. This compensation would be in addition to any sewerage service reliability GSL payment

We also propose to continue adjusting our GSL payments to reflect movements in the Consumer Price Index on an annual basis.

Our GSL proposals for the next regulatory period are set out in Table 53 overleaf.

[43] Coliban Water, Central Highlands Water, Wannon Water, South East Water, City West Water, Yarra Valley Water, and Westernport Water.

[44] Coliban Water, Central Highlands Water, Wannon Water, South East Water, City West Water, Yarra Valley Water, and Westernport Water.

Table 53: Barwon Water's proposed GSLs for the next regulatory period

Service attribute	Proposed guaranteed level of service	Payment in 2017-18 ($ 2017-18)
Water supply reliability	No more than five unplanned water supply interruptions per customer per year	$80
Sewerage service reliability	No more than three unplanned sewerage service interruptions to a customer's property per year	$80
Sewerage service reliability	No more than two sewer spills on a customer property per year	$613
Hardship	We will not restrict water supply or take legal action against a customer prior to making reasonable efforts to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying a bill.	$367

10. Meeting PREMO

- We have self-assessed our submission as 'Advanced' under the PREMO framework.
- We are confident that the Engagement element of our submission achieves a 'Leading' rating.
- For the remaining three PREMO elements that are operational now (Risk, Management and Outcomes), we are very confident that our submission achieves an 'Advanced' rating.
- Our PREMO self-assessment translates to an aggregated score of 14.25, which is well within the bounds of an 'Advanced' rating (11.5 to 15.25).

10.1 Our self-assessment

We have conducted our PREMO self-assessment using the self-assessment tool and scoring methodology set out in the ESC's Guidance Paper. Our self-assessment translates to an aggregated score of **14.25**, which is well within the bounds of an 'Advanced' rating (11.5 to 15.25). A summary of our assessment is provided in Table 54.

Table 54: PREMO self-assessment – rating and score

PREMO element	Rating	Score
Risk	Advanced	Very Confident 3.5
Engagement	Leading	Confident 3.75
Management	Advanced	Very Confident 3.5
Outcomes	Advanced	Very Confident 3.5
Overall assessment	Advanced	14.25

The key features of our submission that support our self-assessment of an 'Advanced' rating are set out in the remainder of this chapter.

Each of our Supporting Papers 1 to 7 provide a detailed explanation of how our approach across these seven aspects of our submission contributes to an 'Advanced' PREMO rating. We invite the ESC to review these Supporting Papers for further justification of our 'Advanced' rating.

PREMO element: OUTCOMES	PREMO Score: Advanced, Very Confident 3.5

- Our submission reflects a **significant improvement in customer value** because we will provide a higher level of service against the outcomes our customers value at a lower price.
- Our **outcomes were entirely shaped by our customers** via a robust customer and community engagement process, which allowed us to:
    - design outcomes, actions and expenditure that reflected the recommendations of our Community Panel, reducing our expenditure in some areas and increasing our expenditure or changing our focus in others;
    - test our proposals with our broader community, which demonstrated high levels of comfort for our proposals, and reconvene our Community Panel so that they could provide final recommendations in light of our proposals and the views of our broader community about these proposals.
- The **proposals in our submission reflect the outcomes our customers have asked for**. For example, we will deliver affordability for all customers by:
    - implementing a pricing structure under which all customers pay the same $/kL price for water by 2022-23,
    - giving residential customers greater control over their bills, by changing the proportion of fixed and variable water charges on residential bills; and
    - fairly implementing these changes by actively managing bill impacts for tenants (through a Transitional Rebate Adjustment) and vulnerable customers.
- We have **designed performance measures (or outputs)** that we will use to monitor our delivery of outcomes, many of which are new (reflective of customer priorities) and/or have stretch targets attached to them. Our proposed outputs are measurable, robust and deliverable. Together, they reflect all elements of service including network performance, product quality, customer service and experience.
- We have **set ourselves ambitious targets** against our performance measures (or outputs), which mean we will maintain our current high standards of performance at a lower cost and improve our performance in those aspects of our service that are most important to our customers.
- We are proposing to apply a **performance incentive scheme** under which we will return money (up to $2.3 million per year or 2.3% of our total operating budget) to customers (in the form of lower prices or investment in other outcomes if they prefer) if we do not meet our targets.
- We have made a **new commitment to annual performance reporting**, under which we will regularly and transparently report our progress in meeting performance and achieving targets back to our customers. This approach aligns with the Balanced Scorecard we will use to monitor our performance as an organisation.

Guiding questions	Barwon Water's response	Score
Has the business provided evidence that the outcomes proposed have taken into account the views, concerns and priorities of customers?	Our outcomes have been shaped entirely by our customers. We have provided evidence the outcomes proposed have taken into account the views, concerns and priorities of our customers, as documented by the recommendations of our Community Panel (who acted as a 'citizen's jury') and the results of testing our proposed outcomes through the Draft Price Submission Phase. We asked a random, representative group of customers (our Community Panel) to agree the outcomes they want us to deliver and to provide their views on a range of services we offer (specifically, agreeing their preferences on where we should do more / do less / stay the same) through a deliberative process that was informed by the views of our broader community. The recommendations of our Community Panel went directly to our Board. Further details are provided in Chapter 4. We designed outcomes, actions and expenditure that reflected the recommendations of our Community Panel, reducing our expenditure in some areas and increasing our expenditure or changing our focus in others. Further details are provided in Chapter 6. We tested our proposals with our broader community, which demonstrated high levels of comfort with our proposals. We reconvened our Community Panel so that they could provide final recommendations in light of our proposals and the views of our broader community about these proposals. Further details are provided in Chapter 5 and Supporting Papers 1 and 2, along with a range of supporting documentation setting out our approach to, and findings from, our engagement.	Leading, Confident Score: 3.75
Has the business provided sufficient explanation of how the outcomes it has proposed align to the forecast expenditure requested?	We have explained how our proposed outcomes align to the forecast expenditure requested by giving details of how customers have shaped our proposed projects, programs and activities (see Chapter 6) and showing our expenditure profile has shifted, to better align with the outcomes that our customers have asked us to deliver (see Sections 7.3.4 and 7.4.4). Expenditure against our outcomes is explained at a high-level in Chapter 6 of this submission. Details of capital and operating expenditure against our outcomes are given in Sections 7.3 and 7.4 of this submission. Further details are provided in Supporting Papers 4 and 5.	Advanced, Very confident Score: 3.5

Guiding questions	Barwon Water's response	Score
Has the business proposed outputs to support each of its outcomes, which are measurable, robust and deliverable?	We have fundamentally overhauled the framework we will use to monitor our performance as an organization, to better reflect the outcomes that our customers have asked us to deliver. We have set performance measures (or outputs) that we will use to monitor our delivery of outcomes, many of which are new (reflective of customer priorities). We have set ourselves ambitious targets against our performance measures (or outputs), which means we will maintain our current high standards of performance at a lower cost and improve our performance in those aspects of our service that are most important to our customers. Further details are provided in Chapters 6 and 9. Our performance measures and targets feed straight into the Balanced Scorecard we will use to monitor our performance as an organization. Our proposed measures are measurable, robust and deliverable. Together, they reflect all elements of service including network performance, product quality, customer service and experience. Further details are provided in Chapter 9.	Advanced, Very Confident Score: 3.5
Has the business provided evidence that the outputs it has proposed are reasonable measures of performance against stated outcomes?	Our performance measures (or outputs) are directly linked to the actions that we propose to take in order to deliver the outcomes our customers have asked for. Our performance measures (or outputs) and targets reflect aspects of our service that are important to our customers. Further details are provided in Chapters 6 and 9. We are proposing to apply a simple performance incentive scheme under which we will return money (up to $2.3 million per year) to customers (in the form of lower prices or investment in other outcomes if they prefer) if we do not meet our targets. Further details are provided in Chapter 9.	Advanced, Confident Score: 3.25

Guiding questions	Barwon Water's response	Score
Has the business demonstrated a process to measure performance against each outcome and to inform customers?	We have an ongoing and deeper commitment to our customers. We have documented a process for monitoring our performance and adjusting prices to account for any underperformance. This includes a new commitment to annual performance reporting, under which we will regularly and transparently report our progress in meeting performance and achieving targets back to our customers. We also propose to continue using deliberative democratic processes (like our Community Panel) so that our customers can decide what to do with any money that is to be returned to them (due to our proposed performance incentive scheme and/or net revenue cap) to maximize customer value. Further details are provided in Chapter 9.	Advanced, Very Confident Score: 3.5

PREMO element: MANAGEMENT	PREMO Score: Advanced, Very Confident 3.5

- Collectively, our Executive Leadership Team and Board have demonstrated **ownership and commitment to our submission** by spending over 270 hours, in 31 ELT meetings and 13 Board meetings over the past 2 years, discussing all elements of our submission.
- Our **prices are decreasing by 7.4%** for average residential customers in 2018/19, followed by modest price increases of 0.9% over the remaining four years, which translates to an average decrease of 3.9% over the five year price period.
- We have committed to a **2.3% reduction in controllable operating costs** without compromising service delivery, which significantly exceeds the 1% per annum efficiency hurdle which the ESC defines as the benchmark for a 'Standard' PREMO rating.
- Our operating expenditure forecasts reflect **ambitious targets of more than $19 million in additional operating savings** and/or new revenue opportunities over the next five years, even though industry benchmarking shows that we are already the second lowest in our national peer group. This $19 million of savings is in addition to 'BAU' or 'standard' annual efficiencies of 1.2% per annum, which are also included in our forecasts.
- We have committed to a **20% reduction in gross capital expenditure** (and a reduction of 14% in net capital expenditure) through prudent and efficient capital expenditure program, which does not compromise service delivery. We have **excluded $60m of projects** from our capital expenditure forecast, so that customers only finance projects where scope, timing and costs are certain.
- We have **avoided 'bill shock' for residential customers** by carefully considering our proposed price path as we move from current lump sum rebate arrangements, and taking action so that our costs are lower in the next regulatory period than would otherwise be the case:
    - **pre-paying $21.65 million of Melbourne headworks charges** (saving ourselves $800,000 than if we had paid it next period) and
    - **capitalising remaining Melbourne headworks charges**;
    - making **adjustments to our depreciation profile** so that customers pay when they receive the benefit of the assets.
- **Without these initiatives, average residential prices would be going up by 8.0%** over the next five years instead of going down by 3.9%.
- We **implemented a rigorous validation process** to ensure the credibility, accuracy, consistency and prudency of our submission and supporting information.
- We **engaged experienced and highly skilled consultants** to assist in the development of our submission and provide assurance about the quality of the submission, including the quality of supporting information relating to forecast costs or projects:
    - Mosaic Lab, Newgate Australia and EY Sweeney to help design and deliver an industry-leading customer and community engagement process;
    - KPMG to review the submission to ensure that the information requirements in the ESC's Guidance Paper were met;
    - Harding Katz Pty Ltd to review the data presented in the submission to ensure that it reconciles with the completed template information;
    - Inside Infrastructure to ensure that our business case information supports the proposed capital expenditure for major capital projects; and
    - CMP to undertake P50 cost estimates for our major capital projects and key capital programs.

Guiding questions	Barwon Water's response	Score
To what extent has the business demonstrated how its proposed prices reflect only prudent and efficient expenditure?	We have committed to a 2.3% average reduction in controllable operating expenditure and a 20% reduction in gross capital expenditure (14% reduction in net capital expenditure) without compromising service delivery. Our proposed operating efficiencies average 2.3% per annum, which significantly exceeds the 1% per annum efficiency hurdle that the ESC defines as the benchmark for a Standard PREMO rating. Industry benchmarking shows that we already have the second lowest operating expenditure per property in our national peer group, which means that our proposal puts us amongst the leading companies in terms of operating expenditure efficiency. Our operating expenditure forecasts reflect ambitious targets of $19 million in additional operating savings and/or new revenue opportunities over the next five years. Further details are provided in Section 7.3 and Supporting Paper 4. Our proposed capital expenditure program is prudent and efficient ($328.6 million over the next five years, compared to $411.7 million over the previous five years): • Our gross capital expenditure is based on a prudent demand forecast and a prudent assessment of our water security needs, and is 20% lower than the current period. Our total net capital expenditure is forecast to be 14% lower compared to the current regulatory period. • We have excluded a number of projects where business cases have not been fully developed. Nonetheless, based on current information, there is a strong likelihood that some or all of these projects will proceed during the next regulatory period. Our exclusion of these projects from our proposed capital expenditure allowance provides a high level of confidence that it is prudent and efficient. • We have robust planning and delivery processes, including the use of external contractors, which ensure that every dollar we spend is prudent and efficient. • We have a robust internal decision making and external validation process to support our forecasts, and to ensure that assumptions are reasonably based, that information is accurate and consistent, and that forecasts reflect efficient and prudent investment. Further details are provided in Section 7.4 and Supporting Paper 5.	Advanced, Very Confident Score: 3.5

Guiding questions	Barwon Water's response	Score
To what extent has the business justified its commitment to cost efficiency or productivity improvements?	Our Board and Executive Leadership Team have been actively engaged in driving further cost efficiencies in the next regulatory period: • Our operating expenditure forecasts reflect ambitious targets of $19 million in additional operating savings and/or new revenue opportunities over the next five years. • These savings are in addition to our 'business as usual' or 'standard' annual efficiencies of 1.2% per annum, which are also included in our forecasts. • Together, these savings equate to an average annual efficiency improvement of 2.3% per annum in controllable operating expenditure. Given our present high level of efficiency, a further annual improvement of 2.3% represents a 'stretch target' for the business. • We have included our proposed additional operating efficiencies and new profit as one of the high-level performance indicators in our Balanced Scorecard. We have also taken action so that our uncontrollable operating expenditure is lower in the next regulatory period than would otherwise be the case, by: • pre-paying $21.65 million of Melbourne headworks charges; • capitalising remaining Melbourne headworks charges; • making adjustments to our depreciation profile so that customers pay when they receive the benefit of the assets.	Advanced, Very Confident Score: 3.5

Guiding questions	Barwon Water's response	Score
To what extent has the business justified or provided assurance about the quality of the submission, including the quality of supporting information on forecast costs or projects?	We implemented a rigorous validation process to ensure the credibility, accuracy, consistency and prudency of our submission and supporting information. This included a robust internal certification framework and use of independent advisors to assess our submission, proposals and forecasts. We engaged experienced and highly skilled consultants to assist in the development of our submission and provide assurance about the quality of the submission, including the quality of supporting information relating to forecast costs and projects: • Mosaic Lab, Newgate Australia and EY Sweeney to help design and deliver an industry-leading customer and community engagement process; • KPMG to review the submission to ensure that the information requirements in the ESC's Guidance Paper were met; • Harding Katz Pty Ltd to review the data presented in the submission to ensure that it reconciles with the completed template information; • Inside Infrastructure to ensure that our business case information supports the proposed capital expenditure for major capital projects – where projects have been queried by the consultant, these have been removed from our capital expenditure forecast to ensure that the resulting expenditure is prudent and efficient, even in cases where we remain committed to these projects (for example, renewable energy projects); and • CMP to undertake P50 cost estimates for our major capital projects and key capital programs, and to review our standard estimating tools and templates in relation to contingency allowances. Members of our Executive Leadership Team have made an attestation in each of our Supporting Papers 1 to 7 that information is complete and accurate, forecasts are robust and that guidelines have been followed in the preparation of the Supporting Paper. These attestations support the Board's attestation provided in the Executive Summary.	Advanced, Very Confident Score: 3.5

Guiding questions	Barwon Water's response	Score
To what extent have senior management, including the Board, demonstrated ownership and commitment to the proposals in its submission?	Collectively, our Board and Executive Leadership Team have demonstrated ownership and commitment to our submission by spending over 270 hours, in 13 Board meetings and 31 ELT meetings over the past 2 years, discussing all elements of our submission. Their involvement has included: • Engaging directly with our Community Panel, by attending panel meetings and inviting panel representatives to speak at a Board meeting, to inform their deliberations and understand their recommendations. • Seeking substantial efficiency improvements from the business through a rigorous 'bottom up' and 'top down' assessment of our operating and capital expenditure requirements, which culminated in ambitious targets of $19 million in additional operating savings and/or new revenue opportunities being reflected in our operating expenditure forecasts, even though our cost performance already benchmarks well against our peers nationally. This $19 million of savings is in addition to 'BAU' or 'standard' annual efficiencies of 1.2% per annum, which are also included in our forecasts. • Reviewing and approving all new and significant commitments in our submission, including but not limited to cost efficiencies, the net revenue cap, performance measures (outputs) and targets, and the performance incentive mechanism.	Advanced, Very confident Score: 3.5
To what extent has the business provided evidence that there is senior level, including Board level, ownership and commitment to its submission and its outcomes?	As already noted, collectively our Board and Executive Leadership Team have demonstrated ownership and commitment to our submission by spending over 270 hours, in 13 Board meetings and 31 ELT meetings over the past 2 years, discussing all elements of our submission. We have fundamentally overhauled our performance management framework so that we can be sure we are delivering the outcomes customers have asked for. This demonstrates our ownership of, and commitment to the delivery of those outcomes. The alignment between our submission and our new strategic direction also provides evidence of the commitment of our Board and Executive Leadership Team. Specifically, the five customer-led outcomes set out in this submission describe what we will deliver to customers (consistent with what they have asked for) and the five *Strategy 2030* focus areas describe how we will operate as an organisation in order to deliver these outcomes. Further details are provided in Chapter 1 and our *Strategy 2030* document.	Advanced, Very confident Score: 3.5

PREMO element: ENGAGEMENT	PREMO Score: Leading, Confident 3.75

- Developing our submission has been a journey, where **customers have led the way**. The views of our customers have been central to the development of our submission, because our engagement has been tailored and meaningful, both for our customers and ourselves.
- We spoke with **over 3,100 customers (or 2.1% of our customer base) for almost 1,950 hours** during the development of our submission.
- We adopted a new approach that allowed customers to **inform development of our submission** through three distinct phases of engagement, which began early in June 2016:
    - We **explored top-of-mind issues** with 51 customers and used the information gained to design and undertake **extensive qualitative and quantitative research** with 1,116 customers, supplemented by a public campaign that included face-to-face discussions with 560 customers.
    - We applied the **principles of deliberative democracy** to ask a random, representative group of 27 customers, who acted as a 'citizens jury', to agree the outcomes they want us to deliver and their preferences about the levels of service we provide, through a deliberative process that allowed time and information to 'deep-dive' into the operations of our business and the views of our broader community.
    - We **tested our proposed outcomes, actions and prices** with 1,260 customers through a public consultation process and a follow-up deliberative process with 17 customers, both of which demonstrated high levels of comfort amongst customers for our proposals.
- Our staff have invested **thousands of hours** in our engagement activities. We were **guided by experienced and highly skilled consultants**, Mosaic Lab, Newgate Australia and EY Sweeney, who helped us to ensure that our approach had the utmost integrity and the information provided to customers was appropriate given the purpose, form and content of the particular activity.
- Our **outcomes directly align** with the five outcomes recommended by our Community Panel. Our levels of service, actions and expenditure to deliver these outcomes were directly informed by the fifteen preferences recommended by our Community Panel.
- The **strength of our engagement approach has led to invitations** to speak at the 2016 WSAA Asset Management Customer Value 'Leading Practices Conference' (December 2016) the 2017 IPAA Victoria Public Sector Week (August 2017) and our engagement co-ordinator being awarded one of two Australia-wide scholarships by IAP2 Australia to attend the 2017 IAP2 North American Conference in Denver, Colorado (September 2017).
- Our Community Panel have provided a **powerful final statement** on their process – "*The net result is that we support the context of the proposed price submission as put forward by Barwon Water, as it also supports our views, and where necessary we have provided supportive commentary for our recommendations. We commend the report to the Essential Services Commission, for their approval.*"

Guiding questions	Barwon Water's response	Score
To what extent has the business justified how the form of engagement suits the content of consultation, the circumstances facing the water business and its customers?	Developing our submission has been a journey, where customers have led the way. We adopted a new approach that allowed customers to inform development of our submission through three distinct phases of engagement, which began early in June 2016: • We explored top-of-mind issues with 51 customers and used the information gained to understand the key themes of interest to our customers and how they would like to be engaged on these issues. • We completed extensive qualitative and quantitative research with 1,116 customers, supplemented by a public campaign that included face-to-face discussions with 560 customers, to gather data about customers views in response to the question: *What do you value most about water and sewerage services and what do you expect in the future?* • We applied the principles of deliberative democracy to ask a random, representative group of 27 customers, who acted as a 'citizens jury', to agree the outcomes they want us to deliver and their preferences about the levels of service we provide, through a deliberative process that allowed time and information to 'deep-dive' into the operations of our business and the views of our broader community. • We tested our proposed outcomes, actions and prices with 1,260 customers through a public consultation process and a follow-up deliberative process with 17 members of our Community Panel, both of which demonstrated high levels of comfort amongst customers. In all, we spoke with over 3,100 customers (or 2.1% of our customer base) for almost 1,950 hours during the development of our submission. The views of our customers have been central to the development of our submission, because our engagement has been tailored and meaningful, both for our customers and ourselves. This is best evidenced in the following excerpt from the report of our Community Panel:	Leading, Confident Score: 3.75

Guiding questions	Barwon Water's response	Score
	Final statement on the process by the panel… As members of the Community representation panel, we provide you with the report from our final day of deliberations, in response to the Barwon Water community consultation (Our proposed services and prices for 2018-2023). This is a culmination of a series of workshops, over a series of days, to prepare for this final report. We have had the opportunity to review all of the Barwon Water background information, original panel work, online discussions, and the EY Sweeney report on the community consultation research. We also received submissions from Barwon Water explaining the process undertaken in preparation and implementation of the survey, and an extrapolation of the results. We can provide assurances that as a panel, we have been supported by the facilitators in reaching conclusions that we believe are representative of our collective views. The net result is that we support the context of the proposed price submission as put forward by Barwon Water, as it also supports our views, and where necessary we have provided supportive commentary for our recommendations. We commend the report to the Essential Services Commission, for their approval. There is no precedent information available that suggests a more robust approach to engaging with customers. It is for this reason that our engagement is consistent with that of leading practice.	

Guiding questions	Barwon Water's response	Score
To what extent has the business demonstrated that it provided appropriate instruction and information to customers about the purpose, form and content of the customer engagement?	Our staff have invested thousands of hours into our engagement activities. We were guided by experienced and highly skilled consultants, Mosaic Lab, Newgate Australia and EY Sweeney, who helped us to ensure that the information provided to customers was appropriate given the purpose, form and content of the particular activity. Further details are provided in Chapters 2, 3, 4 and 5. By way of example, the materials provided to our Community Panel included: • 2018 Price Submission Community Panel Handbook (January 2017) – a manual explaining the process for determining Barwon Water's prices and services from 2018 to 2023 and the role of the Community Panel. • Barwon Water Snapshot Report (January 2017) – a report detailing key information about Barwon Water, its role, customers and responsibilities, based on research findings about areas of interest to customers from earlier phases of engagement. • Community Consultation Report (January 2017) – a report detailing the feedback and views of the community regarding future prices and services gained through extensive quantitative and qualitative research with 1,100 customers. • Various Barwon Water strategic and business documents – including Annual Reports, Strategic Intent, Strategy 2030 and 2017 Urban Water Strategy. • Responses to Panel questions – including detailed 'report back' at end of Day 2 of Panel deliberations. • Barwon Water Proposed services and prices 2018-2023 (July 2017) – a report setting out the outcomes we propose to deliver, the actions we will take and the proposed prices customers will pay in return, based on the recommendations of our Community Panel. • Community Feedback Report (July 2017) – a report setting out the views of 1,260 customers about proposed outcomes and prices. We also made Board, Executive Leadership Team and senior management members available to the Community Panel to provide further information and to address questions.	Leading, Confident Score: 3.75

Guiding questions	Barwon Water's response	Score
To what extent has the business demonstrated that the matters it has engaged on are those that have the most influence on the services provided to customers and prices charged?	We clearly demonstrated through our iterative engagement process that we engaged on issues of most importance to customers, and on issues that have most influence on the services customers receive and the prices they are charged. We gathered customer views about, and asked our Community Panel to consider, a very broad remit: *What do you value most about water and sewerage services, and what do you expect in the future?* We clearly explained the areas of influence for our Community Panel, which included all aspects of our core services, community services and charges. However, we also explained that some areas were outside their realm of influence, such as our regulatory and legislative obligations; physical constraints relating to water and sewerage; and business operations, such as treatment processes. Further details are provided in Chapter 4 and our Community Panel handbook.	Leading, Confident Score: 3.75
To what extent has the business explained how it decided when to carry out its engagement?	We adopted a new approach that allowed customers to inform development of our submission through three distinct phases of engagement, which began early in June 2016. We have clearly demonstrated that we have undertaken engagement early in the price review process to allow our customers to influence the development of this submission. Further details are provided in Chapters 2, 3, 4 and 5.	Advanced, Very Confident Score: 3.5

Guiding questions	Barwon Water's response	Score
To what extent has the business demonstrated how its engagement with customers has influenced its submission?	Our submission and engagement process clearly demonstrates that customers have influenced all elements of our submission and their level of influence has been material. Our outcomes align directly with the five outcomes recommended by our Community Panel. Our levels of service, actions and expenditure to deliver these outcomes were directly informed by the fifteen preferences recommended by our Community Panel. We tested our proposed outcomes, services and prices with our community prior to finalizing our submission. In July 2017, we publicly released a document outlining our proposed services and prices from 2018 to 2023. It explained the outcomes we propose to achieve, the key actions we propose to take and the proposed prices customers will pay in return. We saw this as an important way of checking in with customers to ensure we had accurately captured what we had heard and what customers had told us. We invited comment on our proposals via written submissions or completion of an online survey. 4 submissions were received and 1,260 surveys were completed. We also reconvened our Community Panel to provide their views on our proposals, in light of the views of our broader community. In instances where our proposals did not exactly match the original recommendations of our Community Panel (such as their original recommendation to increase the residential water volume charge by 10%), we have tested our proposed approach with our Community Panel and they have given their support. Further details are provided in Chapters 5 and 8, and Sections 7.3 and 7.4, together with our proposed services and prices document, our community feedback report and our Community Panel's final report.	Leading, Very Confident Score: 4.0

PREMO element: RISK	PREMO Score: Advanced, Very Confident 3.5

- We have made significant commitments to **reducing uncertainty passed through to customers** through prices.
- We propose to **bear more risk on behalf of our customers** compared to the current regulatory period. Our customers will benefit from this reallocation of risk, in the form of lower prices than otherwise would have been the case.
- We will **introduce a net revenue cap**, under which we will bear the risk of our actual demand being lower than expected but share the benefit if it is higher than expected. We will pass back any net revenue gained from increased water demand sales to customers, in the form of lower prices (or investment in other outcomes) in the following regulatory period.
- We propose to introduce a **performance incentive scheme**, under which we will compensate customers (up to $11.5 million over the five year regulatory period) if we obtain an 'Advanced' PREMO rating, but do not deliver the outcomes that we have promised. This means that delivery risks will fall to us, not our customers. Again, we will pass back any revenue owed under the scheme to customers, in the form of lower prices (or investment in other outcomes) in the following regulatory period.
- We have **excluded $60 million of projects** from our capital expenditure forecast, so that customers only finance projects where scope, timing and costs are certain.
- We are adopting **lower project contingency allowances** than advised by our external reviewer, meaning that customers will not finance generous contingency allowances.
- We will bear the risk that we are unable to achieve the **ambitious targets** we have set ourselves to achieve further efficiencies in our business operations ($3.8 million per annum).
- Our proposed **GSLs are industry-leading and reflect customer feedback** by imposing appropriate financial penalties on us if service levels fall below expectations, including a new 'sewerage incident credit' scheme that was recommended by our Community Panel.

Guiding questions	Barwon Water's response	Score
To what extent has the business demonstrated a robust process for identifying risk, and how it has decided who should bear these risks?	We have utilised AS/NZS ISO 31000 Risk Management – principles and guidelines and the Victorian Government Risk Management Framework as the basis for developing our risk management framework. Further details are provided in Section 7.6. We also propose to bear more risk on behalf of our customers compared to the current regulatory period, recognising we are the party best able to manage these risks. Our customers will benefit from this reallocation of risk, in the form of lower prices than otherwise would have been the case. In particular: • We will introduce a net revenue cap (a slightly amended version of the ESC's autonomous demand model), under which we will bear the risk of our actual demand being lower than expected but share the benefit if it is higher than expected. We will pass back any net revenue gained from increased water sales volumes that exceed our forecasts to customers, in the form of lower prices (or, if customers prefer, investment in other outcomes) in the following regulatory period. • We have a robust optimisation process that enables us to determine which projects are required, and the timing of those projects. We have excluded $60 million of projects from our capital expenditure forecast, so that customers only finance projects where scope, timing and costs are certain. Further details are provided in Section 7.4.3. • We are adopting lower project contingency allowances than advised by our external reviewer, meaning that customers will not finance generous contingency allowances. In this respect, our capital expenditure program is the minimum prudent level of expenditure, based on our best available data. Further details are provided in Supporting Paper 5. • We have assumed that we will achieve ambitious targets we have set ourselves to achieve additional operating expenditure savings in our business operations (more than $19 million in total), which are not yet identified. We have used these efficiencies to offset regulated costs. We accept the risk that these savings will not be realised, but our customers will receive the benefit of these assumed savings in lower prices.	Advanced, Very confident Score: 3.5

Guiding questions	Barwon Water's response	Score
To what extent does the proposed guaranteed service level (GSL) scheme provide incentives for the business to be accountable for the quality of services delivered, and provide incentives to deliver valued services efficiently?	We propose to introduce a performance incentive scheme, under which we will compensate customers (by up to $11.5 million over the five year regulatory period) if we obtain an 'Advanced' PREMO rating, but do not deliver the outcomes that we have promised. This means that delivery risks will fall to us, not our customers. Again, we will pass back any revenue owed under the scheme to customers, in the form of lower prices (or, if customers prefer, investment in other outcomes) in the following regulatory period. These arrangements complement our GSL scheme by strengthening our accountability and providing strong incentives for us to deliver the outcomes customers want. Our proposed GSLs reflect the feedback we have received from customers and impose appropriate financial penalties on us if service levels fall below expectations. Importantly, however, our customer engagement revealed that the existing GSLs were largely operating at the right level in terms of service standards and financial penalties. We are proposing a new 'sewerage incident credit' scheme that was recommended by our Community Panel. Further details of our proposals in relation to GSLs are set out in Section 9.4 and Supporting Paper 2.	Advanced, Very Confident Score: 3.5

11. List of supporting papers

Paper number	Title	Purpose and content
1	Customer engagement	Provides further details on our customer engagement activities, addressing all of the matters in the ESC's Guidance Paper. It also lists the supporting documents that provide further details of our engagement process and findings.
2	Outcomes and Guaranteed Service Levels	Explains the outcomes (as informed by our customer engagement) that we plan to achieve in the next regulatory period, the measurable outputs and targets we have set to track our progress in delivering these outcomes and our proposed guaranteed service level arrangements to address those situations where performance falls short of our customers' expectations.
3	Demand forecasts	Provides further detail on our demand forecasting methodology for potable water, recycled water, sewerage, customer growth and sewer connections, addressing all of the matters in the ESC's Guidance Paper. It also sets out the supporting documents and assumptions that we relied upon in preparing our forecasts.
4	Operating expenditure	Provides further information to demonstrate that our forecasts are prudent and efficient, including detailed information to explain the basis of our forecasts and addressing all of the matters in the ESC's Guidance Paper.
5	Capital expenditure	Provides further information to demonstrate why our capital expenditure forecasts are prudent and efficient, including detailed information to explain the basis of our forecasts and addressing all of the matters in the ESC's Guidance Paper.
6	Prices and tariff structure	Addresses the requirements of the ESC's Guidance Paper in relation to prices and tariffs and explains how we have applied the ESC tariff principles and criteria in developing our tariff proposals.
7	Form of control	Provides details of our proposed form of control and why it delivers a better outcome for our customers. It also sets out our price adjustment proposals, in accordance with the ESC's Guidance Paper.

Each of these Supporting Papers detail the assumptions and supporting documents that we have relied upon in preparing this price submission. We can provide this information to the ESC on request. Each Supporting Paper sets out the attestation made by the relevant General Manager, which the Board has considered as part of its attestation process.

Appendix 1 – Tariff schedule ($ 2017-18)

Tariff	Unit	2018-19 Tariff	2019-20 Tariff	2020-21 Tariff	2021-22 Tariff	2022-23 Tariff	*2018-19 change*	*2019-20 change*	*2020-21 change*	*2021-22 change*	*2022-23 change*
Residential											
Water volume charge	$/kL	1.8840	1.9715	2.0630	2.1588	2.2591	*-16.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*
Water service charge	$/year	151.70	146.85	141.71	135.90	128.97	*-11.6%*	*-3.2%*	*-3.5%*	*-4.1%*	*-5.1%*
Sewer service charge	$/year	553.07	553.07	553.07	553.07	553.07	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Non Residential											
Water service charge	$/kL	2.2591	2.2591	2.2591	2.2591	2.2591	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Water volume charge	$/year	171.70	171.70	171.70	171.70	171.70	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sewer volume charge	$/kL	1.8775	1.8775	1.8775	1.8775	1.8775	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sewer service charge	$/year	334.65	334.65	334.65	334.65	334.65	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Fire Services											
Sewer Service charge	$/year	242.39	242.39	242.39	242.39	242.39	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Residential recycled water											
Class A recycled water	$/kL	1.3188	1.3800	1.4441	1.5112	1.5814	*-27.0%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*
Non-residential recycled water											
Class A	$/kL	1.8072	1.8072	1.8072	1.8072	1.8072	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Black Rock	$/ML	387.89	387.89	387.89	387.89	387.89	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Black Rock 'take-or pay'	$/ML	300.00	300.00	300.00	300.00	300.00	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Portarlington	$/ML	229.32	229.32	229.32	229.32	229.32	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Winchelsea	$/ML	229.32	229.32	229.32	229.32	229.32	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Anglesea	$/ML	97.28	97.28	97.28	97.28	97.28	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Class C - Apollo Bay	$/ML	97.28	97.28	97.28	97.28	97.28	*n/a*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Geelong region — Trade waste tariffs											
Trade waste volume charge	$/kL	1.8775	1.8775	1.8775	1.8775	1.8775	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
COD > 1200mg	$/kg	0.2660	0.2660	0.2660	0.2660	0.2660	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
SS > 500mg	$/kg	0.1990	0.1990	0.1990	0.1990	0.1990	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
TKN > 60mg	$/kg	1.1611	1.1611	1.1611	1.1611	1.1611	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
S > 50mg	$/kg	1.2690	1.2690	1.2690	1.2690	1.2690	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Colac region — Trade waste tariffs											
Trade waste volume charge	$/kL	1.8775	1.8775	1.8775	1.8775	1.8775	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
COD > 1200mg	$/kg	0.4621	0.4621	0.4621	0.4621	0.4621	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
SS > 500mg	$/kg	0.2686	0.2686	0.2686	0.2686	0.2686	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
TKN > 60mg	$/kg	1.3983	1.3983	1.3983	1.3983	1.3983	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
P > 14mg	$/kg	3.2800	3.2800	3.2800	3.2800	3.2800	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*

Tariff	Unit	2018-19 Tariff	2019-20 Tariff	2020-21 Tariff	2021-22 Tariff	2022-23 Tariff	*2018-19 change*	*2019-20 change*	*2020-21 change*	*2021-22 change*	*2022-23 change*
Application fees											
Application fee - permit	$/app	143.70	143.70	143.70	143.70	143.70	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Application fee - agreement	$/ app	518.95	518.95	518.95	518.95	518.95	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Annual fee											
Category 5	$/year	2,395.40	2,395.40	2,395.40	2,395.40	2,395.40	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Category 4	$/year	962.94	962.94	962.94	962.94	962.94	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Category 3	$/year	434.32	434.32	434.32	434.32	434.32	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Category 2	$/year	245.89	245.89	245.89	245.89	245.89	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Category 1	$/year	183.59	183.59	183.59	183.59	183.59	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Re-Sampling & Analysis of Non-Compliant Trade Waste	$/item	359.25	359.25	359.25	359.25	359.25	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Asset Protection Fee	$/item	1,224.81	1,224.81	1,224.81	1,224.81	1,224.81	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Re-assessment of risk ranking	$/item	159.65	159.65	159.65	159.65	159.65	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Contravention Charges											
Unpermitted discharge – category 1	$/item	798.42	798.42	798.42	798.42	798.42	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Unpermitted discharge – categories 2-5	$/item	1,596.90	1,596.90	1,596.90	1,596.90	1,596.90	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Reporting violation – category 1	$/item	319.33	319.33	319.33	319.33	319.33	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Reporting violation – categories 2-5	$/item	798.42	798.42	798.42	798.42	798.42	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Monitoring violation – category 1	$/item	319.33	319.33	319.33	319.33	319.33	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Monitoring violation – categories 2-5	$/item	638.73	638.73	638.73	638.73	638.73	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Discharge violation – type 1, category 1	$/item	798.42	798.42	798.42	798.42	798.42	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Discharge violation – type 1, categories 2-5	$/item	1,596.90	1,596.90	1,596.90	1,596.90	1,596.90	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Discharge violation – type 2, category 1	$/item	399.20	399.20	399.20	399.20	399.20	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Discharge violation – type 2, categories 2-5	$/item	798.42	798.42	798.42	798.42	798.42	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Treatment violation – category 1	$/item	399.20	399.20	399.20	399.20	399.20	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Treatment violation – categories 2-5	$/item	798.42	798.42	798.42	798.42	798.42	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
New Customer Contributions (per lot)											
Water (incl. Recycled Water) - infill	$/lot	2,985.48	2,985.48	2,985.48	2,985.48	2,985.48	*5.9%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Water (incl. Recycled Water) - greenfill	$/lot	602.11	602.11	602.11	602.11	602.11	*-78.6%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sewer - infill	$/lot	0.00	0.00	0.00	0.00	0.00	*-100.0%*	-	-	-	-
Sewer - greenfill	$/lot	0.00	0.00	0.00	0.00	0.00	*-100.0%*	-	-	-	-
Water by Agreement – customers not in declared service area											
Untreated Water, service charge (70% of water tariff service charge)	$/year	106.19	102.79	99.19	95.12	90.27	*-11.6%*	*-3.2%*	*-3.5%*	*-4.1%*	*-5.1%*
Untreated water - volume charge (70% of water volume charge)	$/kL	1.3188	1.38	1.4441	1.5111	1.5813	*-16.6%*	*4.6%*	*4.6%*	*4.6%*	*4.6%*

Tariff	Unit	2018-19 Tariff	2019-20 Tariff	2020-21 Tariff	2021-22 Tariff	2022-23 Tariff	*2018-19 change*	*2019-20 change*	*2020-21 change*	*2021-22 change*	*2022-23 change*
Treated Water, service charge (85% of water tariff service charge)	$/year	128.94	124.81	120.45	115.51	109.62	*-11.6%*	*-3.2%*	*-3.5%*	*-4.1%*	*-5.1%*
Treated water - volume charge (parity with water volume charge)	$/kL	1.8840	1.9715	2.0630	2.1588	2.2591					
Miscellaneous fees and charges											
Information Statement	$/item	25.68	25.68	25.68	25.68	25.68	*3.6%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sewer Application Fee - New	$/item	102.38	102.38	102.38	102.38	102.38	*17.6%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Sewer Application Fee - Alteration and repair	$/item	94.73	94.73	94.73	94.73	94.73	*46.7%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Tenant meter reading	$/item	28.11	28.11	28.11	28.11	28.11	*-0.2%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Special meter reading	$/item	13.50	13.50	13.50	13.50	13.50	*2.3%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Supply of Meter & Assembly (recycled) in a Dual Pipe area	$/item	299.48	299.48	299.48	299.48	299.48	*10.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Metered Hydrant Yearly service charge - FHYW	$/item	1,111.43	1,111.43	1,111.43	1,111.43	1,111.43	*103.3%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Portable Metered Hydrant Security deposit 65mm - FHLB	$/item	462.02	462.02	462.02	462.02	462.02	*7.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Portable Metered Hydrant security deposit 25mm - FHSB	$/year	192.27	192.27	192.27	192.27	192.27	*18.8%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Installation of Recycled meter in Dual Pipe area	$/item	232.01	232.01	232.01	232.01	232.01	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Supply of Meter & Assembly (potable) in Dual Pipe area	$/year	247.60	247.60	247.60	247.60	247.60	*-2.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Installation of Potable meter in Dual Pipe area	$/item	210.08	210.08	210.08	210.08	210.08	*-9.5%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Mandatory inspection of Dual pipe recycled water residential	$/item	143.87	143.87	143.87	143.87	143.87	*3.2%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*

Appendix 2 - Checklist of information requirements for Barwon Water's 2018 price submission

Guidance paper section:	**3.1.1 - Managing risk**
Addressed in:	Chapter 10 – PREMO self assessment Supporting Paper 5 – Capital Expenditure

Guidance paper requirement - Managing risk	Document reference
In its price submission a water business must: • identify any significant risks that may impact on customer prices or services, and if requested, make available to the Commission scenario analysis for each risk including an assessment of the nature and scale of the risk and its probability of occurring	There are no significant risks identified that may impact customer prices or services during the next regulatory period. Our approach is to take on more risk on behalf of customers, as summarised in section 10.1.
• identify how it has addressed significant risks through its proposals, explain how the business considered the allocation of risk, and demonstrate how its proposals support efficiency	Section 10.1 summarises our approach to risk. Our approach is focused on providing the best offer for our customers, which means Barwon Water taking on more risk.
• provide evidence that the business has given strategic consideration to the allocation and management of risk in developing its price submission — this may involve providing references and making available to the Commission material on the business's risk identification and management framework or processes, rather than including detail in a price submission.	In addition to section 10.1, Supporting Paper 5 (capital expenditure) sections 4.5, 4.6, 4.7 and 4.8 discuss our approach to risk identification and management.

Guidance paper requirement - Managing risk	Document reference
Upon request, a water business must also make available to the Commission the following information about significant risks the water business proposes to manage that require cost allowances: • the categorisation of the risk (as operational or financial risk, for example) • measurement of the risk including: • the nature and scale of the risk • the probability of the risk event occurring • factors influencing the probability of the risk event occurring • the financial or service impact of the risk if it occurs • options considered for allocating the risk • rationale for the allocation of the risk, given alternative options • an explanation of why the regulatory risk mitigation tools listed in Attachment 4 of the Guidance Paper do not adequately mitigate the risk • the role customers will be expected to play in dealing with these risks and how customers will be engaged in this process.	Not applicable. This information is available on request.

Guidance paper section:	**3.2.2 - Regulatory period**
Addressed in:	Executive summary

Guidance paper requirement - Regulatory period	Document reference
If a water business proposes a five year regulatory period, it needs only to state this in its price submission.	Barwon Water proposes a five year regulatory period. See page 1 of the Executive Summary.
If a business proposes a different term, then the submission must: • provide reasons for the regulatory period, having regard to the benefits and risks identified in section 3.2.1, including demonstrating that the benefits of a longer or shorter period outweigh the risks and costs from a customer's perspective • outline the results of customer engagement on the length of regulatory period, and how feedback has been taken into account.	Not applicable - see above.
In addition, for proposed regulatory periods longer than five years, a price submission must: • Demonstrate that the expenditure forecasts and asset management plans underpinning the price submission are sufficiently robust, particularly having regard to the capacity of the assets and demand forecasts towards the end of the proposed regulatory period. • Include details of mechanisms that will provide customers and the Commission with confidence that prices reflect value for money and efficient service delivery after year five of the proposed regulatory period. • Describe how the business will keep customers engaged throughout the longer regulatory period, including how it will update customers on performance. • Describe how the business will adapt to changing customer needs during the regulatory period, within the constraints of the determination. For example, the approach to re-aligning capital programs in response to customer preferences. • Outline the business's approach to dealing with uncertainty and risk during the regulatory period, particularly financial viability risk, having regard to the mechanisms for mitigating risk outlined in Attachment 4.	Not applicable - see above.

Guidance paper section:	**3.3.2 - Customer engagement**
Addressed in:	Chapter 2 - Testing ideas; Chapter 3 - Listening to our customers; Chapter 4 - Learning from our Community Panel; 5 - Testing our proposal. Supporting Paper 1 - Customer Engagement Supporting Paper 2 - Outcomes and GSLs

Guidance paper requirement - Customer engagement	Document reference
A price submission must: • describe and justify how and when the business engaged with its customers	Chapters 2, 3, 4 and 5. Supporting Paper 1, sections 3, 4, 5 and 6.
• describe and justify the matters covered by customer engagement	Chapters 2 and 3. Supporting Paper 1, sections 3, 4, 5 and 6.
• explain what the business learned from customer engagement, and how it satisfied itself that customers were given a reasonable and fair opportunity to participate and that any views expressed were sufficiently representative of its customers	Chapters 4 and 5. Supporting Paper 1, sections 3.2, 4.5, 5.4 and 6.3.
• explain how feedback was taken into account by the business in reaching its proposals	Chapters 4, 5 and 6. Supporting Paper 2, section 3 and Appendix.
• explain how the business will address customer expectations that will not or cannot be met.	We believe that we can meet customers' expectations, as evidenced by Chapter 5.
A business must make available, or provide on request, resources and materials provided to customers during its engagement, and any customer feedback about the engagement program.	This information is available on request. A document list is provided in section 7.2 of Supporting Paper 1 and section 8.2 of Supporting Paper 2.

Guidance paper section:	**3.4.2 - Outcomes**
Addressed in:	Chapters 4 - Learning from our Community Panel; Chapter 5 - Testing our proposal; Chapter 6 – Delivering Outcomes; Chapter 7 – Balancing costs, services and risks; Chapter 8 - Setting fair and equitable prices. Supporting Paper 2 - Outcomes and GSLs Supporting Paper 4 – Operating Expenditure Supporting Paper 5 – Capital expenditure.

Guidance paper requirement - Outcomes	Document reference
A price submission must: • present a set of customer outcomes, each with measurable outputs and deliverables and associated targets	Chapters 6 and 9. Supporting Paper 2, Appendix.
• explain how the outcomes were informed by the business's customer engagement program	Chapters 5 and 6. Supporting Paper 2, Appendix.
• specify the key actions, activities and programs that the business will undertake to meet its targets (and consequently outcomes)	Chapter 6. Supporting Paper 2, Appendix. Supporting Paper 4, section 4. Supporting Paper 5, section 3.
• demonstrate the connection between the outputs, key actions, activities and programs proposed and achievement of a specified outcome	Chapter 6. Supporting Paper 2, Appendix. Supporting Paper 4, section 5. Supporting Paper 5, section 3.

Guidance paper requirement - Outcomes	Document reference
• present and explain any cost increases or cost savings for operating or capital expenditure that correspond to each outcome	Sections 7.3.4 and 7.4.4. Supporting Paper 4, section 7.2. Supporting Paper 5, section 3.
• explain how the cost increases or cost savings are reflected in prices charged to customers.	Chapters 4 and 8. Supporting Paper 2, Appendix.
A business may also choose to describe in its price submission: • how the business proposes to report on performance against the delivery of its outcomes to customers during the next regulatory period, including: • its proposed strategy for communicating its performance to customers • how the business might respond to underperformance on outcome delivery • how the business might adapt its outcomes to respond to changing customer preferences, including an ongoing customer engagement program to inform business priorities throughout the next regulatory period. Describing the business's proposed customer reporting process may support a water business's PREMO rating.	Chapter 9.

Guidance paper section:	**3.5.2 - Guaranteed Service Levels**
Addressed in:	Chapter 9 – Promising to deliver Supporting Paper 2 - Outcomes and GSLs

Guidance paper requirement - Guaranteed Service Levels	Document reference
A price submission must specify each GSL and the corresponding payment or rebate amount that will apply where a customer has received a level of service below the guaranteed level.	Section 9.4. Supporting Paper 2, section 4.
A price submission must identify and justify any changes to the GSL scheme compared with those approved for the current regulatory period.	Section 9.4. Supporting Paper 2, section 4.
For any new or amended GSL, a price submission must: • explain the basis for the GSL, including how it has been informed by customer engagement • specify whether benefits to customers will take the form of payments or rebates • explain the reasons for the proposed size of the customer payment or rebate that applies to each GSL.	Section 9.4. Supporting Paper 2, section 4.

Guidance paper section:	3.6.2 - Revenue requirement
Addressed in:	Chapter 7 – Balancing costs, services and risks

Guidance paper requirement - Revenue requirement	Document reference
The price submission must specify a water business's forecast total revenue required for the next regulatory period. The forecast revenue required must also be provided for each year of the next regulatory period.	Section 7.5.3.
The price submission must also provide an estimate of the required revenue for each year after the next regulatory period to at least 2027-28, providing a brief explanation of the reasons for the trend in the forecast over the ten year period from 1 July 2018.	Section 7.5.3.

Guidance paper section:	3.7.2 - Forecast operating expenditure
Addressed in:	Chapter 7 – Balancing costs, services and risks Supporting Paper 4 - Operating expenditure Completed Financial Model Template

Guidance paper requirement - Forecast operating expenditure	Document reference
A price submission must include a forecast of total prudent and efficient operating expenditure for the next regulatory period, including a forecast for each year of the next regulatory period. Forecast operating expenditure is to be presented separately for each major service category. (Depending on the business, the major service categories may include water, sewerage, recycled water, bulk water, rural water, irrigation, drainage, domestic and stock, and diversions.)	Section 7.3.2. Supporting Paper 4, section 2.

Guidance paper requirement - Forecast operating expenditure	Document reference
For total and annual forecast operating expenditure and for each major service category, forecast operating expenditure for each year of the next regulatory period, and beyond to at least 2027-28, must be further broken down where relevant, in the financial model for: • operations and maintenance • bulk charges (further broken down into bulk charges by type and system, for example, transfer charges, Greater Yarra System – Thompson River fixed charges, Victorian Desalination Plant – Water Order variable charges) • treatment • customer service and billing • GSL payments • licence fees (Essential Services Commission, Department of Health and Human Services, and EPA Victoria) • corporate costs, and • other operating expenditure.	The completed Financial Model Template contains this information, and is provided as part of the price submission.
Forecasts for the environmental contribution must also be provided in the financial model.	Supporting Paper 4, section 8.5. The completed Financial Model Template contains this information, and is provided as part of the price submission.
A business must also provide actual operating expenditure for the current regulatory period (using forecasts for 2017-18), categorised in the same way as above, in the financial model.	The completed Financial Model Template contains this information, and is provided as part of the price submission.
Forecast operating expenditure must be presented relative to a reference or baseline operating year, with allowance for customer growth and cost efficiency improvements over the next period. Any significant changes in the forecast years' costs relative to this baseline year must be clearly presented and explained, including how they are reflected in the proposed customer outcomes and how they represent improved customer value.	Section 7.3.3. Supporting Paper 4, section 5 sets out the derivation of baseline controllable operating expenditure. Supporting Paper 4, section 6 sets out information on growth and efficiency factors. Supporting Paper 4, section 7 provides information on forecast changes to controllable operating expenditure.

Guidance paper requirement - Forecast operating expenditure	Document reference
BOX 3.1 - BASELINE CONTROLLABLE OPERATING EXPENDITURE In preparing forecast operating expenditure, a price submission must establish a baseline controllable operating expenditure which comprises efficient recurring controllable costs from the last full year of actual data (2016-17) for those activities and services that are expected to be incurred throughout the next regulatory period. The baseline is established from the actual prescribed operating expenditure for 2016-17, adjusted as follows: • remove any non-controllable expenditure • remove any one-off or non-recurring expenditure items incurred in that year, or add any normally occurring items that did not occur in that year • remove any further ongoing cost savings or efficiency commitments that will be realised in the final year of the current regulatory period (2017-18), for example commitments made by a water business following its efficiency review in 2014. A price submission must justify the adjustments proposed to the baseline year in order to establish the baseline controllable operating expenditure, and demonstrate that this represents efficient ongoing operating expenditure (consistent with any efficiency targets for the current regulatory period).	Section 7.3.3. Supporting Paper 4, section 3 sets out our operating expenditure forecasting methodology, which is consistent with the ESC's requirements. Supporting Paper 4, section 5 sets out the derivation of baseline controllable operating expenditure, in accordance with the ESC's requirements. Supporting Paper 4, section 5 presents benchmarking information to demonstrate that the baseline operating expenditure is efficient.
Using the 2016-17 baseline controllable operating expenditure, a water business must propose and justify: • its forecast customer growth rate assumptions (for each year) • its annual cost efficiency improvement rate (for each year) • how proposed cost changes deliver improved customer value.	Section 7.3.3. Supporting Paper 4, section 6 sets out information on growth and efficiency factors. Supporting Paper 4, sections 4 and 7.2 explain the feedback we received from customers, the initiatives we will take to address customer feedback and the expenditure proposed to deliver these initiatives.
A price submission must also: • demonstrate how proposed cost changes relate to the proposed customer outcomes and the associated outputs and deliverables, and in particular:	Sections 7.3.4 and 7.4.4. Supporting Paper 4, section 4 provides information on the operating expenditure activities required to deliver the outcomes sought by our customers. Supporting Paper 4, section 7.2 provides information on operating expenditure initiatives to address customer feedback.

Guidance paper requirement - Forecast operating expenditure	Document reference
- identify and explain operating expenditure savings or new operating expenditure arising from capital expenditure and projects	Savings from renewables projects are factored into our operating expenditure forecasts, as explained in section 7.3.3. No other cost savings (or increases) are expected to arise from our capital expenditure projects.
- explain any trend or major annual variations in forecast operating expenditure (including identifying cost items that are having an upward or downward influence on operating expenditure) compared with historic operating expenditure.	Sections 7.3.2 and 7.3.3. Supporting Paper 4, section 2.
• demonstrate that proposed costs associated with new or revised regulatory obligations and policy requirements are prudent and efficient	No new obligations are forecast.
• set out and where relevant, justify the non-controllable cost forecasts including: - bulk water purchases from other water businesses - regulatory licence fees - environmental contribution - any other proposed non-controllable costs	Section 7.3.3, step 4. Supporting Paper 4, section 8.
The price submission should explain the business's approach to allocating shared costs, or reference documentation that may be requested by the Commission to verify the business's approach.	Supporting Paper 4, section 3 and Appendix 2.

Guidance paper section:	3.8.2 - Forecast capital expenditure
Addressed in:	Chapter 7 – Balancing costs, services and risks Supporting Paper 5 - Capital expenditure Completed Financial Model Template

Guidance paper requirement - Forecast capital expenditure	Document reference
A price submission must include a forecast of total prudent and efficient capital expenditure for the next regulatory period, including forecast capital expenditure for each year of the next regulatory period.	Section 7.4.1. Supporting Paper 5, section 2.
Forecast capital expenditure is to be presented by major service category[45] and by the following cost drivers: • forecast capital expenditure to maintain service standards — that is, renewals • forecast capital expenditure to expand or improve services — that is, growth and improvements/compliance (improvements or upgrades to existing services or to comply with existing or changed government or regulator obligations).	Supporting Paper 5, section 2.
The business's financial model must also specify actual capital expenditure for the current regulatory period (including a forecast for 2017-18), categorised in the same way as above.	The completed Financial Model Template contains this information, and is provided as part of the price submission.
Capital expenditure will fall into one of three key types: • Major capital projects — large, discrete capital investment projects (may be completed within a regulatory period, or may span more than one period) • Capital programs — ongoing programs of capital expenditure allocation, containing multiple works or projects (for example; water main renewals, sewer odour management, ICT equipment upgrades, etc.) • Other capital expenditure — typically smaller discrete projects and programs.	Supporting Paper 5, sections 5.2, 5.3 and 5.4 present information on these three capital expenditure types.

[45] Depending on the business, the major service categories may include water, sewerage, recycled water, bulk water, rural water, irrigation, drainage, domestic and stock, and diversions.

Guidance paper requirement - Forecast capital expenditure	Document reference
A price submission must present the capital expenditure forecasts set out according to these three key types, as follows: **Major capital projects** — comprising the _top 10‘ discrete capital projects, by total capital cost, to be started or completed during the next regulatory period. A business may also include significant discrete projects that fall outside the top 10 by cost — those large but uncertain projects to be addressed by the alternative options described above, for example. For each of these major projects, provide: • the project name and scope, and relevant major service and asset category • justification for the project, including the cost driver • start and completion dates • total capital cost (itemising any government or customer contributions), and expenditure by year • objectives of the project, including how the project aligns with the various customer outcomes proposed (section 3.4) • and have available: - a business case outlining the options considered for achieving the identified objectives and the approach to identifying the optimal solution - risk analysis of the selected option and plans to mitigate the identified risks to ensure the project can be delivered on budget and on time - the incentive and penalty payment arrangements with contractors (A business‘s proposed prices must reflect incentive and penalty payment arrangements that are based on a symmetrical sharing of risk for delivery or non-delivery of projects) - information to identify whether the project has (or will be) the subject of competitive tendering.	Supporting Paper 5, section 5.2

Guidance paper requirement - Forecast capital expenditure	Document reference
Capital programs — all key capital expenditure programs or allocations that will be ongoing throughout the regulatory period (excluding any discrete projects separately specified in the ‗top 10' above). For each program, provide: • the program (or cost allocation) name, and relevant major service category • the cost driver • total capital cost (itemising any contributions), and expenditure by year • objectives of the program, including how the program aligns with the various customer outcomes proposed (section 3.4) • historical annual costs, and an explanation for significant increases or decreases in the forecast average annual expenditure • and have available: - the list of projects included within the program or cost allocation for the next regulatory period, and business cases and options analyses - a description of the methodology for assessing risk and prioritising projects within the program - the cost estimation basis.	Supporting Paper 5, section 5.3
Other capital expenditure — all other capital expenditure not associated with a defined major project or major capital program should be grouped into one or more programs as appropriate, to be included under the capital programs list, as above.	Supporting Paper 5, section 5.4
Consistent with the above capital expenditure breakdowns (by type and major service category) in the price submission or financial model where appropriate, a water business must also: • for each year of the next regulatory period, and beyond to at least 2027-28, provide annual forecasts for capital expenditure separately identifying (where appropriate) and reconciling: - total capital expenditure - contributions (government and customer) - gifted assets - proceeds from asset sales - written down value of assets disposed, and - net capital expenditure.	Section 7.5.1. Supporting Paper 5, section 2.1

Guidance paper requirement - Forecast capital expenditure	Document reference
• explain the methodology used to estimate forecast capital expenditure	Supporting paper 5, section 4.
• identify and explain the key assumptions which underpin the capital expenditure forecasts by each major service category, and how any risks or uncertainties have been addressed	Risk and uncertainty is discussed in Supporting Paper 5, sections 4.2, 4.3, 4.5 and 4.8. The assumptions and the expenditure categories that they affect are listed in Supporting Paper 5, section 7.2.
• justify the timeframe for delivering the proposed new capital expenditure given the business's delivery of major projects in the past	Supporting Paper 5, section 4.5.
• explain the reasons for the trend or any major annual variations in forecast capital expenditure (including identifying cost items that are having an upward or downward influence on capital expenditure), compared with historic capital expenditure	Supporting Paper 5, section 2.3.
• justify the total forecast capital expenditure against the criteria in section 3.8.1 of the Guidance Paper, taking into account: - forecast demand - any relevant industry or economy-wide benchmarks of expenditure - the substitution possibilities between forecast operating expenditure and forecast capital expenditure.	Supporting Paper 5, section 6.

Guidance paper section:	3.9.1 - Forecast Regulatory Asset Base
Addressed in:	Chapter 7 – Balancing costs, services and risks Completed Financial Model Template

Guidance paper requirement - Forecast Regulatory Asset Base	Document reference
A price submission must propose: • the closing value for the RAB at 30 June 2017 (using actual data) • the opening value of the RAB at 1 July 2018 (calculated according to the criteria above) • the forecast value of the RAB for each year of the next regulatory period, in accordance with the prudency criteria set out above • the forecast value of the RAB for each year after the next regulatory period until at least 2027-28.	Section 7.5.1 provides summary information on the RAB. The completed Financial Model Template contains the required information, and is provided as part of the price submission.
A price submission must also: • provide estimates for regulatory depreciation (section 3.9.2)	Section 7.5.1 provides summary information on depreciation. The completed Financial Model Template contains the required information, and is provided as part of the price submission.
• provide separate data and justify estimates for: - government contributions — federal, state and local government contributions towards the capital cost of a project - customer contributions — upfront cash payments made by new customers - the value of gifted assets — assets constructed and then handed over to the water business to operate and maintain	Section 7.5.1. The completed Financial Model Template contains the required information, and is provided as part of the price submission
• include estimates of revenue expected from disposal of assets for each year from 1 July 2018, to be deducted from the roll forward of the RAB.	Section 7.5.1 provides summary information on the RAB. The completed Financial Model Template contains the required information, and is provided as part of the price submission.

Guidance paper section:	3.9.2 - Regulatory Depreciation
Addressed in:	Chapter 7 – Balancing costs, services and risks Completed Financial Model Template

Guidance paper requirement - Regulatory Depreciation	Document reference
The Commission prefers a straight line depreciation profile. The estimates and profiles for regulatory depreciation should reflect reasonable assumptions about asset life and utilisation.	Section 7.5.1.
Water businesses can propose an alternative approach to straight line depreciation having regard to the following assessment principles: • the depreciation rate should account for technological change, projected future demand and any other factors that may affect the value of the assets in the future • the technical lives of assets, and • impact on prices over the long-term.	Section 7.5.1.

Guidance paper section:	3.9.3 - Cost of debt
Addressed in:	Chapter 7 – Balancing costs, services and risks Completed Financial Model Template

Guidance paper requirement - Cost of debt	Document reference
A business is not required to submit information on the cost of debt in its pricing proposals, as the cost of debt will be determined on the basis of the external data outlined above. However, the business must use the values above (in table 3.2) to estimate its revenue requirement and prices (the values in table 3.2 will be reflected in the financial model).	Section 7.5.3 shows the building block revenue requirement, which includes the cost of debt values contained in table 3.2 of the Guidance Paper. The Completed Financial Model Template contains the required values for the cost of debt.

Guidance paper section:	**3.9.4 - PREMO rating**
Addressed in:	Chapter 10 - PREMO self assessment

Guidance paper requirement - PREMO rating	Document reference
A price submission must identify the water business's self-rating of its submission as 'Leading', 'Advanced', 'Standard' or 'Basic'.	Chapter 10.
A price submission must also identify the rating for the Risk, Engagement, Management and Outcomes elements of PREMO.	Chapter 10.
Attachment 5 includes a PREMO assessment tool that water businesses must use to inform their PREMO ratings.	The assessment tool has been applied in chapter 10.
A price submission must provide information that satisfies the procedural requirements set out in the criteria (on pages 46 to 48 of the Guidance Paper).	Chapter 10.
The price submission must also: • identify the reasons for the self-ratings for the Risk, Engagement, Management and Outcomes elements of PREMO, with reference to the guiding questions above • identify the reasons for the price submission's overall PREMO rating.	Chapter 10.

Guidance paper section:	3.9.5 - Return on equity
Addressed in:	Chapter 7 – Balancing costs, services and risks Completed Financial Model Template

Guidance paper requirement - Return on equity	Document reference
A water business's proposed revenue requirement must incorporate a value for the return on equity that is no higher than the value specified in table 3.4 of the Guidance Paper for its proposed price submission rating. No further supporting information regarding the water business's return on equity is required.	Section 7.5.2 explains that our cost of equity reflects our self-assessed PREMO rating. Section 7.5.3 shows the building block revenue requirement, which includes the return on equity value consistent with our PREMO self-assessment. The Completed Financial Model Template contains the required value for the cost of equity.

Guidance paper section:	3.10 - Tax allowance
Addressed in:	Chapter 7 – Balancing costs, services and risks Completed Financial Model Template

Guidance paper requirement - Tax allowance	Document reference
The price submission must propose a total tax allowance for the next regulatory period. An estimate must also be provided for each year of the next regulatory period. The price submission must also: • state the basis on which the tax allowance for the next regulatory period has been calculated • provide an estimate of the income tax for each year after the next regulatory period up until at least 2027-28 • provide the business's latest corporate forecasts for annual tax payments for the next regulatory period, and make available to the Commission the basis for the forecasts.	Price submission section 7.5.2 presents this information. The completed Financial Model Template contains the proposed tax allowance.

Guidance paper section:	**3.11 - Demand**
Addressed in:	Chapter 7 – Balancing costs, services and risks Supporting Paper 3 - Demand forecasts Completed Financial Model Template

Guidance paper requirement - Demand	Document reference
A price submission must summarise a business's demand forecasts, including expected trends for the next regulatory period, as well as outline the key assumptions adopted to develop those forecasts. A business should use at least a 10 year horizon for demand forecasting and scenario work, and reflect this in its price submission.	Section 7.2 provides this information in summary form. Further detailed information is provided in Supporting Paper 3, section 2.1.
A price submission must also include: • a description of the key demand forecasting issues that lists and justifies the most important assumptions adopted in generating the forecasts — demand forecasts should be based on the latest Victoria In Future forecasts issued by the Victorian Government	Section 7.2.3. Section 7.2 of Supporting Paper 3 lists the key assumptions, including the projections in Victoria in Future 2016.
• a description of the forecasting methodology used, and the justification for using the methodology	Section 7.2 provides a summary of our forecasts and methodologies. Detailed descriptions of the forecasting methodologies are set out in Supporting Paper 3 as follows: • Potable water demand - Section 2.3 • Recycled water - Section 3 • Potable water supply - Section 4.3 • Sewerage - Section 5 • Customer growth and sewer connections - Section 6
• reference to any external reports or information relied upon	Section 7.2 of Supporting Paper 3 lists supporting documents relied upon.
• a description of how forecasts have accounted for the impact of any proposed changes to tariff structures or form of price control expected in the next regulatory period	We do not expect our proposed form of control or tariff structures to affect the demand for potable water.

Guidance paper requirement - Demand	Document reference
• details on the levels of restrictions or nature of any permanent water conservation measures reflected in the forecast	Section 2.2.1 of Supporting Paper 3 explains that we are factoring savings of 4% from water conservation measures. Our forecasts do not assume any water restrictions.
• written information on where price elasticity was applied, the input assumptions used, and how the assumptions were translated into the business's demand forecasts	Section 2.2.1 of Supporting Paper 3 explains the approach to price elasticity, noting that it is not a material issue in the next regulatory period..
• an explanation of how demand forecasts are consistent with proposed expenditure (in terms of the level and nature of expenditure).	This issue is discussed in Supporting Paper 3, section 7.1.
A water business must also make available on request by the Commission, evidence that a range of supply and demand scenarios were modelled, including low, normal and high water inflow scenarios, and written justification for the selection of the modelled scenario.	The required information is available on request.
The financial model will require a water business to provide detailed demand forecasts for every tariff and tariff category, by residential and non-residential customers. If detailed forecasts at this level are unavailable, a business must explain why and provide estimated demand for these services. The detail in the model does not need to be reproduced in the price submission.	The completed Financial Model Template contains this information

Guidance paper section:	**3.12.2 - Form of Price Control**
Addressed in:	Chapter 7 – Balancing costs, services and risks Supporting Paper 7 - Form of Control

Guidance paper requirement - Form of Price Control	Document reference
A price submission must clearly state the proposed form of price control to apply to each service over the next regulatory period.	Section 8.7.1 Supporting Paper 7, section 2.4.
If changes to the form of price control are proposed, then a price submission must: • explain how the proposed form of control would operate and services affected	Section 8.7.1 Supporting Paper 7, section 2.4.
• demonstrate the business has consulted with potentially affected customers, and explain how the feedback from customers informed its proposals, and how the change benefits customers	Section 8.7.1 Supporting Paper 7, section 4.1 explains that the proposed form of control is consistent with 'keeping prices as low as possible.'
• provide data and supporting information that describes how the proposed form of price control is consistent with providing signals about the efficient cost of delivering services and how it is likely to impact on price stability	Section 8.7.1 Supporting Paper 7, sections 2.2 to 2.4 explain that the incentive properties of the proposed form of control are consistent with the ESC's 'automonous demand model.' The approach will deliver a better outcome for customers, while ensuring that marginal revenue equals marginal costs if sales exceed the forecast amount.
• explain how the business considered risk allocation and management (including demand and financial risk)	Section 8.7.1 Supporting Paper 7, section 2.4.
• explain how a transition to a new form of price control may impact customers and the water business's approach to minimising any adverse impacts.	Section 8.7.1 Supporting Paper 7, section 2.4 explains that the proposed application of the new form of control is straightforward. No adverse impacts arise from its introduction.

Guidance paper section:	**3.13.2 - Prices and tariff structures**
Addressed in:	Chapter 8 - Setting fair and equitable prices; Supporting Paper 6 - Prices and tariff structures; Completed Financial Model Template.

Guidance paper requirement - Prices and tariff structures	Document reference
A price submission must: • Include a tariff schedule listing each tariff and the price (or principles) proposed, including each element of a multi-part tariff structure.	Appendix 1. Supporting Paper 6, Attachment.
• For any changes in tariff structures and principles, or new tariffs: - state how each tariff is to be applied — for example, frequency of charging, customer class, applying prices through connection or meter size - describe the relationship between the proposed price for a service and the associated short run or long run marginal cost - provide data and supporting information that describes how proposed tariffs are consistent with providing signals about the efficient cost of delivering services - justify how the proposed change delivers better signals to customers about the efficient costs of service provision - describe how the business considered risk and its allocation and management - provide a summary of the business‘s approach to consultation and how the views of customers informed the price submission.	These provisions only apply in relation to changes in tariff structures or new tariffs. Our tariff arrangements are unchanged from the current regulatory period, apart from the balance between fixed and variable charges, as explained in Section 8.1.2.
• For price changes of more than 10 per cent for any tariff in any year for the next regulatory period: - describe the relationship between the cost of service provision and the proposed price - provide a summary of the business‘s approach to consultation (including the approach to identifying affected customers) - summarise the customer feedback received on the proposed price increase - describe the transition arrangements considered, and ultimately proposed, for affected customers.	Section 8.1 Supporting Paper 6, section 3.

Guidance paper requirement - Prices and tariff structures	Document reference
• Provide estimated tariffs for each service for each year beyond the next regulatory period up until at least 2027-28, in the financial model.	Completed Financial Model Template

Guidance paper section:	3.14.2 - Adjusting prices
Addressed in:	Chapter 7 – Balancing costs, services and risks Chapter 8 - Setting fair and equitable prices Supporting Paper 7 - Form of Control

Guidance paper requirement - Adjusting prices	Document reference
A price submission must: • specify any proposed price adjustment mechanisms to apply in the next regulatory period, and specify the proposed process and/or formula for adjusting prices. The proposed price control formulas must continue to include a mechanism to allow for price adjustments to occur on an annual basis, including desalination water orders for those relevant businesses. • if proposing new or changed price adjustment mechanisms, then the price submission must: - clearly specify and explain how the adjustments would work - demonstrate the business has sought to appropriately balance revenue and cost risk between the business and its customers, without materially impacting on price stability - justify any proposal against relevant matters in clause 11 of the WIRO and consistency with proposed outcomes.	Section 8.7.2. Supporting Paper 7, section 3.3.
For any identified pass through or uncertain and unforeseen events, a price submission must also: • describe each proposed event, and explain why it is uncertain in its timing or impacts on the business or customers • explain why it is appropriate that customers should bear risk associated with the event • explain how the business considered the impacts on its incentives to pursue efficiencies • propose a price adjustment mechanism to implement the pass through.	Barwon Water does not propose any pass through mechanisms in addition to those that currently apply. Supporting Paper 7, section 3.3 provides further detail on how the proposed form of control operates with the current pass through arrangements.
As part of the transition to a 'trailing average' approach to estimating the cost of debt (as outlined in section 3.9.3), each water business must also propose a price adjustment mechanism (including price control formulas) that allows for prices to adjust on an annual basis to reflect movements in the cost of debt.	Section 8.7.2 Supporting Paper 7, section 3.4.

Guidance paper section:	**Miscellaneous matters** covered in sections 3.15.2 to 3.17.8
Addressed in:	See table below

Section	Matter	Guidance paper requirement	Document reference
3.15.2	New Customer Contributions	A price submission must specify the NCC charges proposed to apply, and provide sufficient evidence for the Commission to assess that proposed NCC have been established in accordance with the NCC pricing principles (shown in box 3.2 of the Guidance Paper).	Section 8.5 Supporting Paper 6, section 6.
3.16	Financial position	The financial model will calculate estimates for the four financial indicators specified in table 3.6 for each year to 2027-28. A water business must populate the financial model to enable the Commission to assess the business's financial position in the context of the prices proposed in its price submission.	Section 7.5.4. The completed Financial Model Template contains this information.
		A water business must also provide the Commission with the findings of any independent ratings assessments conducted by an independent credit ratings agency since 1 July 2013.	This information is provided to the ESC on a confidential basis when it becomes available as noted in section 7.5.4.
3.17.1	Summary	A price submission must contain a summary which outlines and brings together the key elements of its proposals. The summary should include: • an overview of proposed prices • indicative bill impacts of the proposed prices, by key customer group • an overview of the outcomes proposed for customers, including how services will change from previous levels • the business's nominated PREMO rating • an attestation from the board on the quality and accuracy of information provided in the price submission	Executive Summary sets out this information.

Section	Matter	Guidance paper requirement	Document reference
3.17.2	Board assurance	The board of a water business is required to attest to the quality and accuracy of the information included in its price submission, and that the price submission complies with the Commission's guidance in all material respects. This attestation, endorsed by a resolution of the board of directors of a water business, must be included in the price submission.	The attestation, endorsed by a resolution of the board is provided in the Executive Summary.
		To support its PREMO rating, a water business may wish to make available to the Commission information on the procedures implemented to ensure its price submission reflects the requirements of the Commission's guidance.	Chapter 10.
3.17.3	Financial model	A water business must complete the financial model prepared by the Commission to accompany its price submission. A water business's price submission must be consistent with the data provided in the financial model. The financial model will clearly identify the cells for which a water business must provide data. A water business must not amend any other cells in the financial model — this includes adding rows, columns, or information not requested by the Commission.	The completed Financial Model Template provided with the price submission accords with these requirements.
3.17.4	Requirement for reasonably-based information	All information contained in the price submission (and financial model — see section 3.17.3) must be reasonably-based. All financial and demand related information must represent the best available estimates at the time of finalising the submission.	Board attestation.
3.17.5	Basis upon which information is provided	All financial information (including prices, operating and capital expenditure) in a water business's price submission (and financial model) must be in 2017-18 dollars (with the March quarter 2017 CPI as the base).	Completed template information
		All reports, studies or any other materials (for example, research reports, policy documents, and cost benefit analysis or studies) which are relied upon in the price submission must be made available to the Commission.	All such documents are available on request.
3.17.6	Confidentiality	If there is information that a water business does not want disclosed publicly, because it is confidential or commercially sensitive, then the water business should discuss the matter with Commission staff before lodging the price submission.	Our price submission does not contain confidential information.

Section	Matter	Guidance paper requirement	Document reference
3.17.7	Notification of changes to assumptions	During the price review, a water business must promptly advise the Commission if it becomes aware of any substantial changes to the assumptions underpinning the proposals in its price submission. A water business must also explain the basis for the changed assumptions, and explain the impact on its proposals (if any). In the event of any changes, a water business must promptly provide the Commission with an updated financial model, reconciling changes to the financial model provided to the Commission with its price submission on 29 September 2017.	This provision applies only after the price submission is lodged on 29 September 2017.
3.17.8	Non-prescribed services	A water business's price submission must provide or reference information that demonstrates that the costs of non-prescribed services have been excluded from its expenditure and price calculations.	The template information has been prepared so that expenditure is appropriately attributed to prescribed and non-prescribed activities.