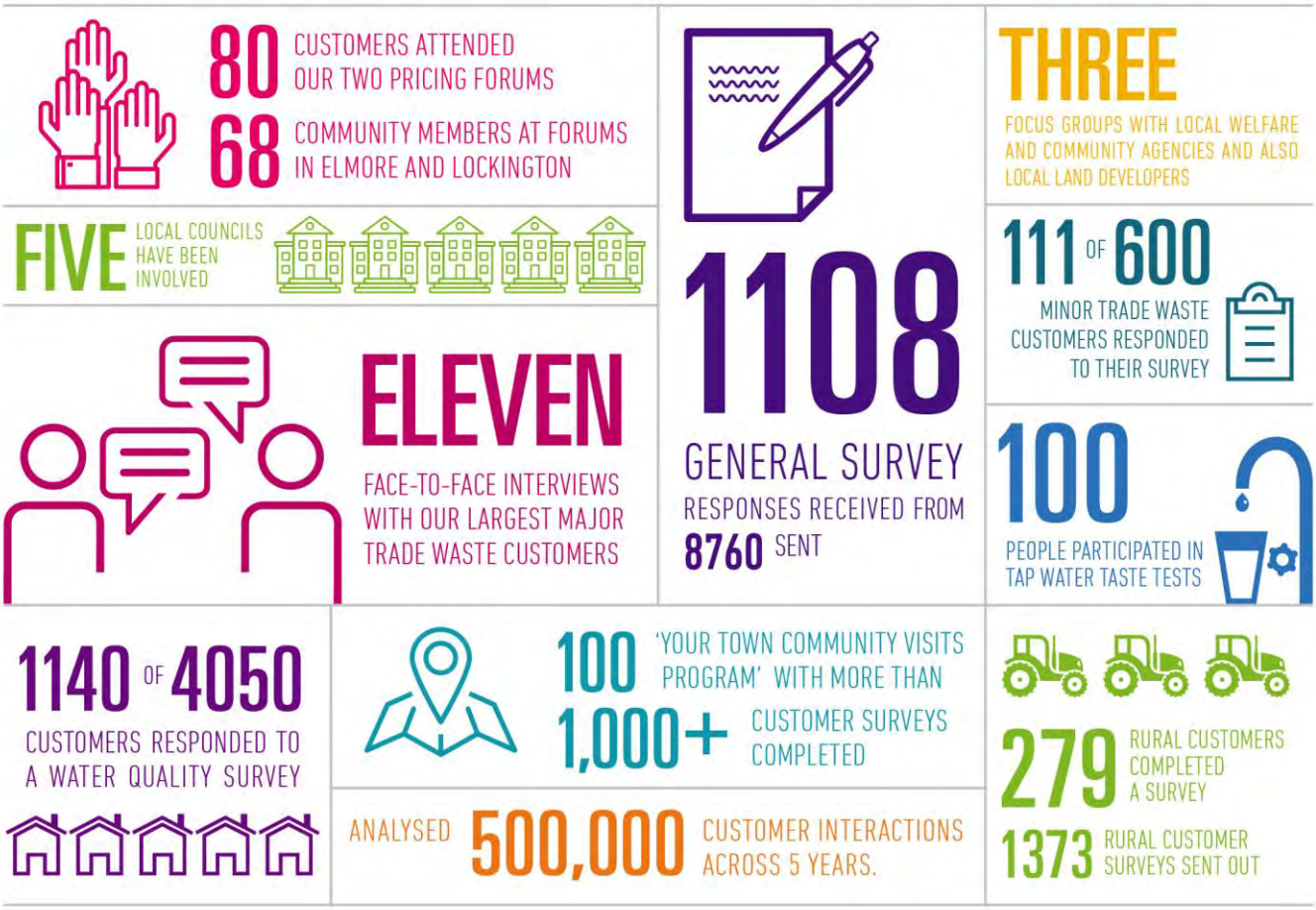
Coliban WATER

Water to live, grow & enjoy

Supplement A. What Customers Value



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A1 Our customer engagement – how we have listened

Real step-change in customer engagement demonstrating our commitment to increasing our customer centricity by defining value from the customer's perspective, not our perspective. Key features of our engagement:

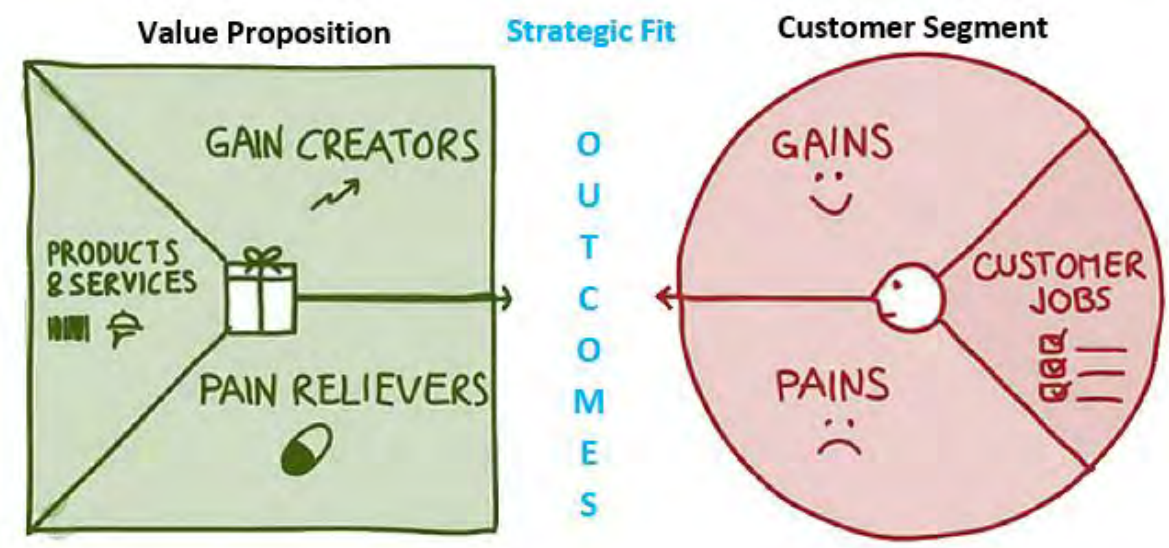
- ✓ *A Voice of the Customer* program with a focus on listening and learning, including data mining of more than 500,000 customer interactions since 2013 to identify seven key customer themes
- ✓ Community Engagement strategy based on the International Association for Public Participation spectrum (IAP2) to explore key themes and to listen, learn and understand what customers want and value
- ✓ Further customer segmentation to understand pains and gains for different groups of customers to shape Customer Outcomes
- ✓ Have we heard you correctly campaign to test and validate that our proposal met customer

A1.1 Introduction

At heart of our Pricing Submission is our customer. We prioritised customer engagement, and invested significant time and resources into this pivotal program of work, with the ambition of unearthing what matters to our customers, and identifying how we can better serve their needs. At all stages we have strived to achieve a customer-centric strategy by ensuring we define value from the customer perspective, not simply through our business-centric lens.

This increased focus on customer engagement signalled a commitment to put our customers at the heart of our decision making and create opportunities for open and ongoing dialogue with our diverse customer base, and then using these results to develop our future plans.

To articulate this and deliver a compelling Value Proposition, we followed a proven value proposition canvas methodology for developing a compelling Value Proposition, as outlined below.



Source: *Adapted from Osterwalder's value proposition canvas template*

This methodology offered an easy to understand overview of what our customer's needs are (and why), and to document or present the pains and gains they are experiencing from our products and services for each specific customer segment. It then enabled us to develop the products and services required to meet the needs and expectations of our customers to increase the value we offer to them.

For the purpose of this Pricing Submission, Customer Outcomes have been strategically placed between the two segments in the diagram to demonstrate the strategic fit or *Golden Threads* that will be highlighted throughout our 'best offer' to customers.

In order for us to populate the value proposition canvas, we answered the following questions:

1. Who are our customers?
2. How we engaged our customers?
3. What we heard from customers?

A1.2 Who are our customers

We provide water and wastewater services to a region with a population of approximately 162,000 people in 49 towns, across 16,500 square kilometres of central and northern Victoria, extending from Cohuna and Echuca in the north to Kyneton and Trentham in the south, and from Boort, Wedderburn, Bealiba and Dunolly in the west to Heathcote and Tooborac in the east.

Table A1 *– Number of customers by segment (2016-17)*

Customer Segment	
Residential - 67,314	Includes tenants, home owners, concessionaires, potable town, non-potable towns, recycled water
Non-residential – 6,849	Includes small businesses which have usage and waste water discharge in line with residential customers. Includes 1,274 minor trade waste customers comprising cafes, restaurants, laboratories, schools, nursing homes, accommodation providers and commercial laundries. Also service 18 major trade customers including some of the largest food manufacturers and the largest regional hospital in the state.
Rural – 1,374	Includes small and large customers who access water via a network of channels and pipelines under Section 51 licences.

In 2016-17 we had 21,655 customers who were eligible to receive concession payments from the Victorian Government for water and sewerage costs. We also had 591 customers who received a Utility Relief Grant.

A1.3 How we engaged our customers

Identifying and understanding what our customers value required a systematic approach. Our customer engagement program was designed to unearth robust insights, and can be summarised in three phases:

In 2016 the *Voice of the Customer* program, a summary of our understanding of the views of our customers, was developed using data mined from approximately 500,000 customer interactions beginning 2013 to identify seven key customer themes. Customer interactions included customer phone calls, emails, complaints, customer satisfaction surveys, five in-depth market research surveys and feedback from over 100 towns for our *Your Town* community visits program.

We then worked collaboratively with consulting firm Insync to develop an IAP2-aligned customer and stakeholder engagement plan for the Pricing Submission. Given our advanced and wide ranging knowledge of customers attained through the *Voice of the Customer* program, the aim of the additional engagement was to fill in gaps in our knowledge, seek answers to new questions and to refine the *Voice of the Customer*. This was to help us target our efforts with a deeper level of engagement prior to decision-making on a wide range of

issues. The plan identified the main customer segments, and listed the known opportunities or consistent themes within each segment that could potentially be addressed.

***Table A2** – Known opportunities or consistent themes within each customer segment*

Customer Segment	Known opportunities or consistent customer themes
Residential	Pricing, tariff structures, STED* sewer options, water taste in small towns, customer and community rebates, service levels, customer experience, sustainability, water security, restrictions.
Non-residential	Service levels, water quality, customer experience, sustainability
Trade waste (major & minor)	Trade waste reclassification, pricing, pre-treatment, water security, customer experience, sustainability
Rural	Water security, licencing structure, pricing, channel reconfiguration
Developers	Price/service trade-offs, developer service expectations
Local councils	Standpipes, pricing, regional growth

**Septic Tank Effluent Disposal (STED)*

The following table summarises our engagement approach for each customer segment based on the IAP2 Community Engagement Spectrum and the service classifications that we decided to engage on.

***Table A3 -** Customer Segment Engagement Approach by Service Classification*

		Core Services				Supplementary Services			Other
Customer Segment	Engagement Activity	Raw Water	Drinking Water (Health / Aesthetic)	Sewerage	Recycled Water	Information	Pricing	Billing	Capital Works
Residential									
	Customers General	Consult					Collaborate	Involve	
	Elmore Lockington Hardship			Empower			Empower		
	Palatability Tap Water Taste Test		Consult / Involve			Collaborate / Consult			Involve
Commercial									
	Councils	Collaborate				Consult			Collaborate
	Major TW	Involve				Empower	Involve		
	Minor TW	Consult					Consult		
Developers Rural	Lifestyle Commercial	Involve				Collaborate / Empower	Collaborate		Consult

Throughout the *Listening & Learning* phase we identified customer insights obtained from both our ongoing customer engagement and customer research and categorised and summarised these customer insights into key themes. Further targeted engagement of customer segments and the general community on values, needs and expectations helped us discover and test our customer insight key themes further.

In the *Hearing & Valuing* phase we identified issues of importance from the *Voice of the Customer* that required further exploration or deep dive to understand customer values, needs and expectations further. These 'emblem topics' provided opportunities for our customers and the community to provide input into significant business decisions. It also helped us refine the key customer themes.

Key features of these customer engagement phases included:

Customer insights - ongoing engagement

Customer Segments	How we engaged	When and where we engaged	Topics of engagement covered	What we learned
Residential, Non-residential, rural, minor trade waste	**Inform** Almost 500,000 customer interactions through phone calls, emails, complaints, customer satisfaction survey and 100 Your Town community visits	Period 2013 to 2017	Customer sentiments, observations (complaints) and interactions	Summarised customer insights into key customer themes. (Voice of the Customer document)

Discovery – targeted engagement

Customer Segments	How we engaged	When and where we engaged	Topics of engagement covered	What we learned
Stakeholders in the community service sectors	**Collaborate** More than 20 representatives from government, not for profit and financial services that work in the community sector, attended a forum at our offices	28 February 2017 Bendigo	Hardship assistance, better practice, fit for purpose options, policies and procedures	Agencies wanted more collaboration and learning opportunities. Future forums have been planned. (Hardship Workshop Summary)
600 Minor Trade Waste Customers	**Consult** Online customer survey	February 2017	Service quality, communication, general trade waste issues, expectations, value proposition	Classification system for charging fees is unfair and need to introduce a new risk based classification in 2018. (Minor TW fact sheet & Minor TW survey report)
18 Major Trade Waste Customers	**Consult** Face to face interviews - All 18 customers were invited with 5 customers participating	January – April 2017. At customer premises	Water quality, water availability, care for the environment, price & cost, service expectations, customer experience & expectation and trust & satisfaction	Concerned about general prices and price shocks. Prefer email communication and online platforms to help monitor their water use. (Major TW fact sheet & Major TW report)
All residential customers	**Consult** General online customer survey	20 March- 10 April 2017	Value for money, water quality, ease of doing business, rebates and care for the environment, trust & satisfaction	Strong support for our 10 year smooth price path and increased rebates. Implement self-service and online options for managing their accounts. Continue to be environmental and community leader in the region. (General Survey summary fact sheet & General Survey report Insync)
Rural customers	**Consult** Online customer survey	February 2017	Important issues, future intentions, pricing, service quality, guaranteed service levels, trading platform, customer experience	Water security and seasonal allocation most important to them. Supported a minimum allocation rebate and want more spent to maintain channels. (Rural summary fact sheet & Rural customers survey report)
The nine Councils in our region	**Consult** Online surveys and yearly Executive Team meetings	May 2017 and ongoing	Important issues, fees and charges, ease of doing business with us and water management practices	Consider discount for public open space watering and exemptions in drought. Standpipe ownership and importance of regional growth. (Council summary fact sheet & Council Survey report)

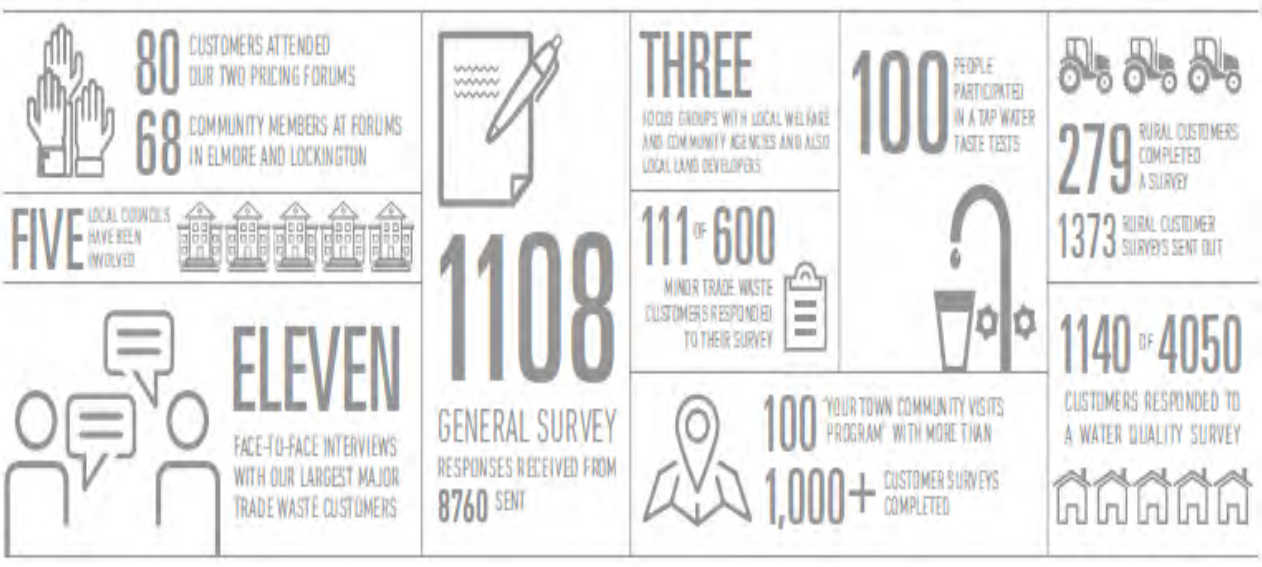
Explore – emblem topics

Customer Segments	How we engaged	When and where we engaged	Topics of engagement covered	What we learned
All customers in the Elmore Township	**Empower** Elmore community forum- STED sewer service and pricing	2 March 2017 Elmore	Customers given choice of 4 options for their STED sewer service	Elmore customers voted for Option 1 - reduction of $120 off their annual bill. (Elmore summary fact sheet & Elmore Forum report Insync & Video testimonials and quotes from session feedback forms)
All customers in the Lockington Township	**Empower** Lockington community forum- STED sewer service and pricing	3 March 2017 Lockington	Customers given choice of 4 options for their STED sewer service	Lockington customers voted for Option 3 – we will hire contactor to clean out septic tanks every 3 years. (Lockington summary fact sheet & Lockington Forum report Insync & Video testimonials and quotes from session feedback forms)
All customers	**Collaborate** Community forums – Pricing based on an Expression of Interest placed in local newspapers.	Forum 1 25 March 2017 Bendigo Forum 2 27 June 2017 Bendigo	Price path options, preferences, tariff structures, fixed and variable bills, form of price control	Customer panel voted for Option 2- prices less than inflation over a 10 year period. (Customer Pricing Forum summary fact sheet & Customer Pricing Forum Report Insync & video testimonies and quotes from session feedback forms)
All customers in rural towns	**Consult** Hard copy water quality survey sent to all rural towns.	February 2017	Drinking water quality in their town, do they own tanks, personal preferences for drinking our water	Drinking water quality and customer preferences in small communities. (Palatability and tap water taste test summaries fact sheet & Palatability survey report Insync)
General public	**Consult** Tap Water Taste Test public events – water quality of rural towns This event was promoted in the traditional and social media	Tap Water Taste Tests Bendigo Council 10 March 2017 Lake Weeroona (Bendigo) 17 March 2017	Drinking water quality in rural towns	Perceptions of drinking water quality in small communities that identified towns that should be upgraded for taste and odour. (Palatability and tap water taste test summaries fact sheet & Taste Testing report PS18)

Results from each engagement activity were summarised, and then shared with the targeted customer segment directly through sharing on our website to give them an opportunity to provide further feedback.

These are some of the ways we collected information from our customers.

Figure A1 *– Summary of customer engagement activities*

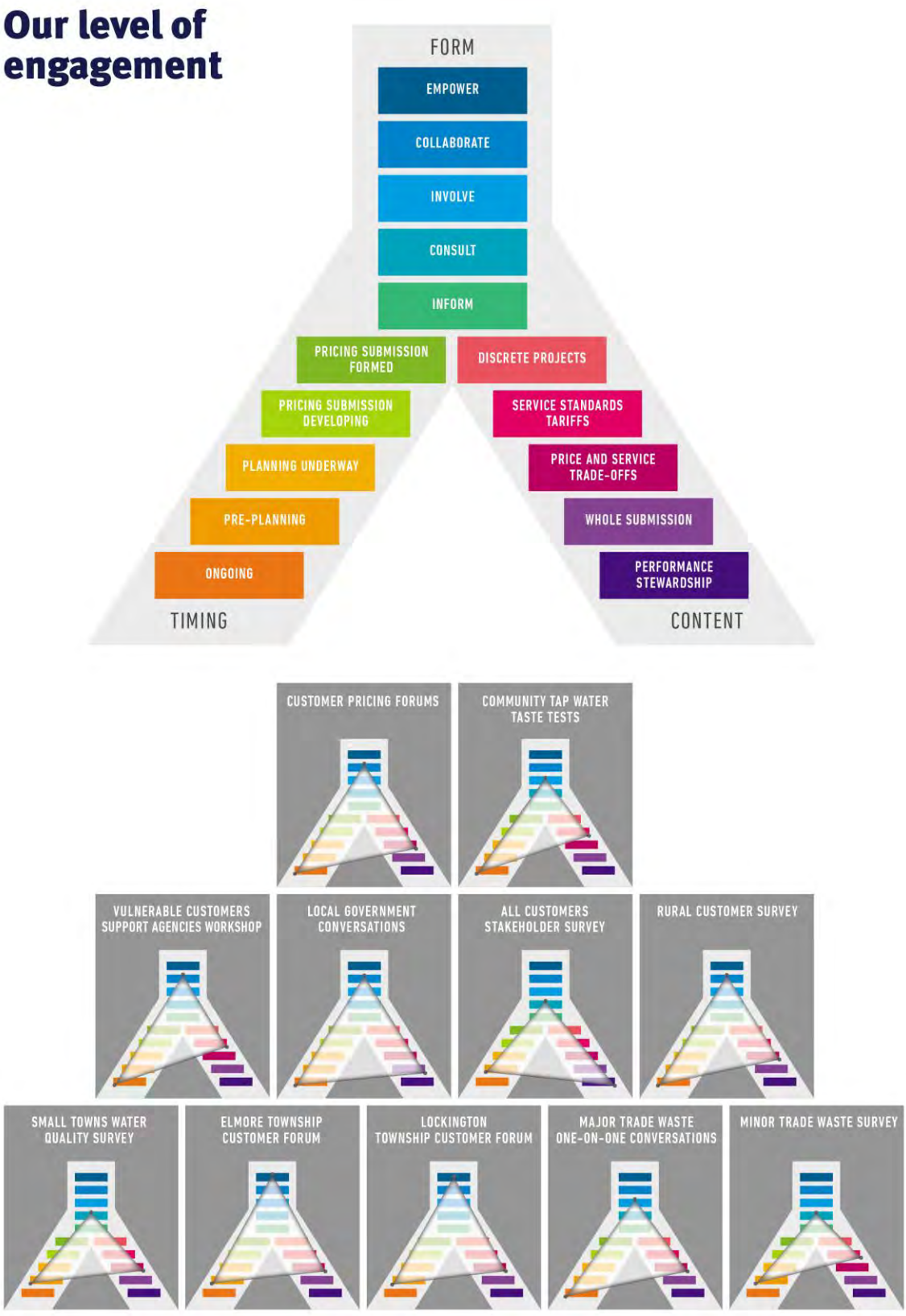


Key features of the *Listening & Learning* and *Hearing & Valuing* phases included the following:

- Refined the *Voice of the Customer*
- Held face-to-face meetings with local councils and major trade waste customers
- Specialised Forum on vulnerable customers with regulators, representatives from government, not for profit and financial services organisations that work in the community sector
- Conducted Community Forums, collaborated on price path options, tariff structures, fixed and variable pricing, level of financial hardship and support for loan repayments
- Enhanced understanding of key issues for local land developers
- Elmore and Lockington were empowered to choose their sewer service from four options
- Enhanced understanding of the drinking water quality in small communities and preferences
- Tap water taste tests from across our region to understand taste perceptions of small towns

The following graphic shows the level of engagement across 11 key customer segments using the Essential Services Commission engagement framework which incorporates the IAP2 levels of engagement.

Figure A2 *– Summary of customer engagement activities undertaken*



The results of our ongoing and targeted engagement helped us refine our common customer themes. In particular, completing the Customer Segment of the value proposition canvas has provided us with a greater understanding of the issues of importance to our customers from their perspective.

Table A4 - *Final key customer themes and refined Voice of the Customer*

Key Customer Theme	What we heard from customer - voice of the customer
Water Quality	1. Maintain high quality water 2. Improve the taste and smell of water supplies in smaller communities
Water Availability	1. Reduce the leaks in our networks and rural channels 2. Avoid water restrictions 3. Educate customers on saving water 4. Ensure water is available now and in the future 5. Invest in infrastructure to meet the future needs our growth areas
Care for the Environment	1. Be more socially responsible 2. Reduce our environmental footprint 3. Less sewer spills 4. More sustainable service
Price & Cost **Service Expectations** **Customer Experience & Education**	1. Be more affordable 2. Pricing that enables lower bills by reducing water use 3. Provide timely information about bills, services and interruptions 4. Create more on-line self-service options 5. Provide reliable water and sewer services
Management of the Business	1. Provide stable prices 2. Be more transparent and accountable 3. Help maintain public parks and gardens

Key features of this effort included:

- Gained a deeper understanding of the defining value from each customer segment's perspective, not our perspective
- Developed a better understanding of the matters and issues that are affecting them
- Gained significant knowledge to prioritise these key customer themes based on the significant influence on services provided and prices charged to each customer segment

A2 Our customer outcomes - what we heard

Real step-change in customer outcomes and value for money demonstrating our commitment to the PREMO model. Key features of our Customer Outcomes:

- ✓ Informed through listening and understanding what our customers value and want
- ✓ Demonstrate strong customer linkages to our proposed Value Proposition
- ✓ Coliban Water bearing greater revenue risk and being more transparent and accountable through standards that will require higher performance from us where it matters the most to our customers

A2.1 Introduction

Following deep and broad customer engagement, we have developed a set of Customer Outcomes, each with measures of success that include deliverables and associated measurable targets.

The Customer Outcomes demonstrate a real connection to the Value Proposition which is affordable, offers value for money to our customers, and supports the financial resilience of the business.

A2.2 What we heard from customers – development of outcomes

The analysis of this large amount of data helped us to develop the *Voice of the Customer* and identify our customers' top priorities. Through the first stages of Pricing Submission engagement with our customers, we realised that these *Voice of the Customer* priorities were still relevant; however, as we continued to engage with customers to listen and learn the things that were important to them, the priorities became more specific and evolved during the hearing and valuing stage.

These priorities were refined to become the Customer Outcomes that appeared in our Pricing Submission 2018 Community Draft. Our Customer Outcomes are effectively a statement that captures the intent of the key themes derived from the *Voice of the Customer* and issues of importance.

The following table summarises each engagement activity we have undertaken in developing our Submission, and how each has linked to the development of our final Customer Outcomes.

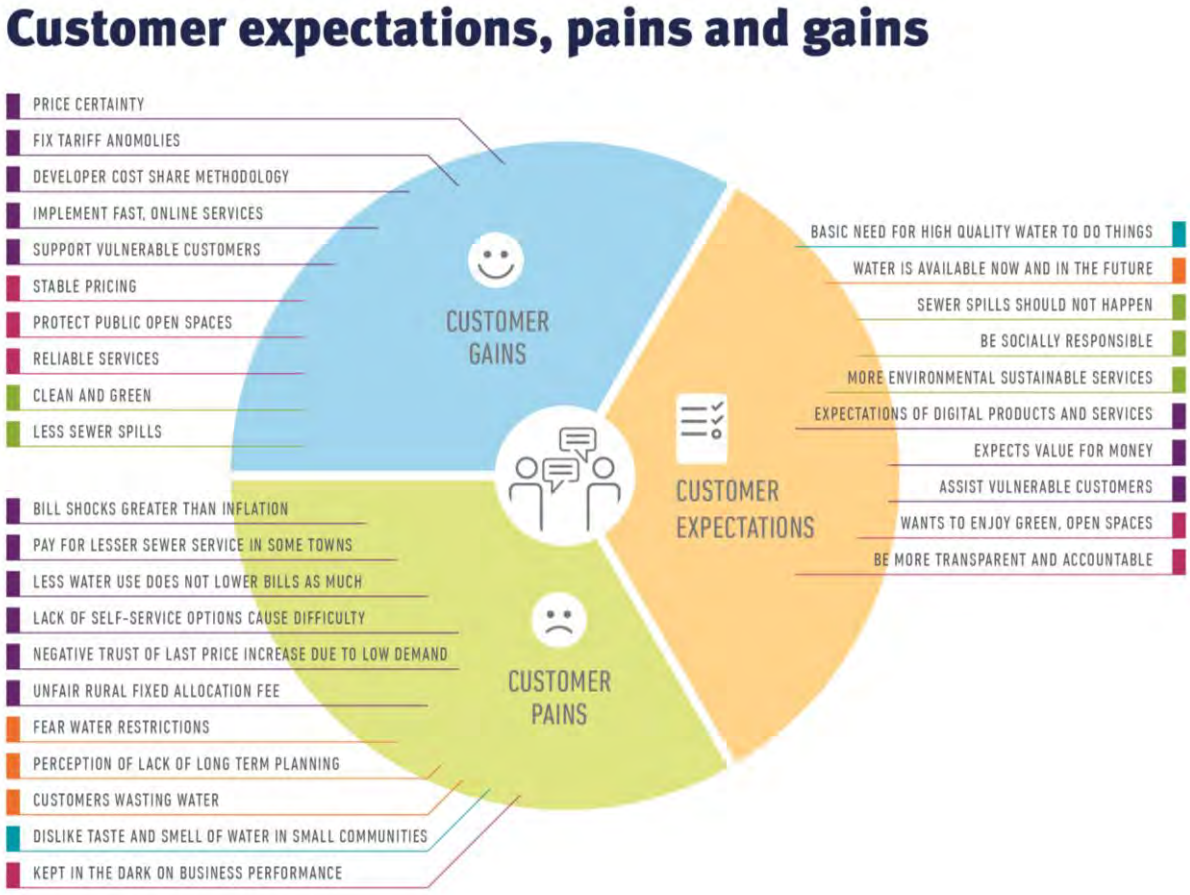
Table A5 *– Summary of customer engagement activities undertaken by customer outcome*

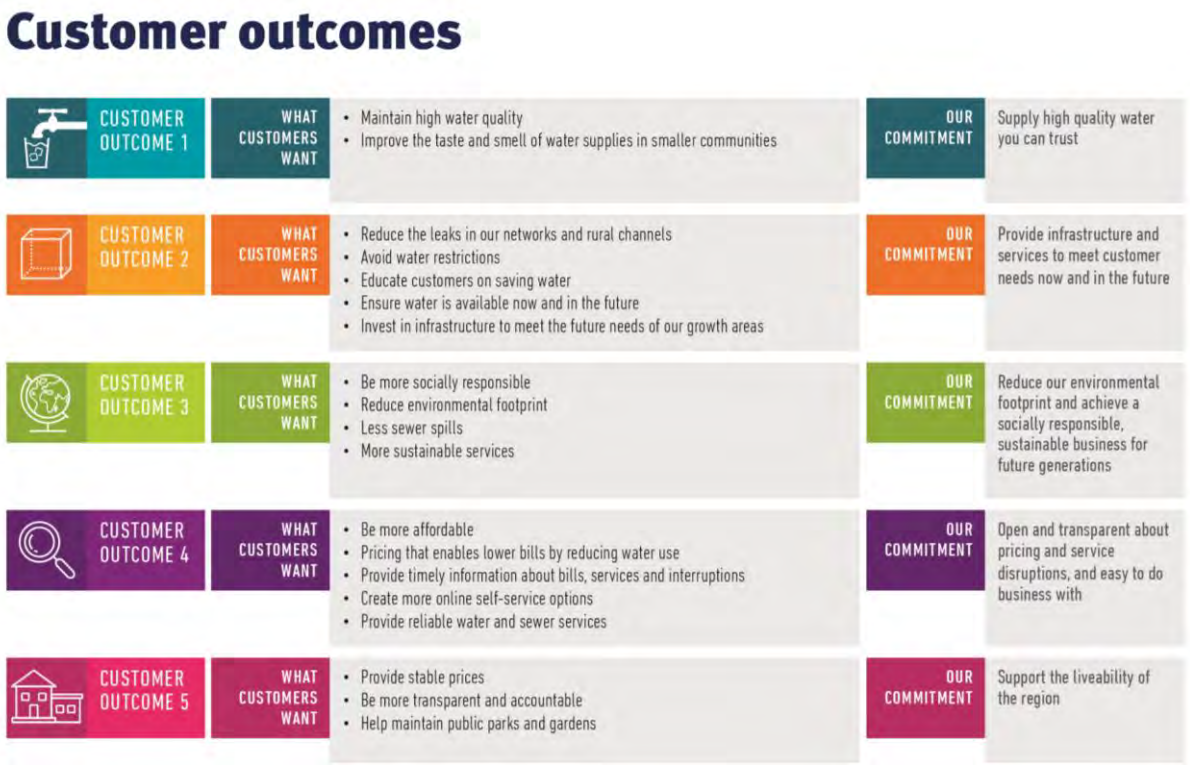
	CUSTOMER OUTCOME 1		CUSTOMER OUTCOME 2		CUSTOMER OUTCOME 3		CUSTOMER OUTCOME 4		CUSTOMER OUTCOME 5		
	Supply high quality water you can trust		Provide infrastructure and services to meet customer needs now and in the future		Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations		Open and tranparent about pricing and service disruptions, and easy to do business with		Support the liveability of the region		
	Water is safe and palatable	Customers are satisfied with their water quality	Customers have enough water to meet their needs	We will supply more water through fewer leaks and faster repairs	We will reduce CO_2 emissions	We will improve the health of waterways	We will deliver genuine engagement on performance	We will increase support for our vulnerable customers	We will increase water supplied to public spaces	We will maintain or improve our credit rating	We will decrease our debt
Pricing Forums			✓		✓		✓	✓	✓	✓	✓
General Survey	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lockington and Elmore STED Forums	✓						✓	✓			
Non palatable towns survey	✓	✓	✓				✓	✓			
Minor TW Survey					✓		✓				
Major TW Interviews		✓	✓		✓		✓				
Council survey			✓		✓	✓	✓	✓	✓	✓	✓
Rural CAG			✓	✓			✓			✓	✓
Rural Survey			✓	✓			✓				
Your Town visits	✓	✓		✓			✓	✓	✓		✓
Complaints data	✓	✓		✓		✓	✓				
Tap Water Taste Testing	✓	✓					✓				
Hardship Forums							✓	✓			
Developer Forums	✓	✓	✓				✓				

A2.3 Our customer outcomes – the link to the customer experience

The following figure summarises our journey to customer-centricity. It clearly encapsulates our customers' expectations, pains and gains based on an in-depth analysis of each customer segment.

***Figure A3** – Our customer outcomes – what we heard*





Coliban WATER

Water to live, grow & enjoy

Supplement B. Our Customer Promise

CPI -1%

CUSTOMER OUTCOME 1

Supply high quality water you can trust

CUSTOMER OUTCOME 2

Provide infrastructure and services to meet customer needs now and in the future

CUSTOMER OUTCOME 3

Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

CUSTOMER OUTCOME 4

Open and transparent about pricing and service disruptions, and easy to do business with

CUSTOMER OUTCOME 5

Support the liveability of the region

Contents

B1 Our customer promise

Real step-change in our business commitment to demonstrate value for money for our customers – what outcomes will be delivered to customers in return for the prices they pay, and how our proposal reflects what customers value. Key features of our Value Proposition are:

- ✓ Advanced PREMO rating, as independently supported by consultant Indec
- ✓ Smooth 10-year price path averaging CPI minus 1% that achieves long term value for money and price stability
- ✓ New form of price control – a five year plus five year Hybrid Revenue Cap to minimise the impacts of water demand variances from forecast and resulting bill shocks, and engaging with customers every year on all tariffs and prices
- ✓ Demonstrate strong customer linkages to our *Voice of the Customer* program
- ✓ Fairer tariffs for customers and a commitment to explore introducing innovative tariff and pricing options over the next three years
- ✓ Rewarding our customers through the business bearing a greater proportion of significant risks
- ✓ Reducing uncertainty in forecasting to ensure efficient expenditure and prices
- ✓ Empowered small communities to choose changes to their sewer services and prices
- ✓ Innovative customer and community rebates that incentivise us to deliver more reliable and efficient services
- ✓ New performance measures for the next regulatory period
- ✓ Committing to implement innovative Outcome Delivery Incentives for transparency and accountability
- ✓ Improvement in taste and odour of water for small communities, delivering high quality water you can trust
- ✓ Investing to extend the water grid for long term water security and enable growth in large towns, ensuring water and service services are available now and in the future
- ✓ Investing in water use information and proactive leak identification services and tools
- ✓ Changing the way we do things to be more clean and green and to help the environment
- ✓ Responsibly co-investing in socially beneficial activities with the Dja Dja Wurrung, Catchment Management Authorities and councils
- ✓ Working with local councils to protect high valued community assets, especially in times of drought
- ✓ Investing in digital products and self-service options to meet the expectations of customers

This section proposes a set of promises that our customers will receive during the next regulatory period.

B1.1 Our prices

An important part of any Value Proposition is the price of the service being offered. In our particular case, customer engagement has shown that bill levels are a significant indicator of perceived customer value. Customers expressed a strong preference for bills to be increasing at less than inflation in the long term. We are pleased to be in a financial position to present this offer to customers.

There are three key components of the pricing side of our Value Proposition:

- **Price changes:** Average CPI minus 1% over 10 years commencing 1 July 2018
- **Hybrid Revenue Cap:** Protecting customers from climate-induced bill variations while reducing business risk
- **Regulatory period:** Five years plus five years

B1.2 Our new performance measures

Through our engagement process, it was reinforced that customers want us to be more transparent and accountable. This aligns neatly to the new PREMO framework. We are proposing a step-change in new performance measures to ensure transparency and accountability for delivering the service levels and outcomes that matter most to our customers.

Our new performance measures are based on three levels:

Level 1: Service levels that impact customers directly (customer rebates)
Level 2: Service levels that impact communities directly (community rebates)
Level 3: Outcome targets (customer priorities)

Section B2 Performance stewardship identifies the reporting framework we will use to report our performance against the measures listed in this section.

Level 1: Service levels that impact customers directly (customer rebates)

Through the customer engagement process, we sought to identify the service levels most valued by customers. The list of customer rebates identifies the service level preferences most valued by customers and that adversely impact them directly.

Customers have told us there are 14 service areas that annoy or frustrate them the most when our performance is not at an acceptable level. To incentivise us to perform, the customer has assisted in development of customer rebates of which a number relate to existing service standards.

For the following three existing GSLs, customers told us to reduce the adverse impacts associated with these services. We have listened and are proposing to make the following changes.

Table B1 – *Comparison of current and new GSL (rebate) trigger conditions*

Current GSL trigger	New Customer Rebate trigger
4+ sewer blockages affecting you in a year	3+ sewer blockages affecting you in a year
6+ water supply interruptions in a year	4+ water supply interruptions in a year
Sewer spill within a house not contained within 1 hour	3 separate rebates depending on severity: • A blown seal sewer intrusion into your house (contained instantly) • Any sewer intrusion into your house contained within 1 hour • Sewer intrusion into your house not contained within 1 hour

To measure our yearly performance against all customer rebates starting in 2018-19, we will set a target based on the value of rebates that would have been hypothetically triggered based on 2017-18 performance. Our future year measurable target will then be a reduction year-on-year on the value to drive continual improvement. For more information, see Section B3 Customer and community rebates.

Level 2: Service levels that impact communities directly (community rebates)

Customers also told us there were other performance areas they were concerned about that affect their community. This includes system-wide performance issues that may impact a greater number of customers across one or more communities.

Direct customer feedback helped inform us which community-wide performance issues were important, the level of rebate and how we should deliver a community rebate. We have listened and propose a list of four community rebates to incentivise us to avoid these adverse events.

To measure our yearly performance against these community rebates commencing in 2018-19, we will set a target based on the value of rebates that would have been hypothetically triggered based on 2017-18 performance. Our future year measurable target will then be a reduction year-on-year on the value to drive continual improvement.

Customers have overwhelmingly told us that they support funds from these rebates to be returned to the local community affected. We will confirm with our customers each year at the pricing forum where community rebate funds should be directed.

Level 3: Outcome targets – customer priorities

Our customers have assisted in the development of a set of outcomes that they will receive during the next regulatory period. Engagement with customers has informed how each outcome links to defined measurable outputs and deliverables, and associated targets that we will monitor to demonstrate the achievement of each outcome.

There are 27 outcome targets for the next five year period. For 2023-2028, we will engage with customers during the pricing engagement process in 2021-22. Some outcome targets relate to existing service standards, with the remainder based on customer feedback for monitoring of performance against outcomes. The customer and community rebates will also form part of the performance measures each year.

We will continue to report against existing ESC Service Standards and have proposed targets for these that will apply in the next regulatory period – see Appendix 2 to this document.

We intend to include all performance measures in the ESC's KPI audit scope to ensure our performance and delivery of outcomes are all audited annually and communicated to customers to reaffirm their priorities.

Key features of the performance measures are:

- Outcome 1: Supplying high quality water you can trust
  - Existing: drinking water compliance
  - New: satisfaction with water quality in our region - especially in small communities, fencing major storages, water mains cleaning
  - Rebates: water quality issues
- Outcome 2: Provide infrastructure and services to meet customer needs now and in the future
  - Existing: unaccounted for water
  - New: number of towns on water restrictions, fit for purpose water for rural and urban customers, deliver digital metering, renew rural channels
  - Rebates: flow rate / pressure and rural water allocations
- Outcome 3: Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations
  - Existing: sewer blockages per 100 kms of sewerage mains (much improved target), CO_2 (improved target), sewer spills
  - New: chemical use per ML
- Outcome 4: Open and transparent about pricing and service disruptions and easy to do business with
  - Existing: water service reliability, sewer service reliability, Utility Relief Grants (URGs), hardship grants
  - Rebates: 12 rebates relating to valued service expectations
- Outcome 5: Support the liveability of the region
  - New: volume of water delivered through recreational pricing, credit rating, paying down debt

Through the Pricing Submission 2018 Community Draft, customers told us they support our proposed outcomes, associated outputs and deliverables, as well as the outcome targets.

B2 Performance stewardship

Real step-change in our commitment to customers to be more open, transparent and accountable. We will report on our performance through our new website. Key features of our performance stewardship and reporting are:

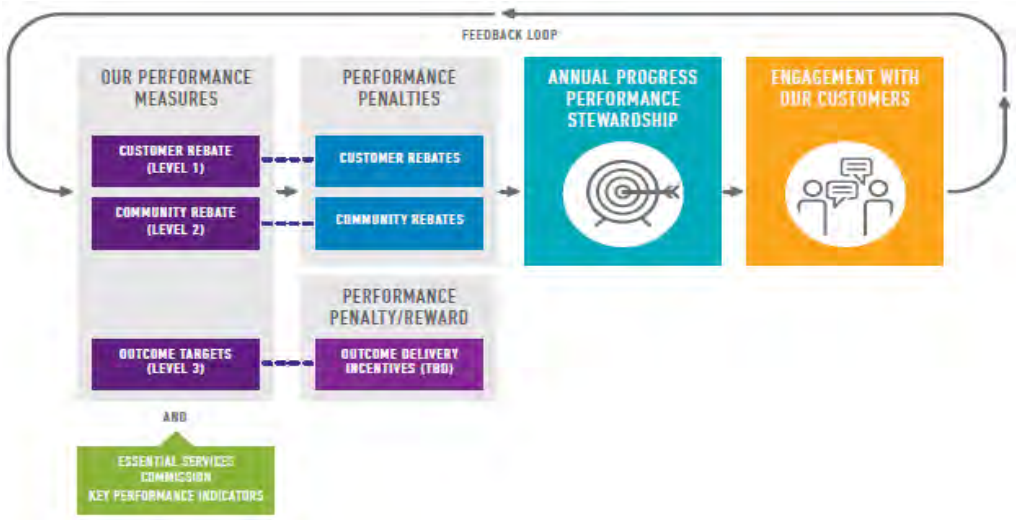
- ✓ All performance measures will be audited as part of the yearly ESC Performance audit scope
- ✓ Outputs, deliverables and measureable targets will form the basis of reporting against the delivery of the outcomes to customers
- ✓ Customers will have an opportunity to discuss our performance and we will respond to any changing preferences that customers believe need to be explored
- ✓ A yearly Customer Forum will be held to discuss tariff adjustments and also our performance against the outcomes
- ✓ Engage customers in 2021-22 to develop an Outcome Delivery Incentive mechanism, that will incentivise the business to achieve the Customer Outcome targets

B2.1 Our proposal

Performance stewardship is our proposal to annually report on the delivery of our Customer Outcomes.

Figure B1 identifies the performance stewardship framework that will be used to guide the performance reporting to customers on our performance measures and ultimately progress towards the Customer Outcomes each year.

Figure B1 *- Performance measures and stewardship framework*



We will publish our progress towards the performance measures on our new website each year and will disaggregate performance by town, where possible. Our *Your Town* visits program will continue to provide an opportunity for our customers to meet us and we will present and discuss our performance results for their town with them. It will also show the 'bigger picture' of performance and how the performance in their town compares to others across the region. If customer needs and priorities change, we will improve our feedback tools and methods to provide information in the most accessible and transparent way possible. This may include bill inserts as well as online engagement tools.

With the success of recent pricing engagement, we will hold annual forums for both retail customers and land development customers. Aligned to the Hybrid Revenue Cap, this will enable customers to provide input to our proposed prices to apply in the following year. We will also collaborate with customers regarding areas of our performance that may need improvement. We are proposing to work with customers to deliver any funds payable for Community Rebates back to their communities.

Customers want value for money for the services they receive which can now be measured against the performance measures of each Customer Outcome. To incentivise us further to achieve these outcomes, we are proposing to implement an Outcome Delivery Incentive mechanism during the first five-year regulatory period. A dollar amount will be nominated as a penalty and reward against the outcome targets that matter most to customers. As for the proposed rebates, the business may be financially penalised for not achieving the Customer Outcome, but can also be rewarded for exceeding performance. We will work with customers through the annual pricing engagement to identify which outcome targets should be included and what an acceptable dollar value should be at risk to incentivise us to perform.

B3 Customer & Community Rebates

Major step-change in Customer and Community Rebates (formerly GSLs) demonstrate our commitment to Customer Outcomes and incentivise us to perform. Key features of our rebranded innovative Customer and Community Rebates are:

- ✓ An increase in the number of available customer rebates from 4 to 14 that reflect the main service priorities and concerns informed by our customer engagement program
- ✓ The introduction of four new and innovative community rebates that reflect undesirable events affecting a significant number of customers
- ✓ A more equitable sharing of performance risk between the business and customers
- ✓ The business taking on greater revenue risk to incentivise it to deliver efficient levels of service to customers

B3.1 Our proposal

We are proposing a significant step-change in performance for the next regulatory period with our new Customer and Community Rebates (formerly known as GSLs). While the existing GSL scheme gives customers recompense when our service performance is not to the standard expected by customers, there was very little financial incentive to improve performance as the GSLs were triggered so rarely.

We are deliberately proposing more stringent rebate indicators that will be paid to customers more often. These rebates have been derived using customer feedback and we can therefore attest that these are the most valued indicators of performance.

B3.2 Our approach

The development of these rebates were strongly influenced by our ongoing and targeted customer engagement program, through a broad combination of internal and external market research and input from our Rural Customer Advisory Group and Customer Pricing Forums.

Key features of our approach include:

- Internal review and workshopping: staff highlighted main priorities for consideration based on performance, includes senior management, executive and Board review and discussion
- *Voice of the Customer* program: identified the main service priorities and concerns of customers
- Customer empowerment: general survey used to select the rebate and the rebate payment
- Filtering and publication: widespread support via the Pricing Submission 2018 Community Draft, with two rebates added
- Implementation workshops: ensuring rebates are objectively defined, easily understandable and able to be audited and reported

B3.3 Rebates not chosen by customers

Customers were presented with a broad list of potential Customer and Community Rebates to apply for the next regulatory period. Some were not supported by customers. Given we had decided to empower customers in the selection of rebates, this means the following rebates have not been proposed for inclusion:

- Level 3 or 4 water restrictions: urban customers want us to avoid restrictions rather than compensating them when they are imposed
- Phone call not answered within 5 minutes: customer satisfaction is improved when issues are resolved the first time rather than simply answering the phone quickly
- Reducing CO2 emissions in line with targets: while feedback demonstrates customers are concerned about this, there is no support for a community rebate in this instance
- Burst and leak duration: this was supported by customers although not implemented as a variety of customer rebates already overlap

The following tables list our proposed rebates for the next regulatory period.

Table B2 *– Proposed customer and community rebates*

Customer Rebates	Status	$ Value
A blown seal sewer intrusion into your house (contained instantly)	New	Clean up (if required) + $50 first intrusion $100 subsequent intrusions
Any sewer intrusion into your house contained within 1 hour	New	clean up + $300
Sewer intrusion into your house not contained within 1 hour	Existing	clean up + $1,000
Special Meter Read not completed within 2 business days of the scheduled SMR date	New	No charge for SMR
3+ sewer blockages affecting you in a year	Changed	$100
4+ water supply outages affecting you in a year	Changed	$50
Water supply outage not restored within 5 hours	New	$50
Your correspondence (letter or email) to Coliban Water not responded to within 10 business days	New	$10
Planned water supply outage during peak periods (6AM-9AM & 6PM-9PM weekdays and on weekends)	New	$100
Rural customers receive <100% of water allocation	New	Rebate on Infrastructure Charge is % of undelivered allocation
Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours (as defined by the Essential Service Commission) to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying	Existing	$300
There is an ongoing adverse water quality issue in your system, for example poor taste or colour	New	25% of Water Access fee
High Priority inspection at practical completion not completed within 2 Business Days	New	$250
High Priority mains extension approval not completed within 10 Business Days	New	No charge for service
Community Rebate	**Status**	**$ Value**
There is a significant sewer spill to local waterways or the environment	New	$20,000 per incident
There is poor water flowrate / pressure in a supply area over a prolonged period	Explore	$5,000
Coliban Water issues a "boil water" or "do not consume" notice in your water supply system	New	$5,000
There is a short-term adverse water quality issue in your system, for example poor taste or colour	New	$5,000

B4 Managing Risk

Real step-change in balancing risks and rewards between the business, customers, and our shareholder through a systematic approach of assessing risks to ensure the proposed Value Proposition is appropriate. The business has given strategic consideration to risk and reward, and identified the risks and rewards that have a material impact on prices customers pay, or the services they receive. Key features of our Risk Management position is as follows:

- ✓ Significant step-change in engagement reduced the risk of redundant assets and business risk
- ✓ Exclusion of uncertain projects from revenue requirement, including Castlemaine Link Interconnector Pipeline and Goldfield Superpipe Augmentation
- ✓ Introduction of a Hybrid Revenue Cap to eliminate demand forecasting risk and reduce customer bill risk, and a side constraint that reduces CPI and interest rate risks
- ✓ Ambitious operating efficiency of 1.5% means customers get the reward of future technological improvements while we rise to the challenge of exploiting these efficiencies
- ✓ Minimise capital cost forecasting risk through the continuation of our better project management and control processes to minimise uncertainty in forecasts and large contingencies
- ✓ Independent external credit rating assessment to demonstrate financial risk
- ✓ Reward customers by engaging them in the development of new technology like self-service options and digital metering
- ✓ Delivery Assurance Margin on capital projects to enable us to dynamically manage these projects to achieve capital delivery requirements

B4.1 Introduction

Our Pricing Submission has considered all the significant risks that may impact on customer prices or services. It is acknowledged that customers have supported the business over the past years to improve our financial viability. In this Pricing Submission the business has changed the risk appetite and will bear greater risk to better protect customers from uncertainty, as well as our ongoing commitment of ensuring cost efficient services to customers.

B4.2 Our approach

The business has a risk management framework consistent with the *International Standard for Risk Management 31000:2009*. The identification of significant risks impacting customer prices and services was influenced by our customer engagement program that defined value from our customers' perspective, not our perspective. Risks impacting the business were also identified.

Understanding the *Voice of the Customer* and Customer Outcomes informed the strategic consideration to the allocation and management of significant risks, and has assisted in developing a compelling Value Proposition to our customers.

The following sections identify how we have responded to the risks identified in the ESC Guidance and should not be confused with our Board approved Corporate risks, which are available to the ESC upon request.

For further information on how we are managing risk and uncertainty with our operating and capital expenditure, please refer to relevant sections in Supplement C.

Inflow risk (water system)

ESC Guidance: an inability for water businesses to meet customer demand due to extended low rainfalls and inflows

Our response: Due to recent improvements in modelling long term climate change and large supply side investments during the Millennium Drought, the business is aiming to avoid water restrictions in the next regulatory period. While it is impossible to be completely certain of this, we believe it would be inappropriate to include substantial restriction avoidance expenditure in our revenue requirement. This is a risk we are best placed to bear rather than customers. To mitigate this risk, we will continue to make incremental improvements in long-term water resource forecasting and planning. While we have planned the Castlemaine Link Interconnector Pipeline which will ultimately be required to avoid water restrictions in the Coliban

Southern System, this item will be treated as a pass through rather than included in the revenue requirement in advance.

Revenue risk (demand)

ESC Guidance: where actual demand differs from forecast

Our response: Our customers have borne significant historical risk due to the unpredictable nature of demand forecasting. In the 2008 to 2013 regulatory period, average bills were significantly less than forecast in the 2008 Determination and in the 2013 to 2018 period, average bills were moderately higher than forecast.

Our proposal to introduce a Hybrid Revenue Cap means that customers are no longer faced with this risk, while simultaneously providing the business with reduced revenue risk. This risk balance is central to our Pricing Submission – if not for the Hybrid Revenue Cap, it would be difficult for us to offer the myriad of customer related initiatives, including CPI minus 1% price changes.

To reduce risk for customers even further, the implementation of the period Hybrid Revenue Cap and the Customer Safety Net of maximum 3.5% nominal price increases, ensures that customers will not be faced with price shocks. The smoothed nature of our proposed Hybrid Revenue Cap even further lessens the risk of price shocks occurring.

Operational risk

ESC Guidance: Poor service outcomes from inadequate processes, asset failures or external factors

Our response: While this risk relates predominantly to poor service outcomes, we note that this is far more likely if the customer engagement underpinning operational decisions is not robust. In 2017, our business underwent a restructure with a new General Manager Customer Experience and Community Relations appointed to ensure maximum Executive focus on the experience of customers. Our proposed upgrade to Goornong's water treatment plant will include input from customers in assisting us choose options for consideration.

In the 2013 to 2018 regulatory period, we successfully achieved both our targeted operating efficiency (1%) and our Fairer Water Bills savings, while still delivering on improvements to our service levels.

Our proposal for a BAU operating efficiency of 1.5% per annum removes risks from customers and will force us to proactively identify savings that contribute to customer bill reductions. The comprehensive suite of customer and community rebates will also provide internal focus to incentivise the business towards minimising adverse events most disliked by customers. At a higher level, our new performance measures provide clarity to customers as to the level of performance they can expect from us. While some aspects of our expenditure is increasing in real terms, such as IT and labour expenditure, no addition to the revenue requirement is proposed. The business will manage these items and still achieve the 1.5% efficiency overall as real operating expenditure per customer continues to improve into the future.

Construction risk

ESC Guidance: Underestimating capital costs or project delays

Our response: Cost uncertainty risk is historically managed at the project level by adding a contingency for additional expenditure into project budgets. However, as the maturity of our project management has increased, we have bolstered our capital delivery policies by estimating contingencies at the portfolio rather than at the project level.

We have also noted that project delays can lead to underspending in a given financial year. Often, this is unavoidable as weather conditions can affect delivery schedules. Our approach of applying a Delivery Assurance Margin to capital expenditure ensures that if a project is unavoidably delayed, total expenditure for the period can remain at the target level.

The business has accepted more risk over time and will reward customers in the next regulatory period by minimising forecasting uncertainty and better managing contingencies. Total capital expenditure per customer continues to decrease over time, and uncertain items like the Castlemaine Link Interconnector Pipeline and Trentham Alternative Supply works will be excluded from pricing until constructed.

Regulatory and policy risk

ESC Guidance: Changes in laws and regulations that materially affect expenditure or revenue

Our response: In the event that our financial position is impinged by a change in law, regulation or policy, our first response will be to dynamically manage our business to avoid passing costs onto customers. This was the process we undertook from 2014 as we voluntarily reduced our prices in response to the government's *Fairer Water Bills* initiative.

We believe that this risk needs to be shared between the business and customers where we cannot dynamically manage and avoid financial impacts. Subject to acceptance of our Pricing Submission proposals (particularly, Hybrid Revenue Cap and CPI minus 1% price movements), we can financially absorb any regulatory and policy risk up to 2.5% of revenue in line with the 2005 ESC Final Decision.

This aligns to our internal level of Medium under our Board approved corporate risk framework. If our Pricing Submission is not accepted, then this risk would be too great for the business to bear and a lower figure would be required.

Financial risk

ESC Guidance: Factors affecting the economy

Our response: While this risk is usually seen as relating to large scale and generational economic upheavals, we believe this risk is more commonly borne by customers via annual CPI updates and debt cost updates. There are three ways we are planning on assuming more of the risk in favour of our customers.

Firstly, our 2018-19 prices are capped in nominal terms. If CPI and debt movements result in prices higher than proposed, we will instead apply the proposed nominal prices. Secondly, we are taking the risk on behalf of customers by retaining a Customer Safety Net within our Hybrid Revenue Cap, regardless of actual movements to debt and CPI benchmarks. Thirdly, where our credit rating improves we will pass back any savings from lower annual Financial Accommodation Levy payments to our customers. While our credit review did indicate some underlying financial concerns, improving financial ratios due to debt repayment will enable future credit rating improvements. This has been strongly supported by customers. Many proposals in this Pricing Submission, such as our ambitious operating efficiency, are only possible because of improvements to our underlying financial position.

Business risk

ESC Guidance: New technology or change in competitive landscape

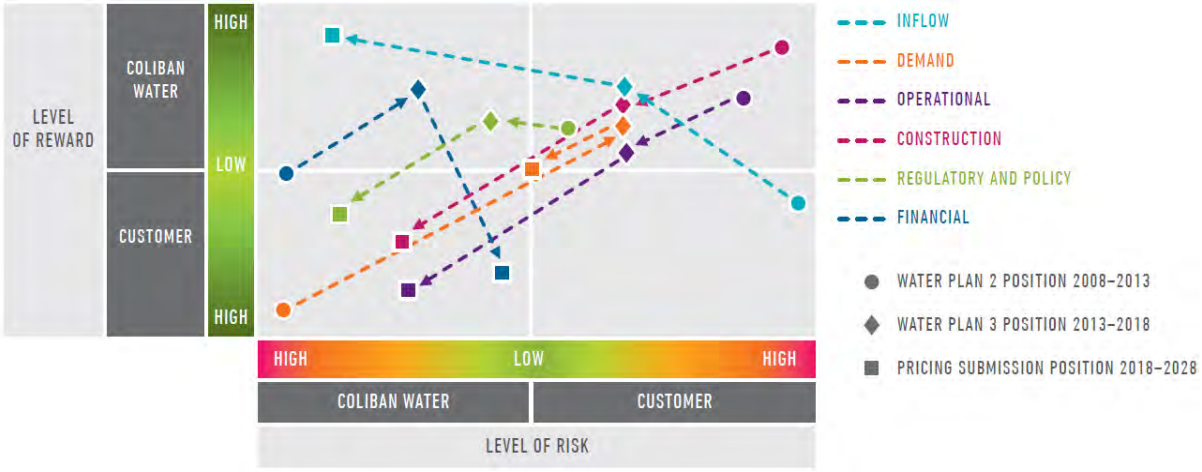
Our response: Similar to our management of risks identified above, our new executive structure will enable us to even more readily tap into the wishes and experiences of our customers.

We do not see technology and changes in competitive landscapes as a threat. Rather, they are an opportunity to provide enhanced value to customers. We will be investing in new technologies including self-service options and digital meters to reward customers and enable them to better manage their water consumption and hence their bill levels. While no one can predict which technologies will be invented, our proposal for an ambitious operating efficiency of 1.5% relies on us exploiting future technological advances as soon as possible.

B4.3 Risk summary

Overall, we are proud of our proposals to manage risks currently borne by customers and contend that this integrated risk package that we propose represents a fundamental shift in risk management for our business. Our risk journey over recent regulatory periods is outlined in Figure B2.

***Figure B2** – Sharing risk and reward for the past three regulatory periods*



B5 Approach to PREMO / Setting the Value Proposition

When undertaking our self-assessment, we considered the requirements of the ESC's Guidance Paper (specifically Attachment 5), what customers have told us regarding their experience (including their pains and gains – our opportunities), our performance during the third regulatory period versus our proposal for the next regulatory period and how we believe we are positioned against other similar sized water businesses.

The key elements of the individual assessment scores are highlighted in the following sections however further justification is available, upon request, which identifies our self-assessment with supporting evidence.

B5.1 Management

Customers have told us they want us to be financially resilient to allow us to provide price stability.

The previous regulatory periods has seen us and our customers move from facing significant financial challenges to setting ourselves up to be financially sustainable. It is acknowledged that our customers have done the heavy lifting to get the business to a position where our financial credit rating is improving. We have listened to our customers and believe this Pricing Submission provides the best value to our customers though the price stability and tariff options they are seeking.

To assist with the self-assessment in relation to Management, the ESC guidance in the form of questions which focused on: demonstrating how the prices reflect only prudent and efficient expenditure, justifying commitment to cost efficiency or productivity improvements, demonstrating ownership and commitment to the proposals, outcomes and provided assurance about the quality of the Pricing Submission.

Each of the questions highlighted in the guidance paper have been critically reviewed with answers provided in our self-assessment document and assessed both internally and by external consultant Indec.

All expenditure identified in our proposal has endured extensive review against the prudent and efficient test. Not only has the expenditure passed the test, we are also confident in highlighting a number of expenditure items that we have excluded from our Pricing Submission, whereby management will wear the risk if these items are required in the next regulatory period. For further information, please refer to Supplement C (adjusting prices).

We have implemented a new prioritisation model for capital expenditure that is a multi-criteria assessment which includes prioritisation of financial return, risk and benefits, such as enabling economic growth, enhancing community liveability or enhancing the environment.

Our forecast operating expenditure incorporates an operating efficiency of 1.5% which is significantly greater that the ESC's 1% hurdle used in the 2013 water price review.

All expenditure items are directly linked to our Customer Outcomes which were developed based on the feedback received from customers and based on the areas customers' value most.

The Hybrid Revenue Cap model will ensure we remain efficient, with any revenue received above the proposed side constraints resulting in future revenue being returned to customers in the next regulatory period.

We engaged KPMG Consulting in early 2017 to assist us to derive a strategy that would lead to eventual Board attestation. Each month this year, management provided papers to Board for decision and as these decisions were made, traffic light reporting on each guidance paper chapter was reported. By September, all elements were rated "green" as Board directed and led all critical elements of the Pricing Submission. This gave Board assurance that it could attest to the Pricing Submission in the form required by the ESC.

Customers have told us they support prices increasing by less than inflation over the long term.

Giving consideration to the evidence provided in this Pricing Submission and the supporting documentation, we believe we have demonstrated an **Advanced (3.5)** rating for Management.

B5.2 Engagement

There is no doubting the introduction of PREMO has resulted in an increased focus on customer engagement in support of a water businesses' Pricing Submission, however we believe and will demonstrate below, that this is an activity that we were already doing, for example through our *Your Town* community visits program and through our customer advisory groups that we have been engaged with for numerous years already.

To assist with the self-assessment in relation to Engagement, the ESC provided guidance in the form of questions which focused on: justifying how the form of engagement suits the content of consultation and circumstances facing the business and our customers, demonstrating how we provided appropriate instruction and information to customers about the purpose, form and content of our engagement, demonstrating that the matters we have engaged on are those that have most influence on services provided and prices charged, explaining how we decided when to carry out the engagement and how the engagement has influenced our Pricing Submission.

We have maintained a number of the engagement activities that were conducted as part of our third regulatory period Pricing Submission, such as our *Your Town* community visits program and engagement with our customer advisory groups (CAGs), for example Rural CAG, Developer CAG etc. The way we identified our engagement activities was by identifying customer groups or segments that we service (*Voice of the Customer* document) and then tailoring the activities and tools best suited to the needs of each customer segment. In particular, the Rural CAG helped inform the type and content of engagement for rural customers.

Customers were provided with the purpose, form and content of each engagement prior to the activity (e.g. Rural CAG meetings / Developer Workshops) or at the beginning of the activity. Introductions were also provided in all surveys, interviews and at the beginning of our pricing Customer Forums. Question and Answer sessions were encouraged at all times during engagement activities.

Each engagement activity identified the link to the Customer Outcomes and any impacts to either services or prices. The impact of the engagement is captured in Supplement A. What Customers Value which links the customer priorities to the Customer Outcomes proposed in our Pricing Submission. We note that where possible, we empowered our customers to develop and select their preferred service outcome (e.g. Lockington and Elmore STED sewer forums).

Following our review of feedback received from all engagement activities, we 'closed the loop' with customer segments by publishing on our website and sending, via email / post, a summary of the session, clearly identifying what we believed we heard from the activity. This was also published in our Pricing Submission 2018 Community Draft document. We have received overwhelmingly positive feedback regarding the 'closing the loop' summaries and our Pricing Submission 2018 Community Draft document.

Giving consideration to the evidence provided in this Pricing Submission and the supporting documentation, we believe we have demonstrated an **Advanced (3.5)** rating for Engagement.

B5.3 Risk

As outlined briefly at the beginning of the Management section, it is acknowledged that customers have supported the business over the past years. Benefits to the customer will now be realised in the next regulatory period. The business will be managing more risk when compared to prior regulatory periods (albeit the assessment is done with the benefit of hindsight). This provides the opportunity to now reward customers with better service and a lower price.

To assist with the self-assessment in relation to Risk, the ESC provided guidance in the form of questions which focused on to what extent has the business demonstrated a robust process for identifying risk, how has it decided who should bear these risks and how does the guaranteed service level scheme (GSL, or in our case rebates) provide incentives for the business to be accountable for the quality of service delivered and to deliver valued services efficiently.

A significant element that identifies how the business is managing more risk is within the recommended Hybrid Revenue Cap proposal. The introduction of the Hybrid Revenue Cap form of price control (refer Supplement C Form of price control) will eliminate the revenue risk related to demand volatility and enables the business to take on additional operational, construction, regulatory & policy and financial risk. With a fixed revenue, we can absorb some additional expenditure for risks not identified and will therefore be incentivised to find operating and capital efficiencies to offset any increase in expenditure due to this risk management position. This risk transfer is further highlighted by the incentive for the management team to maintain revenue within the side constraints, therefore avoiding the potential future risk of a poor performance rating in PREMO. The Hybrid Revenue Cap also protects customers from the risk of erroneous demand forecasts, and makes our commitment of bill stability in the long term more likely to be achieved.

All expenditure proposed in the next regulatory period is linked directly to Customer Outcomes, more specifically related to the outcome targets required to be achieved to meet the outcomes. In addition, a number of significant projects have been deferred to manage the uncertainty. These projects are identified in Supplement C. Capital expenditure.

We are excited to propose the leading edge community rebates as an extension of our extensive rebate scheme. These new rebates along with the new performance measures will provide greater service accountability to customers and will focus the business on less well performing areas to deliver services more efficiently.

Giving consideration to the evidence provided in this Pricing Submission and the supporting documentation, we believe we have demonstrated an **Advanced (3.75)** rating for Risk.

B5.4 Outcomes

To assist with the self-assessment in relation to Outcomes, the ESC provided guidance in the form of questions which focused on: providing evidence that the outcomes proposed have taken into account the views, concerns and priorities of customers, explaining how the outcomes it has proposed aligns to the forecast expenditure, explaining how the proposed (measurable, robust and deliverable) outputs support the outcomes, explaining how the outputs proposed provide a measured improvement against the outcomes, and explaining how the performance against each outcome is measured and how we inform customers.

To address the ESC requirements we listened to our customers and summarised their key areas of concern to determine which of our services they value the most and where they think we are already performing well and areas that we can improve. This information was then aligned with our Board success factors to ensure that our vision aligns with that of our customers. We then developed a set of robust Customer Outcomes that address our customer service expectations, “pains” and “gains”. These outcomes were tested with customers, with feedback received from every customer engagement activity helping us to further develop and refine them.

Customer Outcomes were then aligned with firm commitments via outputs and deliverables, with expenditure commitments to meet each along with Performance Measures. For further information, please refer to the Pricing Submission, this document and *Supplement A. What Customers Value*.

Giving consideration to the evidence provided in this Pricing Submission and the supporting documentation, we believe we have demonstrated an **Advanced (3.25)** rating for Outcomes.

B5.5 Performance

Section B2 Performance stewardship identifies our proposed approach to annually reporting on our performance against the delivery of our Customer Outcomes. A step-change for us we be the annual forums for both retail customers and land development customers. Aligned to the Hybrid Revenue Cap, this will enable customers to provide input to our proposed prices to apply in the following year, but also collaborate with customers regarding areas of our performance that may need improvement.

Customers told us that they wanted us to be more transparent and accountable. The broader customer and community rebates incentivise us to perform against the service levels that matter most to the customer and community directly. These rebates penalise us if our performance is not to an acceptable standard.

Customers want value for money for the service they receive which can now be measured against the Customer Outcomes created. To incentivise us to achieve these outcomes, we are proposing to implement an Outcome Delivery Incentive mechanism during the first five year regulatory period. A dollar amount will be nominated as a penalty and reward against the outcome targets that matter most to customers to incentivise the business to achieve the performance target against each Customer Outcomes. The business has the ability, like with rebates, to be penalised for not achieving these outcomes, but can also be rewarded for exceeding performance, refer Supplement C Adjusting prices.

It is proposed that the Hybrid Revenue Cap figure will be adjusted at the end of each regulatory period by the amount of the Outcome Delivery Incentive, in accordance with Supplement C Adjusting prices.

We note the ESC guidance that Performance is not a measure of a business's PREMO rating at this time. However, we believe we have offered exceptional value to customers over the third regulatory period and our self-assessment has indicated that if Performance was to be a measure, we believe we would have achieved an **Advanced** rating. Our review of performance in the third regulatory period is in Appendix 1 (this document).

B5.6 Overall PREMO Rating

Based on the information above, we consider that our PREMO rating for this Pricing Submission is **Advanced (14.0).**

We firmly believe, and have had independently verified by independent consultant Indec, that the proposals in this Pricing Submission offer a Value Proposition that is a step-change improvement in terms of price, service level performance, risk allocation and customer alignment. Furthermore, we are delighted with how initial customer feedback helped shape this Pricing Submission and how later customer feedback has endorsed and further refined it.

Appendix 1 Performance summary of third regulatory period

The close of the second regulatory period saw the business in an extremely poor economic state. However through strong management and improved climatic conditions the business has turned things around and seeks to drive performance to the next level. Highlights from the third regulatory period are as follows:

- ✓ Fixed and variable tariffs rebalanced to ensure revenue certainty and avoid bill shocks
- ✓ Prices remained constant in real terms since 2013-14 with customers experiencing significant savings through Fairer Water Bills and Carbon Tax savings
- ✓ Operating and capital expenditure per customer was lower than the previous regulatory period, reflecting the efficient use of resources and more value for customers
- ✓ Applying a retrospective PREMO assessment to the business performance over this regulatory period, confident would have achieved an 'Advanced' rating

By the end of the second regulatory period, we were over $400 million in debt and unprofitable, with expenditure far exceeding revenue most years. This was entirely due to factors outside our control, including a low opening RAB and a prolonged drought. Customers bore the brunt of price volatility and restrictions. The third regulatory period was one of reversed fortunes that put the business back on course to achieving long-term financial stability. This recent record of strong performance should be emphasised and holds us in good stead for the pricing strategies we wish to implement for the next regulatory period.

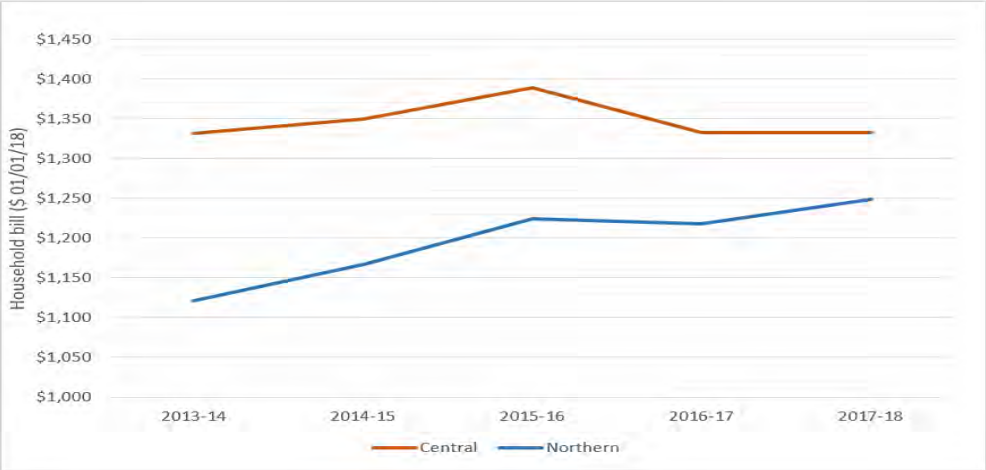
It should also be pointed out that despite the stronger performance in the third regulatory period, we are not fully recovered. Any deviations from the Pricing Submission may jeopardise our future financial sustainability.

1.1 Price changes

With spiralling debt and revenue shortfalls, something needed to change. We rebalanced fixed and variable prices to reflect the fact that many costs of providing water and sewerage treatment services do not vary with the level of water demand. Fixed sewer and water charges increased and we removed inclining block tariffs. Thus, we were able to ensure that any future shocks, in particular lower than forecast water consumption, would not leave the business in the same financial position.

With the change to tariff structures reducing our revenue risk, we were able to offer stable prices – something that our customers had not enjoyed in the previous regulatory period. Prices for water and sewerage services, previously highly volatile, increased in line with inflation in the third regulatory period. Looking at the impact on total customer bills, despite a significant rebound in demand for water in 2015-16, a higher share of fixed charges shielded customers from significant cost increases. Despite average household demand being higher than forecast over the period, the average household bill over rose by 0.04% in real terms over the period (Figure 1). Water prices in the northern pricing zone continued to harmonise with central zone prices over the third regulatory period, with customers in that area seeing average annual bill increases of 2.74%. Price harmonisation is due to be completed in 2019-20.

Figure 1 – *Average annual household bills, third regulatory period, central & northern pricing zones*



Other fees and tariffs increased in line with inflation. Trade Waste charges increased by inflation plus 3%, in line with agreed pricing principles and to reflect historical under-recovery of expenditure for providing these services and the costs of treating and disposing of trade waste.

Table 1 below summarises the ESC's approved and actual prices for our main tariffs over the third regulatory period. We are pleased to report that in all instances we matched or bettered approved tariffs. We note that savings from the *Fairer Water Bills* initiative and Carbon Tax savings were passed back to our customers via reductions to the water volumetric and wastewater access tariffs. This resulted in 2017-18 water volume charges that were lower than the approved tariff ($0.1494 per kL central, $0.1197 northern), representing a $27.64 annual saving for the average central and $22.14 for the average northern residential customer. Along with the $10.93 reduction in the 2017-18 wastewater access fee, the average residential customer is nearly $40 a year better off than under approved tariffs ($33 northern).

Table 1 – *Tariffs charged in the third regulatory period*

	2013-14		2014-15		2015-16		2016-17		2017-18	
$ 01/01/18	*Approved*	Actual	*Approved*	Actual	*Approved*	Actual	*Approved*	Actual	*Approved*	Actual
Water Volume										
Central District (per kL)	*$2.3162*	$2.3162	*$2.3857*	$2.2715	*$2.4048*	$2.2555	*$2.4048*	$2.2554	*$2.4048*	$2.2554
Northern District (per kL)	*$1.2089*	$1.2089	*$1.3878*	$1.3214	*$1.5669*	$1.4694	*$1.7455*	$1.6369	*$1.9235*	$1.8038
Untreated (per kL)	*$0.9067*	$0.9067	*$1.0408*	$1.0005	*$1.1751*	$1.1020	*$1.3091*	$1.2276	*$1.4426*	$1.3527
Recycled (per kL)	*$1.7371*	$1.7371	*$1.7893*	$1.7372	*$1.8429*	$1.7250	*$1.8429*	$1.7250	*$1.8429*	$1.7250
Urban Water Access Fees										
Treated (per annum)	*$220.10*	$220.10	*$226.71*	$226.70	*$228.52*	$228.51	*$228.52*	$228.51	*$228.52*	$228.50
Untreated (per annum)	*$110.06*	$110.05	*$113.35*	$113.35	*$114.26*	$114.26	*$114.26*	$114.25	*$114.26*	$114.25
Recycled (per annum)	*$110.06*	$110.05	*$113.35*	$113.35	*$114.26*	$114.26	*$114.26*	$114.25	*$114.26*	$114.25
Wastewater Access Fee										
Residential (per annum)	*$671.88*	$671.88	*$692.04*	$686.66	*$697.57*	$686.65	*$697.57*	$686.64	*$697.57*	$686.64
Non-residential (per annum)	*$671.88*	$671.88	*$692.04*	$686.66	*$697.57*	$686.65	*$697.57*	$686.64	*$697.57*	$686.64
Wastewater Volume										
Non-residential (per kL)	*$0.8959*	$0.8959	*$0.9227*	$0.9227	*$0.9504*	$0.9503	*$0.9789*	$0.9788	*$0.9787*	$0.9787

1.2 Service performance

The following table summarises our performance in the first four years of the third regulatory period against each of the ESC Service Standards.

Table 2 *– Performance against ESC Service Standards, 2013-14 to 2016-17*

	2013-14	2014-15	2015-16	2016-17
General Information				
Water customers	70,893	72,117	73,228	74,163
Sewerage customers	63,743	65,038	66,088	67,055
Length water mains (km)	2,203	2,220	2,237	2,254
Length sewer mains (km)	1,859	1,885	1,915	1,938
Usage & Billing				
Average annual consumption (kL)	190	192	210	185
Average annual bill ($)	1234	1286	1342	1305
Customers with instalment plans (per 100):				
Residential	18.9	20.9	18.6	6.5
Non-residential	10.7	10.2	8.8	0.8
Customer Service & Complaints				
Ave time to connect to operator (seconds)	14	14	14	13
Complaints received (per 100)	0.61	0.63	0.65	0.86
Water Performance				
water supply interruptions (per 100km main)	10.2	9.6	13.9	13.4
Interruption frequency (interruptions per customer)	0.08	0.07	0.10	0.11
Ave duration unplanned interruptions (minutes)	170.2	114.3	118.4	132.0
Ave customer minutes off supply (minutes)	14.2	7.5	11.6	14.6
Bursts & Leaks (per 100km main)	28.6	26.1	29.1	28.7
Ave time to rectify bursts & leaks:				
Priority 1 (minutes)	293.5	371.8	328.7	405.3
Priority 2 (minutes)	1,019.7	346.8	705.3	2,065.8
Unplanned interruptions restored within 5 hours (%)	95.3	98.1	98.1	98
Sewer Performance				
Sewer blockages (per 100km main)	62.9	48.2	53.7	40.5
Sewer spills from reticulation and branch sewers (per 100km main)	38.4	33.5	39.9	25.7
Containment of sewer spills within 5 hours (%)	99.0	100.0	100.0	100.0
Sewer spills to customer property (per 100 customers)	0.51	0.42	0.54	0.33
Proportion of effluent reused (%)	32.2	37.1	39.8	23.8
Net Greenhouse gas emissions (tonnes CO2)	31,648	44,006	56,374	33,645

Note that the definition of instalment plans was changed in 2016-17 to end of period rather than each month, hence the reduction in reported figures.

1.3 Expenditure

One of our key goals was to return to financial viability during the third regulatory period. This meant controlling spiralling debt by reducing expenditure and stabilising revenues, with the goal to return to profitability. Changes to tariff structures reduced the revenue risk to the business from demand volatility. Our level of investment in capital spending and operating expenditure, already efficient, required similar levels of investment to maintain service levels and renew infrastructure and to ensure that customers continued to receive a high quality of service.

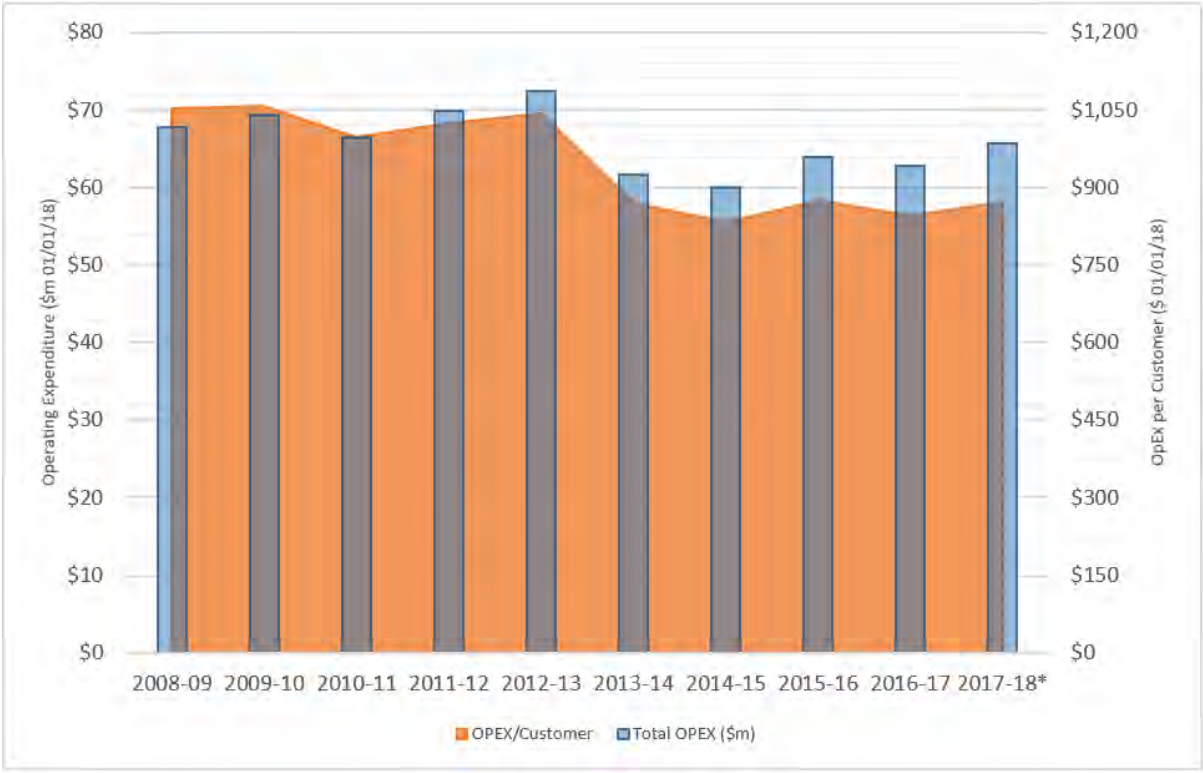
Table 3 – *Annual capital and operating expenditures, 2013-14 to 2017-18*

$ 01/01/18	2013-14	2014-15	2015-16	2016-17	2017-18
Customers	70,841	72,103	73,218	74,163	75,424
Total OpEx ($m)	$ 61.63	$ 60.16	$ 63.98	$ 62.77	$ 65.79
Operating Expenditure/Customer	**$ 870**	**$ 834**	**$ 874**	**$ 846**	**$ 872**
Total CapEx ($m)	$ 57.70	$ 47.27	$ 65.43	$ 36.67	$ 38.03
Capital Expenditure/Customer	**$ 814**	**$ 656**	**$ 894**	**$ 494**	**$ 504**

Operating expenditure

Figure 2 below shows annual operating expenditure (total and per customer) for the third regulatory period. Operating expenditure was relatively consistent over the regulatory period, with a low $61.2 million in 2014-15 and a high of $64.0 million the following year, mainly due to higher than forecast expenditure for pumping.

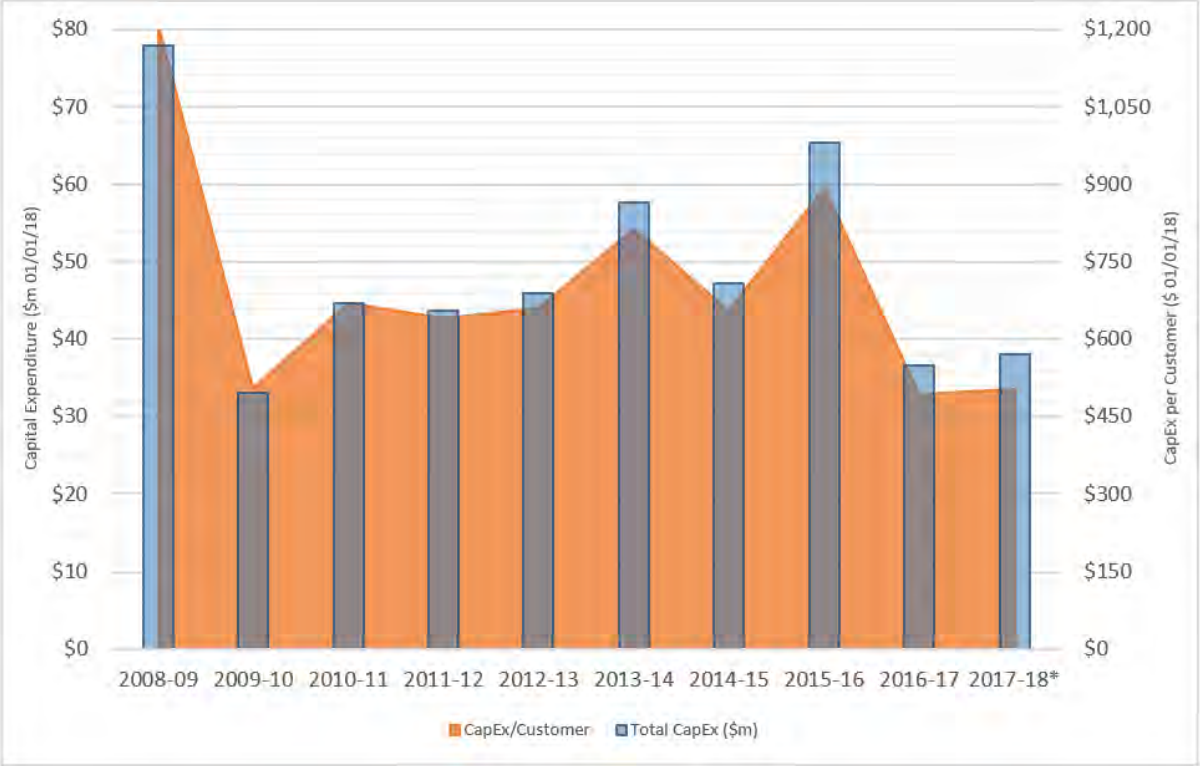
Figure 2 - *Annual operating expenditure, 2008-09 to 2017-18*



Capital expenditure

Capital expenditure over the third regulatory period has been more volatile, in line with the nature of often large and "lumpy" investments, as seen in Figure 3 below. Despite this, the cost impact to the business (and to customers) has been mitigated, with annual borrowing costs remaining largely stable over the period reflecting the decline in interest rates over this period. Capital expenditure this regulatory period was approximately $236 million (average $47 million per year), down from $260 million in the previous regulatory period (average $52 million).

Figure 3 – *Annual capital expenditure, 2008-09 to 2017-18*

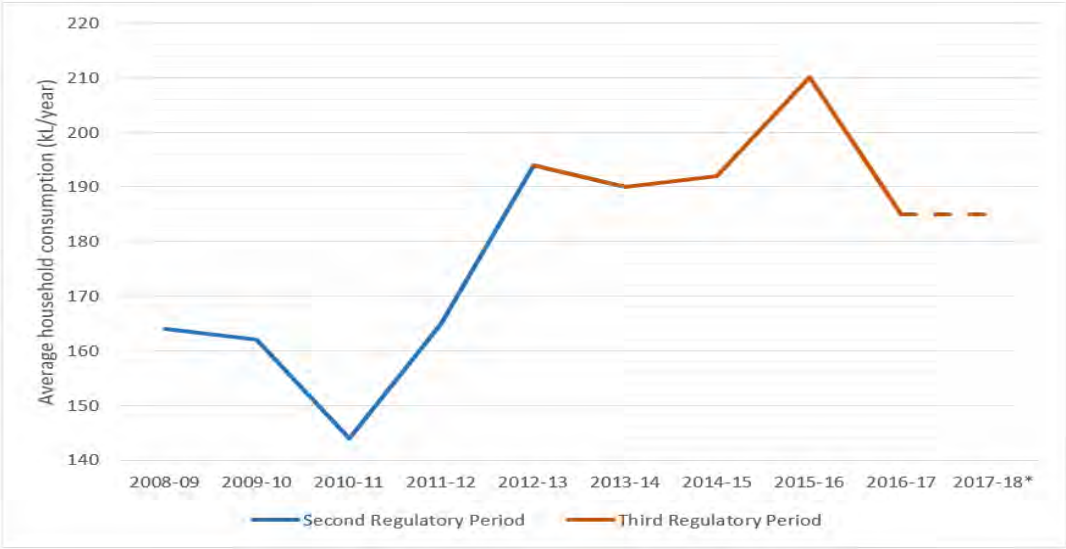


1.4 Water consumption

With dry conditions and harsh water restrictions, water consumption in the second regulatory period was extremely low. Average annual demand was 166 kL per household. In 2010-11, following 1 in 100 year spring and summer rainfalls, water demand dropped to an average 144 kL per household - half of what was the norm only a few years before.

During the second regulatory period, we did the heavy lifting needed to ensure our customers could rely on water being available. Construction of the Goldfields Superpipe and the purchase of additional water shares meant that our customers have access to water even when our catchments are dry. This meant that, leading into the currently regulatory period, we were able to remove harsh water restrictions for the first time in many years. Customer demand for water rebounded immediately. Average household demand peaked at 210 kL in 2015-16 and averaged 192 kL across the five years.

Figure 4 - *Average household water consumption, 2008-09 to 2017-18*



1.5 Financial performance

In the second regulatory period, despite dry, hot conditions, harsh level 4 water restrictions meant water demand was severely constrained. This meant that, despite inclining block water tariffs, our revenue fell well short of our revenue requirement (i.e. actual expenditure).

The story was however very different in the third regulatory period. As shown in Figure 5 below, thanks to higher demand and favourable climatic conditions, actual revenue exceeded the revenue requirement each year. This performance, with a return to profitability three years earlier than forecast, has enabled the business to begin paying down debt.

Figure 5 – *Revenue requirement vs actual financial performance, 2013-14 to 2017-18*

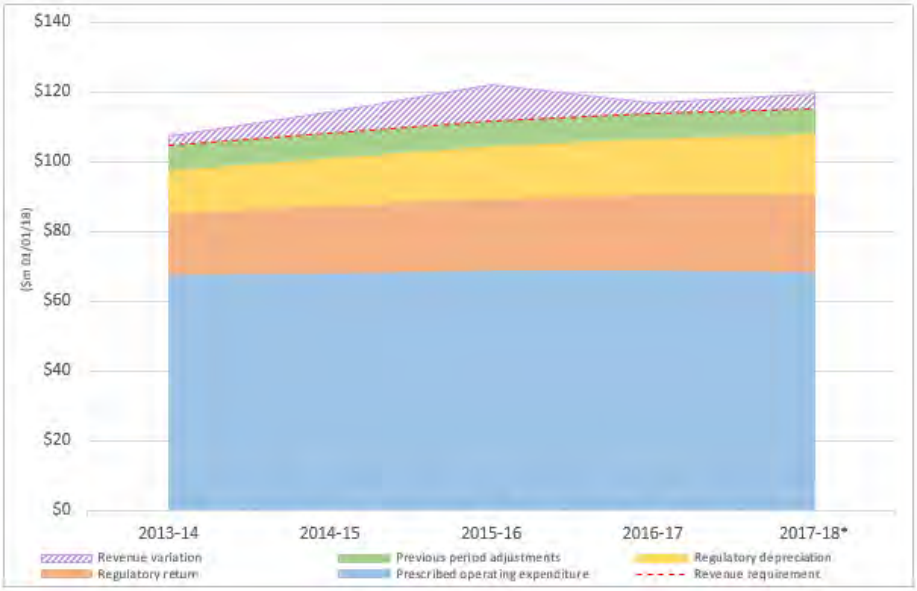


Table 4 – *Revenue requirement vs actual financial performance, 2013-14 to 2017-18*

$m 01/01/18	2013-14	2014-15	2015-16	2016-17	2017-18
Prescribed operating exp.	$ 67.12	$ 67.64	$ 68.43	$ 68.84	$ 68.20
Regulatory return	$ 17.67	$ 19.58	$ 20.72	$ 21.51	$ 22.22
Regulatory depreciation	$ 12.41	$ 13.68	$ 15.11	$ 16.24	$ 17.23
Previous period adjustments	$ 7.49	$ 7.49	$ 7.49	$ 7.49	$ 7.49
Revenue requirement	**$ 104.69**	**$ 108.39**	**$ 111.74**	**$ 114.07**	**$ 115.14**
Revenue collected	$ 107.29	$ 114.32	$ 122.04	$ 116.81	$ 119.55
Revenue variation	**$ 2.60**	**$ 5.94**	**$ 10.30**	**$ 2.74**	**$ 4.41**

1.6 Retrospective PREMO assessment

While it is always a difficult exercise to retrospectively consider how a business would have performed under a new regulatory regime, we are justifiably proud of our performance through the third regulatory period. We believe that, based on our performance and after consideration of the new PREMO regulatory model, that we would have performed at the **Advanced** level, with an average score of 3.0 for PREMO elements. Note that the areas where we feel we fell below Advanced – Engagement and Outcomes – are areas that we have strongly focussed on in the preparation of our Pricing Submission.

Table 5 *– Retrospective assessment of PREMO elements, third regulatory period*

Element	Activities	Rating
Performance	Turned around performance from WP2 – huge debt, annual losses, by end WP3 back to small profit Controlled opex and capex spending – previously larger and huge annual variation Able to deliver annual price rises in line with inflation – customer bills increased by less than inflation	**Advanced+ (3.25)**
Risk	Shift from high variable pricing with inclining blocks to high fixed prices – removed some incentive for customers to be water efficient, however reduced risk to business revenue from variable demand (esp given debt Customers saw smooth price movements each year, without the 'bill shock' experienced previously	**Advanced (3.0)**
Engagement	WP3 commenced with customer survey where every customer was given opportunity to respond. Business received over 8,000 responses Commenced Your Town visits – Coliban Water employees attended towns and cities across our region to hear local issues and seek feedback Continued customer satisfaction surveys, excellent overall results	**Advanced- (2.75)**
Management	Moved from high debt and annual losses to modest profit by end of WP3 Stabilised spending (operating expenditure and capital investment) All VAGO financial performance indicators improved significantly over WP3 – most have moved "red' to 'green' Moved from credit rating BBB- to BBB	**Advanced++ (3.5)**
Outcomes	Board adopted Success Factors to assess our overall performance – in line with current thinking of Outcomes Have come from long way behind in certain areas (average bills, sewer performance, etc) – improved markedly in these areas over WP3 Strong business commitment to continual improvement, including Board visibility of performance in all areas (reports to Board)	**Standard+ (2.5)**
Overall	Advanced - however Engagement and Outcomes slightly low. In both areas Coliban Water's performance improved over the duration of WP3 Our performance in these areas was in line with other businesses and the regulatory model in place. Identified both of these areas as key areas for improvement in developing this Pricing Submission	**Advanced (15.0)**

Appendix 2 Service Standards

Following are our proposed targets for the next regulatory period for each of our existing ESC Service Standards. Note that while some of these align with the proposed Performance Measures, we will continue to collect these throughout the regulatory period.

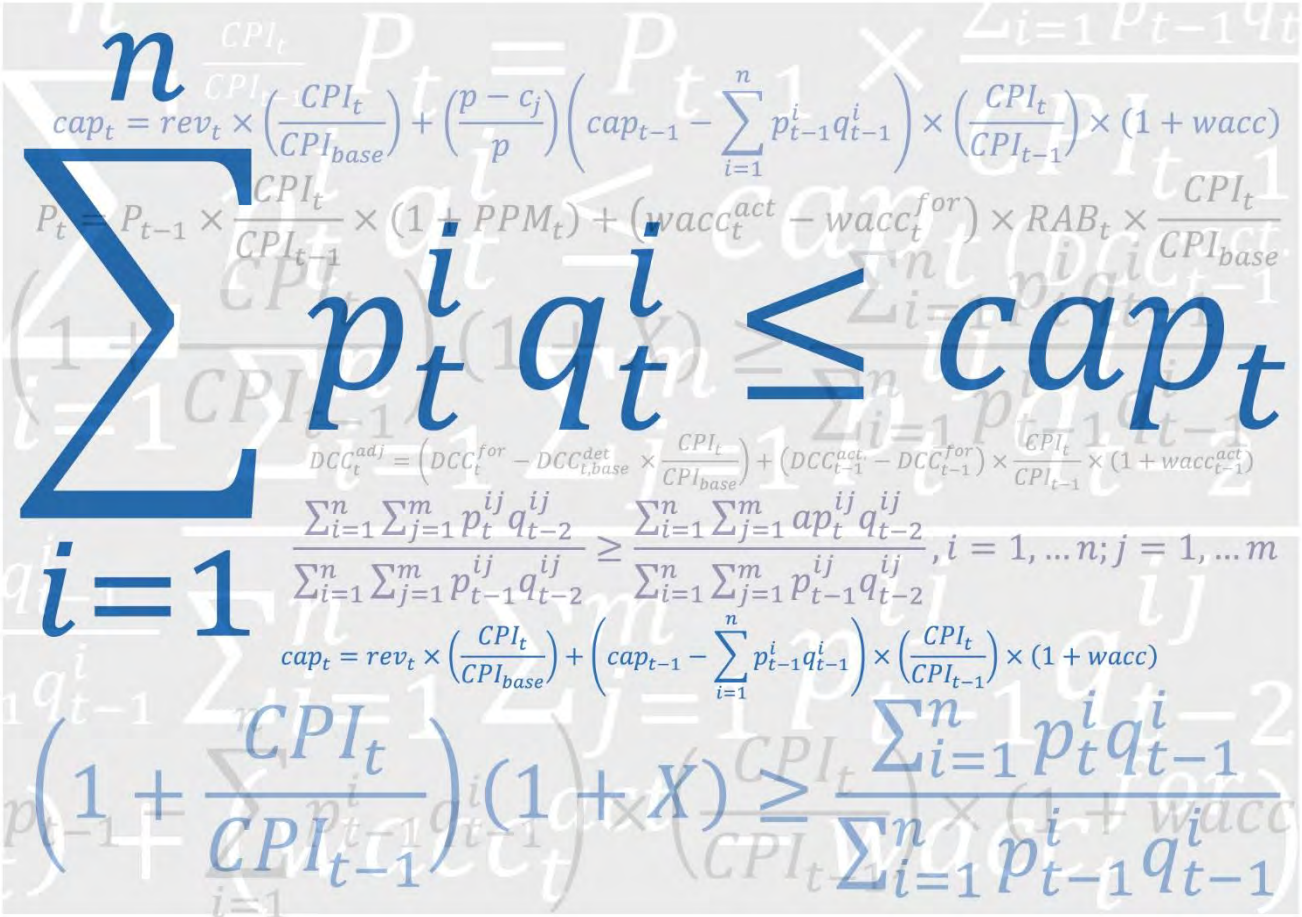
Table 1 *- Proposed ESC Service Standards, 2018-19 to 2022-23*

	2018-19	2019-20	2020-21	2021-22	2022-23
Water					
Unplanned water supply interruptions (number per 100km water mains)	20	20	20	20	20
Average time taken to attend bursts and leaks (priority 1) (minutes)	32	32	32	32	32
Average time taken to attend bursts and leaks (priority 2) (minutes)	80	80	80	80	80
Average time taken to attend bursts and leaks (priority 3) (minutes)	1440	1440	1440	1440	1440
Unplanned water supply interruptions restored within 5 hours (%)	98	98	98	98	98
Planned water supply interruptions restored within 5 hours (%)	98	98	98	98	98
Average unplanned customer minutes off water supply (minutes)	11	11	11	11	11
Average planned customer minutes off water supply (minutes)	13	12.8	12.3	11.8	11.5
Average frequency of unplanned water supply interruptions (interruptions per customer)	0.1	0.1	0.1	0.1	0.1
Average frequency of planned water supply interruptions (interruptions per customer)	0.105	0.102	0.1	0.098	0.096
Average duration of unplanned water supply interruptions (minutes)	112	112	112	112	112
Average duration of planned water supply interruptions (minutes)	140	140	140	140	140
Number of customers experiencing 5 unplanned water supply interruptions in year (number customers)	5	5	5	5	5
Unaccounted for water (%)	15	15	15	15	15
Sewer					
Sewer blockages (number per 100km main)	42	40	38	36	35
Average time to attend sewer spills and blockages (minutes)	30	30	30	30	30
Average time to rectify a sewer blockage (minutes)	80	80	80	80	80
Spills contained within five hours (%)	99	99	99	99	99
Customers receiving more than 3 blockages in the year (number customers)	2	2	2	2	2
Customer Service & Complaints					
Complaints to Energy and Water Ombudsman of Victoria (EWOV) (number)	2	2	2	2	2
Telephone calls answered within 30 seconds (%)	90	90	90	90	90

Coliban WATER

Water to live, grow & enjoy

Supplement C. Financing the Plan



Contents

C1 Financial Position

The business is seeking an adjustment to revenue requirement of $1 million per year to assist financial viability and support the repayment of debt.

Key features of our Value Proposition are:

- ✓ Customers strongly support continued debt repayment of $5.5 million per year
- ✓ Long term prices will be lower as future financial viability will be improved
- ✓ Improvements to corporate credit rating will see prices lowered by passing through any reductions to Financial Accommodation Levy payments
- ✓ As we are proposing prices, if this adjustment of $1 million is rejected, we call for Regulatory Depreciation to be adjusted upwards to maintain the prices customers have requested and we have proposed.

C1.1 Historical financial position

Since 2004, we have been challenged by having a ratio of Debt to Regulatory Depreciation (economic gearing) beyond the maximum level recommended by the ESC. This is due to the historical treatment of financially-related BOOT costs being treated as regulatory operating expenditure. In our 2013-2018 Water Plan, the business proposed a one-off adjustment to the Regulatory Asset Base of $89 million which would solve forever our financial viability concerns.

While this was rejected by the ESC, a combination of substitute measures of a regulatory adjustment of $7 million per year and the capitalisation of financially-related BOOT costs improved our position in the short term but did not permanently solve our financial viability concerns.

In the last five years, a favourable climate, proactive and efficient management and increased customer demand resulted in our financial position improving significantly. Our economic gearing ratio has dropped below 100% and our interest cover has exceeded 2.0.

C1.2 Independent credit review

As recommended by the ESC, we recently had an independent credit review undertaken by global credit rating firm Moody's Investor Service (Moody's). One purpose of this was to ascertain our credit rating that would feed into the rate of Financial Accommodation Levy payable on our loans.

The credit review was done using three distinct pricing scenarios:

Scenario 1: Prices at CPI minus 1% each year

Scenario 2: Prices at CPI minus 4% in 2018-19, then CPI minus 1% thereafter

Scenario 3: Prices at CPI minus 10% in 2018-19 then CPI thereafter.

Common assumptions across all scenarios were:

- Revenue Cap from 2018-19
- 10 year pricing determination period
- Assumed levels of capital and operating expenditure
- Growth in new connections at 1.7%
- Operational contract and BOOT costs based on current toll structures.

Moody's noted with concern our level of economic gearing, although the Revenue Cap did support our credit opinion in all three scenarios.

Given a recent uplift in credit rating has been approved by Government, we will be able to pass savings in the reduced Financial Accommodation Levy back to customers commencing 2018-19.

The Moody's report will be available to the ESC upon request.

C1.3 Building financial resilience

In order to provide debt repayments and price levels supported by customers, we require an adjustment to our revenue requirement of $1 million per year for 2018 to 2023. Following this, and subject to approval of our Pricing Submission, there will be no need for us to require any future regulatory adjustments for financial viability purposes.

This adjustment is required due to the fact that our economic gearing (debt to RAB ratio) exceeds the ESC upper limit of 70%. Applying the adjustment will ensure our real RAB is increasing (rather than decreasing) and will result in our regulatory gearing improving by reducing to 75% at the commencement of the 2023-2028 period.

The importance of the regulatory gearing is well understood in regulatory finance and economics:

- It has been the indicator used by the ESC as far back as 2005
- Credit ratings: This indicator was seen as a key negative indicator for us in our recent Moody's credit rating review
- NERA (for the ESC, 2013): Financeability of Regulated Water Service Providers: "*Every regulator and credit rating agency … employs this metric to assess the debt burden of a service provider*."

We note that, given our plans to spend a historically low level of capital expenditure, our indicator for internal financing ratio is satisfactory under all financial scenarios. Our forecasts for the other three ESC indicators are shown below in Table C1.

Table C1 *– Key financial indicators*

	Target	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
FFO interest cover (times)	> 1.8 times	1.7	2.0	2.1	2.2	2.5	2.6	2.6	2.6	2.6	2.7	2.8
Net Debt / RAB (Gearing) (%)	< 70 per cent	93%	90%	87%	84%	81%	78%	75%	72%	70%	67%	65%
FFO / Net debt (%)	> 10 per cent	4.7%	6.0%	7.0%	7.6%	9.2%	9.8%	9.9%	10.2%	10.5%	11.2%	11.9%

This financial viability adjustment of $1 million per year is required to ensure our RAB remains increasing in real terms. The rejection of this adjustment and substitution of lower customer prices will hamper our ability to repay debt, interfere with the risk proposition throughout this submission and may leave open the possibility of further financial intervention in future regulatory periods. Because it is our position that this Pricing Submission is about pricing and maintaining good faith with customers, if this adjustment were to be rejected by the ESC, this submission calls for the replacement of the adjustment with an equivalent level of regulatory deprecation. While this may lead to "second best" outcomes with regards to the RAB, it will ensure that customers can still receive the services they desire for the prices that they have demonstrated support.

C2 Regulatory period length

The business is seeking a regulatory period of five years plus five years.

Key features of our Value Proposition are:

- ✓ Customers strongly support bills increasing less than inflation over 10 years
- ✓ We firmly signal 10 years of prices to maintain faith with customers
- ✓ Our firm intention is for fast tracking in 2022-23 for the next five year period if revenue, expenditure and the PREMO rating align with expectations.

C2.1 Justification for regulatory period length

A regulatory determination of ten years has been supported by our customers as evidenced by customer forums, surveys and *Your Town* visits. Our residential and business customers have clearly told us that they value long-term price stability. Our business customers value foreknowledge of future water and sewer prices to help with their business planning.

However, we acknowledge the practicality of proposing a 10 year period and our revised approach strikes, we believe, a fair compromise that retains faith with customers while recognising the regulatory reality of the challenges this poses.

Therefore we are seeking an initial regulatory determination of five years and signalling a firm intention for revenue in the following five years (2023-2028) to also be based on prices moving at CPI minus 1%.

We foreshadow seeking to claim fast tracking for 2023-2028 in our next Pricing Submission based on the following criteria:

- **PREMO:** Advanced or Leading rating, this implies meeting our performance measures
- **Operating expenditure:** In line with (±2%) of our 2018 Pricing Submission forecasts for each of:

    - 2018-2023 period
    - 2021-22 year
    - 2023-2028 period
- **Capital expenditure:** In line with (±5%) our 2018 Pricing Submission forecasts for each of:
    - 2017-2023 period
    - 2023-2028 period
- **Revenue:** In line with (±1%) of our adjusted revenue cap such that no carry-forward to 2023-2028 period is required
- **No water restrictions:** No water supply constraint for us in a major town
- **Outcome Delivery Incentives:** Preparation in conjunction with customers for 2023 implementation

Achievement of these criteria will indicate that we have achieved our objectives and that our forecasting of costs was accurate in hindsight. Therefore, we would be strongly seeking fast tracking for 2023-2028.

C3 Form of Price Control

The business is proposing a Hybrid Revenue Cap regulatory model.

Key features of our Value Proposition are:

- ✓ The Hybrid Revenue Cap best meets principles by balancing and eliminating risks
- ✓ Precedent exists for the implementation of a Hybrid Revenue Cap following approval by ESCOSA of SA Water's Revenue Cap
- ✓ Enhanced bill stability for customers and revenue stability for the business
- ✓ Modest real bill decreases on average as supported by customers
- ✓ Greater certainty of debt repayment as desired by customers that supports future price decreases
- ✓ Avoids repeating instability of the Price Cap model that has been unsuitable for customers and the business
- ✓ Stress testing of standard Revenue Cap has shown excessive bill volatility

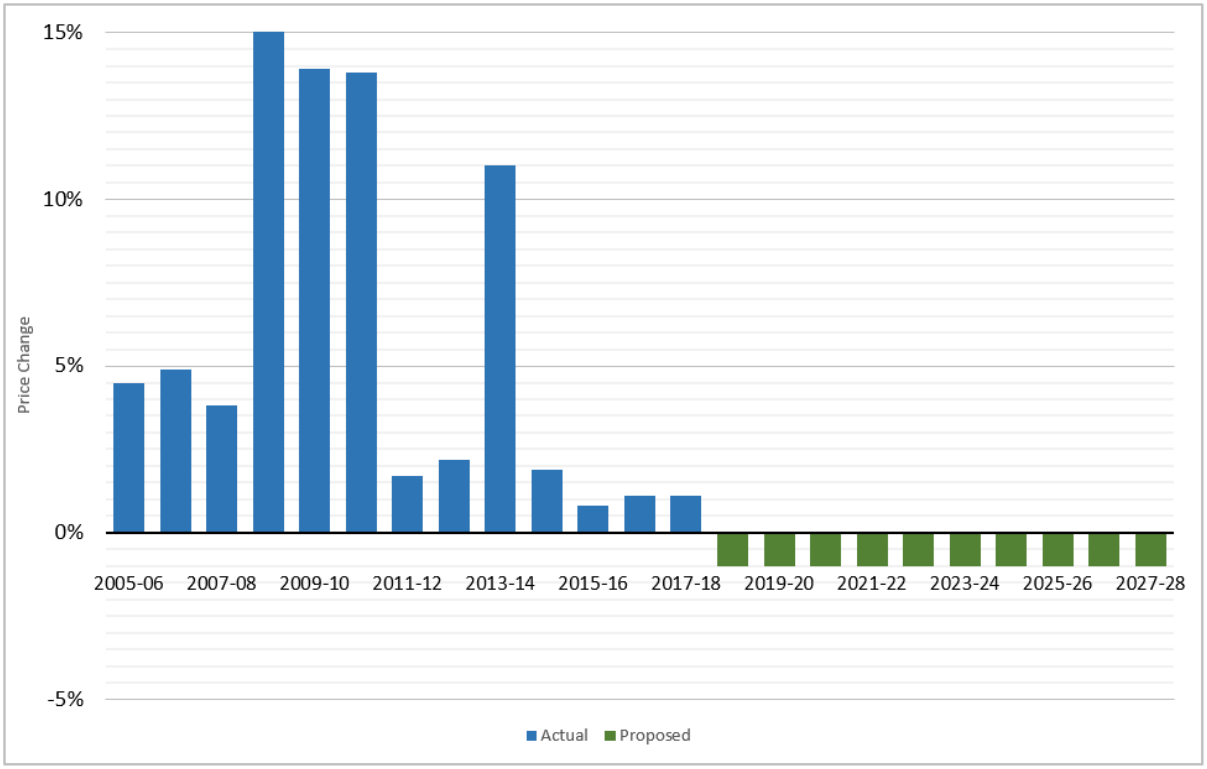
C3.1 Our experience with price caps

In the second regulatory period, revenue collapsed with the imposition of level 4 water restrictions followed by a very wet period. There were three years in this period where real price increases exceeded 10% per annum. Under Price Caps, there is no simple recourse (aside from a resource-intensive regulatory reopening) to adjust prices within period. The revenue shortfall was funded by increased debt in the short term and a financial viability adjustment in the following regulatory period. Under any form of Revenue Cap, a shortfall could have been rebalanced in a more timely fashion subject to a side constraint to protect bill shocks for customers.

The 2013 Determination allowed a large adjustment in 2013-14, and higher demand over this regulatory period led to revenue over-collection with fixed prices. Under any form of Revenue Cap, we are required to offset over-collection by decreasing prices to ensure balance. Since 2013-14 most customers experienced more stable prices but with average bills varying in step with the climate.

Figure C1 shows real historical annual price movements in our tariffs (blue), as well as proposed price movements for the next regulatory period (red).

***Figure C1** - Historical and proposed (real) annual price movements, 2005-06 to 2027-28*



C3.2 Price control engagement

Over many years, customers have told us that they want the water business to remain resilient, profitable and viable. They value us avoiding imposing bill shocks, noting historically bills have significantly increased when faced with climatic challenges and persistent demand changes. Customers dislike volatility, especially where a short term gain may lead to future pain. In our tight-knit communities, our Annual Reports often received adverse media regarding debt levels. Customers considered the 2013-14 price increases fair and inevitable given our financial predicament.

Consumers do not choose a level of water based on an amount they are willing to pay but rather base their consumption on the value they can create from their water. The value of water is not determined by economic exchange but by customers use of water. Customers who maintain a garden place a high value on the maintenance of their private open space as it forms an important aspect of their cultural capital and sense of self-actualisation (Prevos, 2017). Price elasticity of water in areas with high amounts of private open space is very low because willingness to pay is very high. This mechanism is evidenced by the fact that our customers used significantly more water in hot summers than they do in wet summers, to achieve the same level of utility. 2015-16 saw annual consumption 66kL or 46% higher than 2010-11, with neither year materially affected by water restrictions and noting that prices in 2011 were 33% lower than in 2016. Also the cottage industry of water recycling products and alternative water sources that developed during the Millennium Drought demonstrates the high value that the community places on maintaining their private open space. The strong relationship between weather and water consumption also demonstrates that customers are seeking the water they need to generate the value they're looking for.

We are implementing a digital metering to provide customers with tools to manage their water consumption by providing them with continuous information and advice to help them make consumption decisions. We are also considering organising annual pricing forums to discuss any movements in prices with a cross-section of the community.

Presented with a range of options at the first Pricing Forum, attendees overwhelmingly selected a price path that delivers long-term modest real bill decreases. At the second Pricing Forum, the majority of customers supported the fixed / variable tariff split remaining as is, although there was a preference expressed to revisit this in the future. Also, customers were split between preferring a continuation of Price Caps or a “smoothed” Revenue Cap rather than a Revenue Cap with immediate adjustment.

Additionally, we have noted and seek to implement the following customer gains:

- Reduce business debt by $55 million over 10 years
- Review fixed / variable tariff splits
- Introduce tariff choice
- Introduce higher levels of service for developers, including new fast track services
- Reduce capital expenditure by implementing Time-of-Use pricing
- Ensure that long term price increases do not exceed CPI
- Reform trade waste pricing to introduce a new “intermediate” category
- Commence the service delivery of standpipes in our region at a uniform water variable rate
- Introduce meter provision services to customers by reviewing our Quick Connect program

C3.3 Price control options prioritisation

The *Water Industry Regulatory Order 2014* (WIRO) Section 11 provides guidance for Victorian water businesses that prices, or the manner in which prices are calculated, should:

a) Enable customers to easily understand the prices or pricing method
b) Provide signals about efficient costs to customers, and where possible avoid bill shocks
c) Take account of the interests of customers, including low income and vulnerable customers

Alignment between the WIRO guidance and each price control option is shown in Table C2. We note that, under a scenario where actual demand aligns with forecast demand for each year, each model would effectively be identical in operation. Given the extreme climate variation in north central Victoria, this will never eventuate.

Price Cap

A **price cap** form of price control is easily understood by customers. It does not however promote efficiency, as financial variations due to cost savings or overruns are insignificant compared to variations in climate or other shocks. While it does give customers the capacity to vary their usage to manage their total bill, it may result in successive large bill shocks when demand remains higher than forecast or fluctuates. This is especially so in our region, where our customers have a high level of demand variation compared to southern regions. Average customer bills in 2015-16 were $100 higher than forecast in the Determination due to a hot, dry summer. A Price Cap could potentially deliver outcomes in line with our customers’ best interests, however the long term uncertainty of bill levels that are intrinsically linked to unknown climatic conditions are not in the interests of customers generally, or low income or vulnerable customers specifically. Furthermore, price caps would not easily permit us to achieve the customer gains outlined above.

Price caps led to the violation of the principle of cost recovery within the past two regulatory periods. Our historical under-recovery of revenue has been followed by sharp bill shocks. Debt is now higher than had a Revenue Cap applied from 2005.

Revenue Cap

A standard **revenue cap** is more complex than a price cap with the possibility of significant year-on-year variation to prices. It somewhat promotes efficiency by giving the business the means to adjust prices to respond to any variations in demand. However, it leads to the perverse outcome that profit is maximised when consumption is low as saved costs are not otherwise reimbursed to customers while revenue variations are recouped in the following period. This leads to the risk of price shocks, with large price increases or decreases to rebalance for prior year variances. The potential for large bill shocks under this model means it does not align with the best interests of our customers, although the innovative services proposed above could be easily introduced.

Hybrid Revenue Cap

Following discussions with the ESC, ESCOSA and SA Water, we have formulated our preferred Hybrid Revenue Cap. We believe a revenue cap in line with the ESCOSA precedent counters some of the perceived negatives of a standard revenue cap. Our Hybrid Revenue Cap has the following features:

- Precedent based on ESCOSA’s approved SA Water model
- Five year period for balancing revenue reduces intra-period price variation

- A 50% adjustment offsetting 2018-2023 revenue variations. This ensures the positive (negative) marginal cost of providing a higher (lower) quantity and level of service is recovered from (returned to) customers, and therefore locks in cost recovery. It also incentivises us to continue with demand side management activities like *Target Your Water Use* and not promote extreme water consumption
- A 1% materiality threshold before adjustments apply in 2023-2028 avoids any trivial adjustment
- An annual Customer Safety Net restricting maximum price increases to 3.5% (nominal)
- Inbuilt self-correcting mechanism to incentivise softly modifying prices year-on-year so there is no large adjustment in 2023
- New annual Pricing Forum for customers to approve tariff and price changes and also to review performance stewardship

While the Hybrid Revenue Cap is more complex than a standard price cap, it best promotes efficiency by ensuring a better alignment between revenue and costs than both alternatives. By setting a revenue cap figure for the full period, a direct linkage is made between the regulatory revenue determination and the sum of bill revenue paid by customers. The Hybrid Revenue Cap will also reduce long-term bill shocks. The self-correcting mechanism incentivises us to gradually adjust prices to the correct level as revenue variations are smoothed over the period and beyond. Furthermore, we contend that this is clearly in the best interests of customers due to the focus on cost reflectivity, locking in long term bill movements less than CPI, and the achievements of the customer gains above.

C3.4 Preferred price control option

We are proposing a Hybrid Revenue Cap because it better meets the principles of cost reflectivity when compared to a traditional price cap or revenue cap.

***Table C2** - Alignment of price control options with WIRO guidance*

Regulatory Model	Understand Pricing Method	Promote efficiency	Avoid bill shocks	Best interests of customers
Price Cap				
Revenue Cap				
Hybrid Revenue Cap				

Under our Hybrid Revenue Cap, a cap on total allowed revenue is set for the five years of the Revenue Cap period. Annual price movements will be determined in conjunction with customer engagement and the self-correcting mechanism will incentivise annual bills moving smoothly over the regulatory period. Annual revenue benchmarks are non-binding but give the business guidance and the ESC confidence regarding how revenue is tracking within the period. Revenue over-collection in one year, due to climatic variations, will be naturally smoothed and balanced with revenue under-collection in another year, subject to a Customer Safety Net of 3.5% nominal in any year and approval of tariff changes at the annual Pricing Forum.

C3.5 Smoothing the revenue cap

Where revenue variation is outside the ±1% threshold, we are incentivised to provide price adjustments as soon as practical. This will limit the potential for future price shocks and allow price movements to remain as smooth as possible. If we are outside the ±1% threshold at the end of the Revenue Cap period, an adjustment will flow into the next period (with interest and inflation).

We will consider demand forecasts and engage with our customers annually before establishing prices to apply in the next year. Considering the input of customers, the business will choose to modify tariffs to apply in the following year or hold over adjustments until the next regulatory period.

C3.6 Services

Our Hybrid Revenue Cap will apply to all prescribed revenue in the regulatory period that relates to currently incurred operating expenditure. This broad base will best ensure cost reflectivity and allow flexibility to introduce new tariffs desired by customers for existing services.

If we choose to introduce a new prescribed service that is not linked to currently incurred operating expenditure, the standard principles of cost recovery will apply and such revenue will be outside the revenue cap. While there are no services that definitely meet this criteria, we are considering the insourcing of meter provision services to better meet the needs of customers.

C3.7 Rebalancing constraints

The Customer Safety Net will limit individual tariff increases to a maximum +3.5% (nominal) in any year, regardless of the prevailing inflation rate or debt adjustment. The 2016 Final Determination for Goulburn-Murray Water[1] approved a maximum rebalancing of 10% plus the average price increase in that year. Compared to the G-MW determination, our Customer Safety Net provides much greater price certainty and significantly mitigates inflation and debt risk for our customers.

There are a number of services for which it is inappropriate to apply the annual Customer Safety Net:

- Northern volumetric harmonisation: A cap of 10.6% (real) will apply in 2019-20 to harmonise the northern volumetric water tariff with the Central zone. After 2019-20 the standard safety net will apply.
- Trade waste services: Customer engagement has led to tariff reform with the introduction of new tariffs from 2019-20. Such changes may be transitioned in over several years to mitigate customer impacts. Therefore, an annual cap of 10% (real) will apply to all trade waste services.
- Developer services (project management): Customers have requested a higher level of service that is supported by greater resourcing. An annual cap of 10% (real) is proposed on any "compulsory" service.
- Optional services: Customers have indicated support for options such as off-peak water tariffs and land development fast-tracking / resubmission fees. The prices for these services should be market responsive as long as customers always have the option of reverting to the standard tariff.
- Pricing by principles: If underlying costs change, then the price would also have to change.
- New Customer Contributions: These services are outside the revenue cap so will not be subject to the revenue cap safety net.

No cap is proposed on annual decreases to any tariff, however any reductions to tariffs would need to be offset by other increases and this is unlikely as increases will be limited by the Customer Safety Net. It is our firm intention not to change well-structured and effective tariffs unless customer support indicates otherwise. Setting tariffs for the following year through engagement with customers at the annual Pricing Forum will allow our customers input to how they want us to respond to inevitable future revenue variations.

C3.8 Risk allocation

Our proposed Hybrid Revenue Cap more equitably balances risk between the business and customers. A Revenue Cap applying for the entire regulatory period rather than individual annual caps reduces demand forecasting risk for the business and promotes bill stability for customers. The proposed rebalancing constraints, in particular the Customer Safety Net, further protect customers from price shocks. Our firm intention to consult with customers each year before endorsing prices will reduce the risk of misalignment with customer expectations.

In addition, financial risks relating to changes in CPI and interest rates that would ordinarily flow through to prices are materially removed from customers where the impact would have prices increasing by more than 3.5% in any year.

[1] Essential Services Commission 2016, *2016 Price Review Final Decision: Goulburn-Murray Water Determination,* June

C3.9 Modelling and intervention

We have undertaken financial modelling to review and implement how a Hybrid Revenue Cap would work in practice and we welcome the opportunity to present this information to the ESC.

We have not identified any transition issues, whether relating to adverse customer impacts or otherwise.

Furthermore, we can (upon request) provide a draft copy of the relevant clauses of the Determination that would give effect to this Hybrid Revenue Cap.

C3.10 Alternative price control

While our proposal is for a specific form of Hybrid Revenue Cap with a defined set of rebalancing parameters that we believe are in our customers' best interests, we would welcome the opportunity to be granted any form of Hybrid Revenue Cap where a percentage of revenue is retained to cover the benchmark for additional costs incurred, and the balance is returned to customers.

We are happy to discuss with the ESC precisely which parameters could be modified.

In the event that a Hybrid Revenue Cap is not endorsed by the ESC, we note that Price Caps performed better than a standard Revenue Cap in our options prioritisation.

C4 Adjusting prices

Three adjustments relating to uncertain and unforeseen events and pass throughs within this regulatory period:

- ✓ Cost of debt pass through aligns with ESC guidance
- ✓ Certain major projects have been excluded from revenue requirements and will only be included where new projects must be completed and have been commissioned
- ✓ Costs to the business of future regulatory and policy changes only pass through where they exceed a materiality threshold

We propose that any adjustment for a pass through or uncertain or unforeseen adjustment will result in an adjustment to the Hybrid Revenue Cap figure.

In the previous chapter, it was demonstrated how the Hybrid Revenue Cap has an inbuilt self-correcting mechanism. This also applies to situations where a pass through or uncertain event causes the Hybrid Revenue Cap to change, where we would be penalised in the next regulatory period if we do not pass any adjustments through this period. While a brief formula has been provided, we would welcome the opportunity to provide a model detailing how the adjustments would work in practice or to suggest wording for insertion in the Determination.

While these adjustments may lead to changes in prices that exceed our Customer Safety Net of 3.5%, we will not breach the safety net for changes in the cost of debt pass through alone.

C4.1 Cost of debt pass through

As required by ESC guidance, we must specify a mechanism for passing through changes in the benchmark cost of debt. We propose an adjustment to our revenue cap as follows:

$$var_t = (DA_t - DD_t) \times 0.6 \times RAB_t$$

Where:

- t represents a given year of the regulatory period (from 2019 to 2023)
- DA_t is the actual 10 year trailing average debt benchmark for year t
- DD_t is the finally approved 10 year trailing average debt figure for year t as specified by the ESC in the Determination
- RAB_t is the average Regulatory asset base for year t as specified by the ESC in the Determination
- var_t is the variance due to the debt pass through in year t that must be reflected in the revenue cap

This formula will lead to some variations which will all be adjusted for the regulatory rate of return and inflation, and used to adjust the Hybrid Revenue Cap figure.

C4.2 Specific project pass through

The Millennium Drought highlighted potential risks to the supply of water to our southern towns, principally Castlemaine and Kyneton, due to their single source of supply. In the event of a significant drought or other interruption to supply, these townships may be subject to more stringent water restrictions than our other towns, or could conceivably have no water available. To address this risk, we have commenced planning for the Castlemaine Link Interconnector Pipeline – a pipeline that would allow water from Bendigo to flow to Castlemaine and Kyneton. Due to the potential additional cost to customers of $3-$5 million per year, we intend to only construct the pipeline when it is needed. We therefore propose that actual costs (incremental operating, regulatory return and regulatory depreciation) associated with this project be passed through to prices in the form of a higher Hybrid Revenue Cap figure only when the pipeline is commissioned.

Note that we are proud of our rigorous capital approval processes that has seen capital expenditure per customer fall significantly over the period. For a project of this size, an independent external Peer Review process applies that mirrors DTF's Gateway process. In applying to the ESC for inclusion in the revenue requirement, we would also forward to the ESC any final reports of the Peer Review team.

For similar reasons, there is also a possibility that we will need to upgrade the capacity of the Goldfields Superpipe in the next regulatory period and we have not included this in our revenue requirement. The same process would apply to the Goldfield Superpipe as would apply to the Castlemaine Link Interconnector Pipeline.

C4.3 Tax, regulatory and policy changes

In Section B4 Managing risk, we outlined that we were taking significant risk regarding changes in taxes and legislative obligations. This means we are formalising the level of risk that we are bearing instead of simply passing through to customers.

It is possible that any of the following taxes or legislative obligations could change:

- Carbon tax
- Land tax
- Environment contribution
- Payroll tax
- Licence fees
- Defined Benefits superannuation contribution
- Other government charges / taxes / fees / licences / laws.

We propose that no changes to the revenue requirement would apply unless the net variation in these items compared to the ESC's Final Determination exceeds a threshold of ± 2.5%. Our Hybrid Revenue Cap figure will then be adjusted. Where there is an upwards adjustment, this may necessitate that our Customer Safety Net of 3.5% nominal in a particular year is exceeded.

We contend that the use of a high threshold (2.5%, approximately $3 million) protects our customers significantly from the risk of changes to government policy.

C4.4 Financial accommodation levy (FAL)

Where our credit rating improves above BBB-, we will also voluntarily reduce our prices to ensure customers are rewarded for their contribution to our improved financial performance. As this will be based on actual debt instead of benchmark debt, it will be calculated annually based on:

- the FAL difference between BBB- and our actual rating; and
- actual loans for which the revised FAL rating applies

As our credit rating effective 2017-18 is BBB, this means we will first apply the FAL adjustment to 2018-19 prices once we know the actual level of loans to which our new BBB rate will apply.

In the event that our credit rating deteriorates, we will not be increasing prices to cover this shortfall.

C4.5 Outcome Delivery Incentive (ODI) mechanism

To incentivise us to achieve the customer outcomes, we are proposing to derive an Outcome Delivery Incentive mechanism during the first five-year regulatory period. A dollar amount will be nominated as a penalty and reward against the outcome targets that matter most to customers. The business will be financially penalised

for not achieving the Customer Outcomes, but in addition it can also be financially rewarded for exceeding performance.

We will work with customers through annual pricing engagement to identify which outcome targets should be included and what acceptable dollar value should be at risk.

This will then be included in our Pricing Submission for the fifth regulatory period from 2023.

C5 Revenue requirement summary

Revenue requirement provides for real price decreases for five years and forward planning provides for continued decreases through to 2028:

- ✓ Prudent and efficient service delivery - forecast operating expenditure
- ✓ Prudent and efficient investment - forecast capital investment
- ✓ Fair regulatory adjustments

C5.1 Revenue requirement

Our revenue requirement is outlined in table C3. Note that our revenue requirement per customer connection is decreasing over the next 10 years.

***Table C3** - Revenue requirement, 2018-19 to 2027-28*

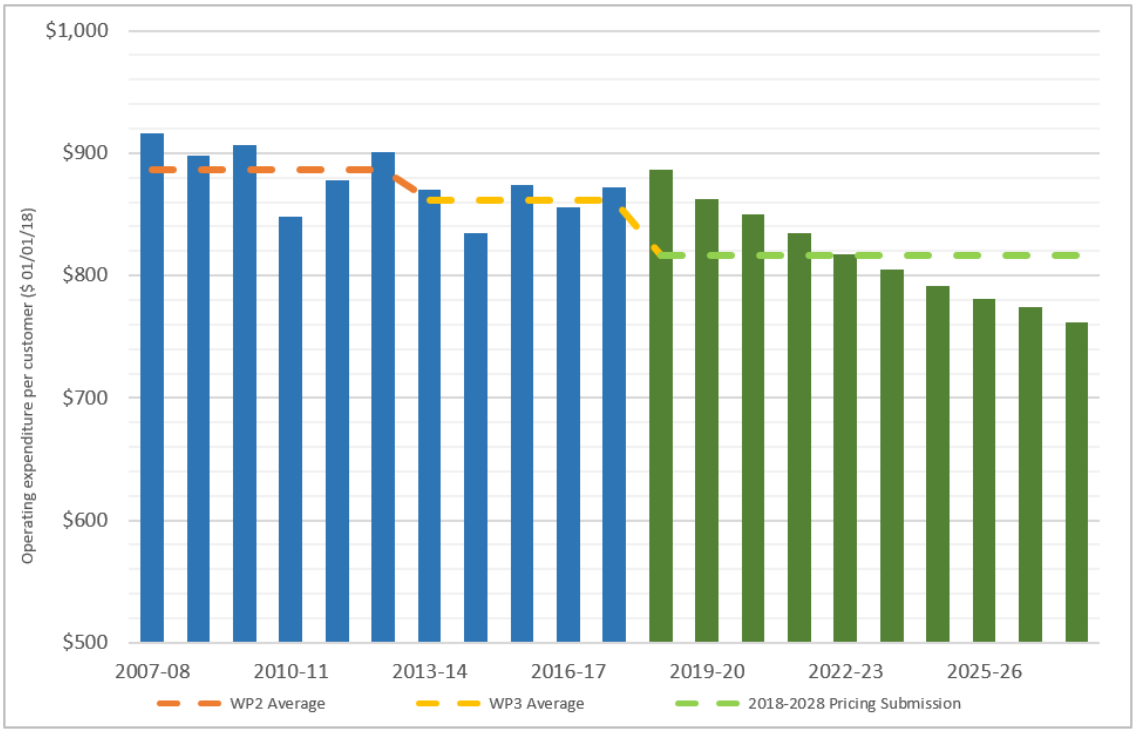
$ 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Operating expenditure ($m)	$ 68.05	$ 67.44	$ 67.65	$ 67.59	$ 67.46	$ 67.56	$ 67.65	$ 67.99	$ 68.62	$ 68.76
Return on assets ($m)	$ 20.85	$ 20.83	$ 20.81	$ 20.85	$ 20.92	$ 20.95	$ 20.95	$ 20.97	$ 20.99	$ 21.01
Regulatory depreciation of assets ($m)	$ 31.53	$ 32.58	$ 33.59	$ 34.66	$ 35.97	$ 36.65	$ 37.14	$ 37.38	$ 37.33	$ 37.78
Adjustments from last period ($m)	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ 1.00	$ -	$ -	$ -	$ -	$ -
Total revenue requirement ($m)	**$ 121.42**	**$ 121.85**	**$ 123.05**	**$ 124.10**	**$ 125.35**	**$ 125.15**	**$ 125.74**	**$ 126.33**	**$ 126.94**	**$ 127.55**
Revenue requirement per customer connection ($)	**$ 1,585**	**$ 1,564**	**$ 1,553**	**$ 1,540**	**$ 1,529**	**$ 1,501**	**$ 1,483**	**$ 1,465**	**$ 1,448**	**$ 1,430**

C5.2 Fair regulatory adjustments

To ensure that we meet our customer objectives of keeping long term price increases less than inflation, we have included a regulatory adjustment of $1.0 million per year. Additional information regarding this is available in section C1 Financial position or in the Pricing Submission main document.

C6 Operating expenditure

***Figure C2** – Historical and proposed operating expenditure per customer, 2007-08 to 2027-28*



C6.1 Operating expenditure summary

***Table C3 –** Summary of operating expenditure, 2016-17 to 2022-23*

$m 01/01/18	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water	$ 28.79	$ 29.31	$ 29.69	$ 29.75	$ 30.28	$ 30.15	$ 30.65
Sewerage	$ 24.48	$ 26.93	$ 26.31	$ 26.04	$ 25.88	$ 26.05	$ 25.53
Recycled Water	$ 1.05	$ 1.16	$ 1.38	$ 1.24	$ 1.22	$ 1.21	$ 1.20
Rural Water	$ 2.79	$ 2.83	$ 3.05	$ 2.95	$ 2.93	$ 2.93	$ 2.92
External bulk water charges	$ 2.04	$ 1.99	$ 2.33	$ 2.33	$ 2.33	$ 2.33	$ 2.33
Licence fees	$ 0.26	$ 0.28	$ 0.24	$ 0.24	$ 0.26	$ 0.27	$ 0.29
Environment Contribution	$ 3.34	$ 3.27	$ 5.00	$ 4.89	$ 4.78	$ 4.67	$ 4.57

C6.2 Baseline operating expenditure

As per our recently approved regulatory accounts, our baseline operating expenditure in 2016-17 was $62.77 million. While the National Performance Report (NPR) for 2016-17 is not yet released, we note that our 2015-16 urban operating expenditure[2] per customer is $822, which compares favourably to other water businesses:

- 11% less than the national median
- 3% less than the national median for businesses with 50,000-100,000 properties

This is despite the unique challenges that we face, including extensive and unreliable catchments, reliance on two different bulk suppliers, ageing assets, 19 geographically separated treated water networks and a large but lowly utilised rural network. Furthermore, as outlined below our regulatory operating expenditure in 2016-17 was $0.5 million lower than 2015-16, and we anticipate future reports will reveal an improving long term operating expenditure trend in the future in line with our forecasts.

[2] http://www.bom.gov.au/water/npr/docs/2015-16/Urban-National-Performance-Report-2016-high-res.pdf

Variations to baseline

Climate variation from year to year can lead to significant variations in operating expenditure. For example, in 2015-16 we incurred significant pumping and water treatment expenditure owing to historically hot and dry conditions that lead to record water consumption (210 kL per household) and very low Coliban River inflows (9 GL). However, 2016-17 started with an extremely wet spring that led to very high Coliban River inflows of 100 GL. Summer returned to more moderate conditions, and actual residential water consumption fell from 210 kL to 185 kL per household in the year.

Consequently, our operating expenditure per customer reduced in 2016-17. There were two abnormal events that need to be factored in when calculating our baseline controllable operating expenditure:

1. Contractual corrections from prior years

Over 2016-17, we received a repayment of expenditure from contractors pertaining to prior year expenditure with a value of $0.42 million. As operating expenditure was incurred by the water business in prior years, the correct accounting treatment was to treat this as a negative operating expenditure. To properly reflect a fair baseline, this repayment needs to be removed from our baseline controllable operating expenditure. Further information regarding this transaction is available to the ESC upon request.

There were no other contract services adjustments from prior years recognised in 2016-17.

2. Pumping not required in 2016-17

As stated above, spring 2016 was incredibly wet and led to one of the highest ever annual inflows experienced into our Coliban storages. Consequently, we exploited this opportunity to reduce the pumping we undertook via the Goldfields Superpipe.

Our forecast annual average pumping is 7 GL per year. This is significantly above our actual 2016-17 pumping of 803 ML. As the Goldfields Superpipe pumping is a normally occurring expenditure that did not occur in 2016-17, expenditure totalling $0.29 million needs to be included in the baseline.

Fairer Water Bills

In 2013-14, we participated in a government program aimed at identifying potential future operating efficiencies and passing savings back to customers in the form of lower prices or bill rebates. This process identified $0.37 million of net operating expenditure reductions. In addition, savings of $1.40 million due to potential procurement savings were also estimated as part of this process.

As we opted for lower price levels, we note that increased water consumption in recent years has resulted in customers receiving greater bill reductions than our cost savings alone would have delivered.

While Fairer Water Bills imposed an obligation on businesses to reduce bill levels for customers, there was never any formal obligation to reduce operating expenditure. Notwithstanding, we are pleased to have made net operating expenditure savings equivalent to the forecasts estimated in the Fairer Water Bills process. In applying the Guidance Paper requirement of adjusting baseline operating expenditure for assumed operating expenditure savings, we note that no further adjustment is necessary as, in totality, the forecast savings have been fully achieved.

Comparison to 2013 Determination

Our 2013 Determination assumed a controllable operating expenditure of $63.39 million in 2016-17 which is significantly above the actual baseline of $57.82 million – a favourable variance of $5.6 million despite an estimated extra $0.4 million of costs due to water consumption being higher than forecast. We note that full achievement of the Fairer Water Bills savings assumed a reduction of $1.8 million.

The balance of the variation ($3.8 million) is due to approved 2016-17 Regulatory Accounts having lower regulatory BOOT operating expenditure in 2016-17 than forecast in the 2013 Determination.

C6.3 Annual efficiency

We are assuming an annual operating efficiency of 1.5% per annum, on average, after adjusting for inflation and growth (1.7% - see section C10). This provides excellent value to customers and challenges the business to seek and exploit cost savings throughout the regulatory period. This is significantly above the 1.0% annual efficiency assumed in the 2013 Determination.

Based on the businesses' present financial position and the proposed Hybrid Revenue Cap, we are well placed to take on the risk of identifying and implementing future cost savings. However, we would be unable to take on this risk if the Hybrid Revenue Cap level was to be below the level proposed.

The figure of 1.5% is based on us providing the same services in 2018-2028 as in 2016-17. It is also based on excluding abnormal items that can vary significantly from year to year, such as electricity. The variation relating to electricity is outlined below and in the financial template.

For other services which are not excluded, the benchmark of 1.5% applies.

C6.4 Efficiency enablers

There are a number of enablers that allow us to offer an operating efficiency significantly above 1% per annum:

- *Digital meters:* This will allow us to reduce expenditure relating to special meter reads and enhanced and targeted leak detection will reduce our raw water procurement and treatment expenditure.
- *System models:* Continued investment in our internal Data Science and operational support teams will provide additional operating efficiency savings in the future.
- *Customer engagement:* We recently implemented an organisational restructure to allow a greater emphasis on the customer experience. By continuing with this focus, we will ensure that future expenditure is targeted to areas in which customers value most.
- *Quick Connect (meter connection services):* Reviewing our process by which registered plumbers are authorised to connect to our network.
- *IT capability and cloud based systems:* While we are investing extra amounts in these services, we are not deeming these costs as variations to the baseline. Rather we intend that savings generated from IT and related expenditure will enable us to achieve the ambitious operating efficiency. We acknowledge that we are well placed to take on this risk owing to our improved financial position.

Any average explicitly implies there are some elements above and some below the average, and while some elements are below this benchmark, other elements are above this.

C6.5 Variations to baseline controllable operating expenditure

Table C4 outlines a summary of all variations to the baseline operating expenditure stemming from changes in service levels or changes in unique cost items, such as electricity.

Table C4 – *Variations to baseline operating expenditure, 2018-19 to 2027-28*

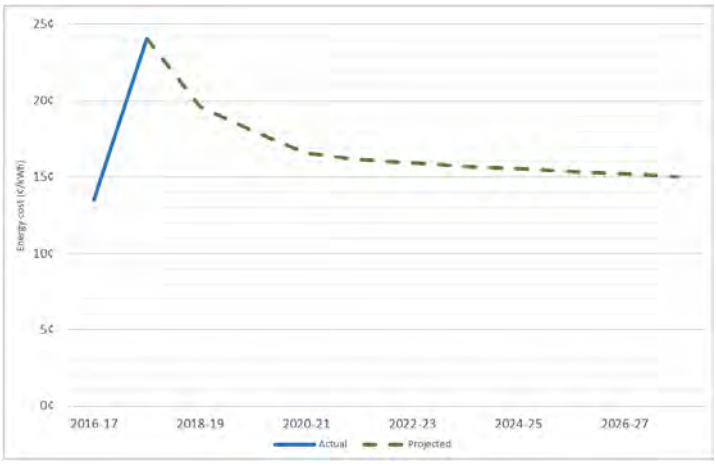
$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Electricity	$ 1.71	$ 1.23	$ 0.89	$ 0.83	$ 0.85	$ 0.89	$ 0.94	$ 1.00	$ 1.07	$ 1.15
Consequential operational costs	$ 0.01	$ 0.06	$ 0.13	$ 0.14	$ 0.20	$ 0.20	$ 0.20	$ 0.20	$ 0.20	$ 0.20
Lockington desludging	$ 0.06	$ -	$ -	$ 0.05	$ -	$ -	$ 0.05	$ -	$ -	$ 0.05
Development services	$ 0.07	$ 0.07	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.05
Financial hardship	$ 0.03	$ 0.06	$ 0.09	$ 0.11	$ 0.14	$ 0.16	$ 0.19	$ 0.21	$ 0.23	$ 0.25
Data connectivity	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05
Trade Waste monitoring	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07
Other variations	$ 0.17	$ (0.00)	$ 0.45	$ 0.33	$ 0.12	$ 0.13	$ 0.11	$ 0.41	$ 0.91	$ 0.88
Total variations	**$ 2.16**	**$ 1.53**	**$ 1.73**	**$ 1.64**	**$ 1.49**	**$ 1.56**	**$ 1.67**	**$ 1.99**	**$ 2.58**	**$ 2.69**

Energy

As a business, we need to annually transport and treat approximately 30 billion kilograms of raw water. This makes us a large user of electricity that is affected by material changes in energy generation, distribution and transmission costs.

It is well known that energy prices have spiked significantly in recent years and futures markets indicate current prices are likely to remain high before some gradual relief during the regulatory period. The forecast average real energy cost per kWh are as follows:

Figure C3 – *Forecast average cost of energy, 2016-17 to 2027-28*



For budgeting and categorisation purposes, we categorise our sites as follows:

- Small sites: 37 unmetered sites and 296 metered sites including pump stations, standpipes and other infrastructure. These sites are responsible for approximately 21% of our energy usage.
- Large sites: 28 large sites including major treatment plants and offices. These sites are responsible for 70% of our energy usage
- Goldfields Superpipe sites: Three sites owned by an unincorporated Joint Venture with Central Highlands Water. Only our share of fixed and variable costs is included for budgeting purposes. Based on reasonable forecasts, these sites are responsible for 9% of our energy usage.

In order to ensure that uncertain expenditure is not included in the revenue requirement, a number of risk-based assumptions and principles have underpinned our energy expenditure forecasts.

1. **Use actuals where possible**

We have used actual 2016-17 kWh usage from our large and small sites as a baseline. This is appropriate given that, 2016-17 is climatically similar to our short range forecast.

Where actual prices are based on a recent tender, these tendered prices have been assumed for the duration of the period that was tendered.

Distribution Loss Factors and Marginal Loss Factors also affect our retail price levels – these have been estimated as constant over the coming regulatory period.

2. **Use half-yearly budgeting**

Given that our use of the Goldfields Superpipe is operationally back-ended in a financial year, and that network charges change on a calendar year basis, we have decided to undertake all energy budgeting on a half-yearly basis. This ensures utmost accuracy and is a step change improvement on the approach we undertook in 2013.

3. **Goldfields Superpipe as standalone**

Given the nature and significance of our three Goldfields Superpipe pump stations, we have estimated pump efficiencies and forecast pumping volumes on a half yearly basis based on standalone estimates. For consistency, we have used the same energy prices for these sites as our large sites.

Forecast “fixed” charge quantities are significantly less than 2016-17 levels in order to ensure that pumping risk is not unnecessarily passed onto customers if such expenditure is not likely.

4. **Assume ongoing operating efficiencies**

For all large and large sites, forecast kWh has been increased annually by the rate of growth (1.7%). However, this has been largely offset by applying the operating efficiency (1.5%) to the rate of growth of kWh usage. Therefore, for large and small sites forecast kWh usage is increasing by 0.18% per annum.

Additional efficiencies related to the upgrade of 12 specific pump stations have also been forecast. Over the forthcoming 10 years, these upgrades will have reduced our energy expenditure by $1.33 million.

5. Prices based on verifiable and reliable research

While no single source of information specifies all the prices that are likely to be payable by us over a 10-year period, we have extensively utilised the following three sources (available on request) when determining our forecast prices:

- VicWater: SCEP 5 Year Electricity Price Forecast, June 2017. (Available on request)
- Jacobs for AEMO: Retail electricity price history and projected trends, June 2017.[3]
- ASX futures: Directly available from the ASX website[4]

Change to customer outcomes: Proposed energy expenditure represents maintenance of a BAU operating scenario. It is the minimum possible expenditure to ensure no degradation in current service levels.

Financial hardship

We are proud to be considered a regional leader in the area of providing support to our most vulnerable customers through our Coliban Assist Program (CAP).

While we have made significant progress in relatively costless ways in recent years, it is also appropriate that we continue to increase our reach by supporting customers who are in a financially compromised position or suffering from family violence.

The bulk of our CAP funding is related to customers in long term financial hardship. As we will continue to newly identify customers in financial hardship without removing customers in long term hardship from the CAP, we are planning for an increasing expenditure relating to financial hardship payments to customers.

As we have learned through our engagement activities, customer support our role and ability to provide direct financial assistance to customers in financial hardship.

This additional expenditure is equivalent to $0.03 million per year (compounding) from 2016-17.

Table C5 – *Financial hardship variations to baseline operating expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Financial hardship	$ 0.03	$ 0.06	$ 0.09	$ 0.11	$ 0.14	$ 0.16	$ 0.19	$ 0.21	$ 0.23	$ 0.25

Change to customer outcomes: This expenditure is directly linked to a deliverable outcome. We see this as a minimum level and will seek to exceed this if necessary.

Lockington desludging

We are committed to postage stamp pricing for our water and sewerage services across our region – the principle that our customers, regardless of location, will pay a similar price for a similar level of service. This is the principle underlying the decision to begin harmonising Northern water prices during the third regulatory period. For more information about the process undertaken regarding the decision to desludge Lockington's septic tanks, please see Supplement A. What Customers Value.

The forecast additional cost by undertaking desludging of customer septic tanks in Lockington is as follows:

Table C6 – *Lockington desludging variations to baseline operating expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Lockington desludging	$ 0.06	$ -	$ -	$ 0.05	$ -	$ -	$ 0.05	$ -	$ -	$ 0.05

This is based on a forecast cost of $300 per customer every third year, with an assumption that the cost of completing this work becomes more efficient over time.

Change to customer outcomes: This expenditure enables delivery of a set of that is fairer and promotes regional equity.

[3] This report is available online https://www.aemo.com.au/-/media/Files/Electricity/NEM/Planning_and_Forecasting/EFI/Jacobs-Retail-electricity-price-history-and-projections_Final-Public-Report-June-2017.pdf

[4] Energy futures available online: www.asx.com.au/asx/markets/futuresPriceList.do?code=BV&type=FUTURE

Trade Waste monitoring

As noted in section C9 Prices and tariff structures, we plan on introducing a new intermediate tier of Trade Waste categorisation to ensure a more granular treatment of customers who may impose costs on our system. This intermediate tier will allow for more fit purpose categorisation instead of just categorising customers as "Major". Price increases for impacted customers will be deferred until 2019-20.

This additional expenditure will be incurred monitoring of discharge of customers to be classified in the new intermediate category. While this expenditure will be incurred in 2018-19, because of our decision to defer price increases for affected customers until 2019-20, we have decided not to include this operating expenditure in the revenue requirement and instead manage via dynamic management.

This expenditure imposes no net additional costs on the broader customer base because of the additional revenue it directly results in.

Table C7 – *Trade Waste monitoring variations to baseline operating expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Trade Waste monitoring	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07	$ 0.07

Change to customer outcomes: This expenditure will enable better monitoring of trade waste customers. It will lead to enhanced environmental outcomes and customer monitoring that is better aligned with the risk that a customer imposes on our network.

Development services expenditure

As per section C9 Prices and tariff structures, customer engagement with developers has led to us proposing an increased focus on increasing the timeliness of our development-related services.

To achieve no net impact (positive or negative) on our existing retail customers as a result of higher development services revenue, it is proposed that all forecast revenue increases from development services will be reinvested in resourcing to deliver a higher level of service as requested by developers.

Therefore, this expenditure imposes no net additional costs on the broader customer base because of the additional revenue it directly results in.

Table C8 – *Development services variations to baseline operating expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Development services	$ 0.07	$ 0.07	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.05

Change to customer outcomes: This expenditure will enable delivery of a higher level of service to developers, predominantly in terms of improved response times from customers applying for new fast-tracking services. This service is underpinned by a simple set of customer rebates – if any customer applies for a fast-track service and we cannot deliver on time, then the fast-track component of the fee will be rebated to the applicant.

Data connectivity

In order to achieve compliance with water quality requirements and minimise the risk of toxins entering water supplies, it is necessary to obtain an internet connection at all nineteen of our water treatment plants. It is budgeted that achieving this will incur $0.05 million per annum.

This expenditure is clearly a new service that is above and beyond existing service levels we receive from our providers.

Table C9 – *Data connectivity variations to baseline operating expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Data connectivity	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05	$ 0.05

Change to customer outcomes: We have an obligation to minimise the occurrence of the provision of unsatisfactory or non-compliant water to customers. We have heard from customers that we should be paying a rebate in both short-term (community rebate) and long-term (customer rebate) scenarios. This expenditure is required to provide enhanced monitoring of water quality right across our region.

Consequential operating expenditure

When a capital project is proposed, it is our standard procedure to carefully consider whether there is any impact on operating expenditure – both positive and negative.

Where the change in operating expenditure is already budgeted for or can be accommodated within existing budgets, no further adjustment to operating expenditure is required. Where it is not budgeted for, an adjustment is made to future budgets.

As stated above, the target operating efficiency of 1.5% is ambitious and is based on the completion of enabling projects regarding IT, digital meters, SCADA and other projects. For the 2018-2023 regulatory period, 13 projects and programs were identified that had material impacts on operating expenditure and were not otherwise enablers of the operating efficiency target. These projects and programs can be summarised as having both a positive and negative impact on operating expenditure:

Table C10 – *Project and program impact on operating expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Positives	$ 0.014	$ 0.107	$ 0.179	$ 0.214	$ 0.263
Negatives	$ -	$ (0.050)	$ (0.050)	$ (0.075)	$ (0.065)
Total	**$ 0.014**	**$ 0.057**	**$ 0.129**	**$ 0.139**	**$ 0.198**

It is worth noting that the upgrade of 12 pump stations has been programmed for the 2018 to 2023 period. For the purposes of clarity, we have incorporated electricity cost reductions for these pump station upgrades within our energy budgeting as outlined above rather than considering these as consequential operating expenditure. The value of these savings is $0.60 million over the regulatory period – higher than the additional cost incurred due to non-energy consequential operating expenditure. We therefore note that the net effect of our capital works programs is to reduce overall operating expenditure rather than lead to increases.

Forecast operating expenditure variations due to capital projects has been forecast to be constant over the 2023 to 2028 period.

Change to customer outcomes: These changes in operating expenditure are directly due to 13 different capital projects and programs which themselves link to a variety of outcomes.

C6.6 No variations to baseline controllable operating expenditure

There are a number of items which can be readily identified as imposing additional operating expenditure above and beyond the baseline. However, as our forecast revenue is sufficient to meet our financial outcomes (including customers' desire for debt repayment) we have taken the risk-based decision to manage the cost of these items within our ambitious target operating efficiency of 1.5%.

Cyber security

In recent years, there has been a global increase in the complexity, frequency and severity of cyber-attacks. In attempting to prevent cyber-attacks, expenditure is proposed that includes security penetration testing, backup and various cloud services.

Sewer blockages

We note recent improvements in our rate of sewer blockages per 100 km of sewer mains. In order to further improve our service performance, reduce environmental spills and enhance compliance with EPA regulations, we will be spending significantly more on sewer blockages to achieve marked reductions in our rate of sewer blockages.

Carbon pledge

All water businesses have now made a carbon pledge to reduce their level of CO_2 emissions. This may involve a combination of capital projects, operating enhancements and the purchase of offsets or certificates.

Where we have identified capital projects with short paybacks, we have prioritised such projects highly within our portfolio and incorporated the reductions in energy expenditure above. Where the current pledge may lead to cost increases, we note we are bearing the risk of achievement of this rather than passing costs onto our customers.

Customer and Community Rebates

As outlined in Supplement B Our Customer Promise, we are proposing the most significant step-change in customer and community rebates (GSLs) seen in the Victorian water industry. We are the first Victorian water business, that we are aware of, to propose a rebate specifically on the nature of water availability and will incentivise us to ensure we provide sufficient water for our communities to live, grow and enjoy.

Even in the event that the rural water availability customer rebate is not triggered, it is anticipated that our expenditure on customer and community rebates will be in the vicinity of $0.04 million to $0.10 million. While ESC Guidance suggests that this expenditure can be included in forecasts for operating expenditure and passed back to customers through higher prices, we are taking a risk-based decision to bear this risk on behalf of customers.

Groundwater expenditure

We have been working with government to avoid the likelihood of toxic groundwater seeping through disused mineshafts in Bendigo and bubbling to the surface. To date, our work with government has seen our net expenditure paid for by government via a funding agreement and customers have not incurred any cost relating to this project.

In the future, it is possible that we may incur some expenditure related to maintenance of temporary treatment facilities at our Bendigo Water Reclamation Plant. In order to avoid adding operating expenditure that is uncertain, we are taking a risk based position that this expenditure can be excluded for the purposes of setting a Hybrid Revenue Cap for 2018 to 2023. In the event such expenditure exceeds the materiality threshold of 2.5% proposed (section B4 of Supplement B Our Customer Promise) this will trigger a reopening of prices at that point. If such prescribed expenditure does not exceed the materiality threshold, then it can be incorporated into prescribed operating expenditure in future regulatory periods.

Defined Benefits Superannuation

In 2012, a shortfall in the value of Defined Benefits Superannuation resulted in us having to make payment of $1.3 million to Vision Super.

It is unknown if such calls will be legally required in the future, although we are presently not forecasting any variation to our baseline controllable operating expenditure for this item.

If and when necessary, such expenditure will be recovered through pricing either within the regulatory period or in future regulatory periods in accordance with our proposals to adjust prices.

Revenue not collected

We note there is an opportunity in the template to include a forecast of revenue not collected. In order to present a robust Value Proposition and reflect our willingness to accept risk where we are best placed to manage it, we have not entered any figure in this section and will instead manage this risk ourselves.

C6.7 Non-controllable operating expenditure

Environmental contribution

We like other water businesses, are required to pay an annual Environmental Contribution to the state. The value of this will be increasing (in nominal terms) from $3.3 million in 2017-18 to $5.12 million in 2018-19. This increase will not be passed onto customers in the form of higher prices. Rather, we will absorb these costs while offering a steady price path of CPI minus 1% on average.

It is possible that the level of the Environmental Contribution will be reset based on actual 2018-19 revenue and hence this could see an increase of up to an additional $1 million per annum from 2020-21. Given the uncertainty around this and to maximise the Value Proposition to customers, we have not proposed to assume a higher allowance for this up front. Future changes to the environmental contribution will be either incorporated mid-period via a pass through mechanism (if significant) or otherwise recovered at the commencement of the next regulatory period.

Licence fees

Our proposal for licence fees is broadly in alignment with recent historical levels of these licence fees.

Table C11 – *Summary of licence fee expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Essential Services Commission	$ 0.09	$ 0.05	$ 0.05	$ 0.07	$ 0.07	$ 0.09	$ 0.05	$ 0.05	$ 0.07	$ 0.07
Department of Human Services	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04	$ 0.04
Environment Protection Authority	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16	$ 0.16
Total	**$ 0.28**	**$ 0.24**	**$ 0.24**	**$ 0.26**	**$ 0.27**	**$ 0.29**	**$ 0.25**	**$ 0.25**	**$ 0.27**	**$ 0.27**

Bulk charges

We purchase bulk water services from both Goulburn Murray Water (GMW) and Grampians Wimmera Mallee Water (GWMWater). The trend over the regulatory period for this expenditure is for changes to be in line with CPI. This implies that any real price reductions (if any) will be offset by our need to purchase and pump more water for our growing populations.

There is an additional step-change in the 2018-19 expenditure. This is due to our upcoming connection to the new South West Loddon (SWL) Pipeline Project. This will provide us with a new source of water to 8 towns[5] decreasing the reliance on historical supply systems that are resource-stressed. Six of these towns suffer poor water quality as evidenced by our water palatability customer engagement and the connection to the SWL scheme will provide a step-change in improvement in water quality. The annual charges payable to GWMWater for connection is estimated to be $0.34 million per year, in addition to an agreed capital contribution.

C6.8 Operating expenditure focus areas

Labour

Given inflation has been lower than forecast in recent years, we, like most other water businesses, have experienced real wage growth. This trend is likely to continue in the future with a new Enterprise Agreement (EA) likely to confirm annual wage increases above the forecast inflation figure of 2.3%. In addition, there were several vacancies in the base year of 2016-17 which have now commenced to be filled.

While we believe we have robust justification for increases above the baseline controllable labour expenditure, we are not proposing labour expenditure as a variation. This is because the Value Proposition we are proposing limits average prices changes to CPI minus 1% within a Hybrid Revenue Cap.

In the event that our Pricing Submission was to be not approved by the ESC in its Draft Decision, we would have to reconsider our allocation of risk and whether we then seek correction of the risk balance by including labour expenditure in addition to the baseline in response to the Draft Decision.

Table C12 – *Summary of labour expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Labour costs	$ 16.22	$ 16.25	$ 16.27	$ 16.30	$ 16.33	$ 16.48	$ 16.63	$ 16.79	$ 16.94	$ 17.10

Chemicals

In working collaboratively with our major contractor Lendlease, we are proposing an annual efficiency of 2% per annum in chemical use for the 2018-2023 period. While this is a stretch target, we are modelling this and including it in our forecast operating expenditure. This, therefore, delivers real savings to customers on an annual basis and contributes to our achievement of the target operating efficiency of 1.5%.

Table C13 – *Summary of chemical costs, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water related chemical costs	$ 1.00	$ 0.99	$ 0.99	$ 0.98	$ 0.98	$ 0.99	$ 1.01	$ 1.03	$ 1.04	$ 1.06
Sewerage and trade waste related chemical costs	$ 1.00	$ 0.99	$ 0.99	$ 0.98	$ 0.98	$ 0.99	$ 1.01	$ 1.03	$ 1.04	$ 1.06
Total chemical costs	**$ 1.99**	**$ 1.98**	**$ 1.97**	**$ 1.96**	**$ 1.96**	**$ 1.99**	**$ 2.02**	**$ 2.05**	**$ 2.08**	**$ 2.12**

Information Technology

In order to leverage technological advances and drive future operating efficiencies, we are proposing a step change increase in our expenditure on IT and related services.

In aggregate, we are anticipating a step change of approximately $0.6 million per annum in IT related expenditure. This increase facilitates:

- Four new roles, specifically for intelligent metering, a PLC specialist, GIS and asset management. These will drive operating expenditure savings in the future

[5] Bridgewater, Inglewood, Laanecoorie, Dunolly, Bealiba, Tarnagulla, Wedderburn and Korong Vale.

- Additional expenditure on growth in IT data storage capability to enable us to intelligently manage our operations and make informed decisions regarding maintenance decisions

Therefore, besides the data connectivity addition to the controllable operating expenditure baseline, IT expenditure is a necessary enabler of the 1.5% operating efficiency and any arbitrary adjustments to IT expenditure would result in corresponding consequential increases in operating expenditure in other areas.

This expenditure links directly to customer outcomes relating to self-help measures, improved billing options, and greater ability for customers to control their own costs and services.

Table C14 – *Summary of IT costs, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water related IT costs	$ 1.68	$ 1.66	$ 1.66	$ 1.71	$ 1.71	$ 1.73	$ 1.76	$ 1.77	$ 1.82	$ 1.80
Sewerage and trade waste related IT costs	$ 1.68	$ 1.66	$ 1.66	$ 1.71	$ 1.71	$ 1.73	$ 1.76	$ 1.77	$ 1.82	$ 1.80
Total IT costs	**$ 3.35**	**$ 3.33**	**$ 3.31**	**$ 3.43**	**$ 3.43**	**$ 3.45**	**$ 3.51**	**$ 3.54**	**$ 3.64**	**$ 3.60**

Note that this table includes labour expenditure associated with IT services and therefore contains a partial overlap of general labour expenditure. Whereas IT labour expenditure is increasing, this is offset by reductions in labour expenditure in other areas, directly demonstrating the benefits of investing in enhanced IT and related services. Whereas other businesses may take a narrow view of IT expenditure, we have broadly included support systems such as GIS, SCADA and Asset Management to more clearly specify the IT costs that we are incurring to drive efficiencies in the business.

C7 Capital Expenditure

C7.1 Capital expenditure summary

We are proposing to invest $142 million over the fourth regulatory period on capital works for water, sewerage, rural and recycled water. Compliance and Growth are the key drivers in the business and making up approximately 75% of proposed capital expenditure. Renewals and will contribute to almost 15% of proposed expenditure, with the remainder being Improved Service projects.

Table C15 – *Comparison of capital expenditure, third and fourth regulatory periods, by service*

Top 10 Projects	Completion	Expenditure
1. Western Bendigo water network growth and pressure	2021-22	$ 13.34
2. Bendigo WRP sludge processing upgrades	2023-24	$ 11.10
3. Strathfieldsaye water network augmentation	2021-22	$ 9.11
4. Kyneton WRP lagoon compliance works	2020-21	$ 6.80
5. Castlemaine WRP sludge handling upgrades	2022-23	$ 5.60
6. Digital customer metering	Ongoing	$ 5.00
7. Echuca West tank	2021-22	$ 4.22
8. Heathcote WRP compliance	2021-22	$ 4.04
9. Echuca WTP security of supply	2022-23	$ 2.86
10. Epsom Huntly water main augmentation	2022-23	$ 2.62

$m 01/01/18

Service Category	WP3	PS18
Water - Headworks	$ 2.99	$ 0.63
Water - Pipelines/network	$ 18.94	$ 59.93
Water - Treatment	$ 31.81	$ 13.23
Sewerage - Pipelines/network	$ 37.59	$ 18.14
Sewerage - Treatment	$ 4.81	$ 31.89
Recycled Water	$ 4.27	$ 5.03
Rural Water	$ 52.63	$ 6.54
Corporate	$ 32.60	$ 6.55
Total	**$ 185.63**	**$ 141.93**

In addition, the business is proposing that non-operating BOOT expenditure and biosolids removal expenditure is capitalised for pricing purposes instead of being expensed. This reduces pressure on our revenue requirement. These expenditures are excluded from the table above for comparability purposes.

Expenditure is proposed for projects and programs in the 2018 to 2023 period and significant supporting documentation exists for these projects and is available to the ESC on request. Capital expenditure beyond 2023 has been benchmarked to continue at record low levels.

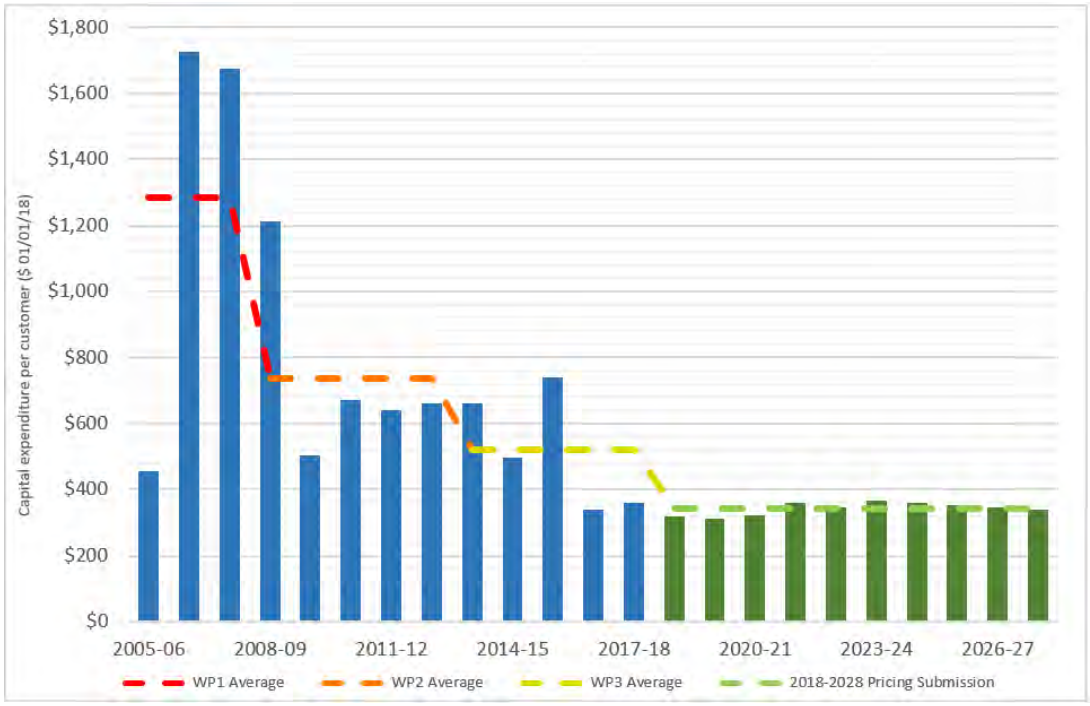
Table C16 below is a breakdown of our recent historical and proposed capital expenditure by major service category.

***Table C16** – Summary of capital expenditure, third and fourth regulatory periods, by service*

$m 01/01/18	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water	$ 25.48	$ 21.41	$ 20.70	$ 18.21	$ 16.16	$ 18.66	$ 24.08	$ 22.40	$ 20.11	$ 22.57
Sewerage	$ 17.56	$ 15.68	$ 24.36	$ 13.80	$ 10.94	$ 15.56	$ 10.38	$ 13.98	$ 18.94	$ 18.84
Recycled	$ 2.01	$ 0.78	$ 0.62	$ 0.78	$ 1.74	$ 1.81	$ 0.81	$ 0.19	$ 2.03	$ 0.18
Rural	$ 12.64	$ 9.40	$ 19.75	$ 3.88	$ 9.20	$ 0.75	$ 1.88	$ 1.96	$ 1.43	$ 0.52
Totals	**$ 57.70**	**$ 47.27**	**$ 65.43**	**$ 36.67**	**$ 38.03**	**$ 36.78**	**$ 37.15**	**$ 38.52**	**$ 42.52**	**$ 42.11**

Since the first regulatory period (2005 to 2008), the business has implemented more rigorous management controls on capital expenditure and has significantly reduced capital expenditure per customer from $1480 per customer to $380 per customer. This step-change is how we are able to offer continued long term pricing relief to customers compared to the large price increases experienced in the last decade.

***Figure C4** – Historical and proposed capital investment per customer, 2005-06 to 2027-28*



C7.2 Capital prioritisation

We have expanded our capital prioritisation process from being only risk and compliance driven to now focusing on risk, benefit and financial return. The addition of the benefit assessment focuses on valuing and prioritising the opportunity to support community and stakeholder interests.

The elements of the risk assessment remain unchanged and include compliance (legal and regulatory), human, level of service, environmental, finance and reputation. The elements of the benefit assessment include (1) enable economic growth, (2) enhance community liveability, (3) enhance the environment and (4) engaged workforce and thriving business.

Risk, Benefit and Financial Return assessments are complete for all capital works to identify a prioritisation level between 1 and 125. Further granularity is provided within groups of similar ranking by distinguishing projects with higher number of high risk and prioritising by cost driver. The output from these assessments is a prioritised list of capital projects.

The final step is a review of the prioritised list whereby management, at their discretion, can exclude certain projects or include lower ranked projects. During this review consideration is also given how best to manage projects with some level of uncertainty. It is worth noting that more than 90% of the proposed projects were selected directly from the prioritisation tool.

C7.3 Major Projects

Total expenditure on our top 10 major projects is forecast to be $64.7 million. A summary of the top 10 projects is as follows:

Western Bendigo water network augmentation

The purpose of this project is to maintain service standards to our customers in Maiden Gully and Marong. The project involves the duplication and upsizing of several mains through Maiden Gully and Marong in order to provide additional flows and pressures to the rapidly expanding region. The existing main is undersized and represents a significant security of supply risk to the customers.

The number of new customers in Marong is expected to increase by 86% between now and 2023. Maiden Gully has already experienced steady growth over the past five years of approximately 70%. Pressure problem areas, with the pressure at customer nodes falling well below 20m, have been identified. These concerns as well as security of supply were considered in selecting the preferred option.

This project is pivotal to achieving the Customer Outcome to provide infrastructure and services to meet customer needs now and into the future.

Table C17 – *Summary of Western Bendigo water network growth and pressure expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 4.00	$ 5.34	$ 3.10	$ 0.90	$ -
Consequential Operating Expenditure	$ -	$ 0.01	$ 0.03	$ 0.04	$ 0.04

Bendigo Water Reclamation Plant sludge processing upgrades

The purpose of this project is to increase the treatment capacity of the sludge handling system at Bendigo WRP. The project involves the construction of a new aerobic digestion system and supernatant pump station, with a future conversion of the existing BNR aerators to a BNR plant bioreactor system. This also includes the decommissioning of the existing ATAD system.

The upgrade is required to address major operational issues and high operating costs with existing sludge handling system and to ensure EPA compliance requirements are met.

This project is pivotal to achieving two Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future, and
2. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

Table C18 – *Summary of Bendigo WRP sludge processing upgrades expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ -	$ -	$ 0.50	$ 5.61	$ 5.00
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Strathfieldsaye water network augmentation

The purpose of this project is to maintain service standards to our customers in Strathfieldsaye. The project involves the construction of a new main from the Edwards Road Tank to the Strathfieldsaye township to

provide additional flows and pressures to the growing suburb. This will provide Strathfieldsaye customers with additional security of supply and alleviate a worsening pressure problem in the area.

The number of new customers in Strathfieldsaye is expected to increase by 42% over the next seven years. Modelling shows that about 30% of Strathfieldsaye will experience less than 5m head at times of peak demand.

This project is pivotal to achieving the Customer Outcome to provide infrastructure and services to meet customer needs now and into the future.

Table C19 – *Summary of Strathfieldsaye water network augmentation expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 0.10	$ 5.00	$ 3.56	$ 0.45	$ -
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Kyneton Water Reclamation Plant compliance works

The purpose of this project is to manage current flows and loads from local industrial customers and to ensure ongoing compliance with EPA requirements for wastewater management. The project will refurbish and reinstate existing trickling filters, install additional aeration at the trade waste lagoon, install inlet works, primary treatment and odour control for the trade waste lagoon.

The upgrade of the trade waste treatment plant is required to ensure reuse effluent quality guidelines are met at all times. It is worth noting that proposed works are required to meet the current license agreement conditions with the major trade waste customer. No future proposed works or expenditure related to the customer's potential expansion is included in our pricing proposal.

This project is pivotal to achieving two Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future, and
2. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

Table C20 – *Summary of Kyneton WRP lagoon compliance works expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 2.00	$ 0.10	$ 3.20	$ 1.50	$ -
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Castlemaine Water Reclamation Plant sludge handling upgrades

The purpose of this project is to increase the treatment capacity of the sludge handling system at Castlemaine WRP. The project includes refurbishing the existing DAF system, construction of aerobic digester tanks with aeration and an aerobic digester supernatant pump station, decommissioning the ATAD system and construction of a new sludge dewatering system. It also includes upgrade to the UV disinfection and renewal of the existing diffuser membranes.

The upgrade is required to address major operational issues and high operating costs with existing sludge handling system and to ensure EPA compliance requirements are met.

This project is pivotal to achieving two Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future, and
2. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

Table C21 – *Summary of Castlemaine WRP sludge handling upgrades expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ -	$ -	$ 0.10	$ 1.70	$ 3.80
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Digital customer metering

The purpose of this project is to improve safety in the workplace, reduce water losses and to enable future functionality for customers to manage their water use. The project includes increasing the frequency of customer meter reading from quarterly to hourly, and every five minutes for large customers. These readings will be transmitted to a central server where data will be used for billing and analysis.

The project is required to reduce or eliminate OH&S issues, more accurately account for water consumption, to reduce leakage and reduce non-revenue water. Furthermore, the project is essential if we are to meet our operating efficiency as operating expenditure savings are incorporated within our BAU operating expenditure levels.

This project is pivotal to achieving two Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future, and
2. Open and transparent about pricing and service disruptions, and easy to do business with

Table C22 – *Summary of Digital customer metering expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 0.98	$ 1.05	$ 0.99	$ 0.99	$ 0.99
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Echuca West tank

The purpose of this project is to maintain service standards to our customers in Echuca. The project includes include the construction of a 6 ML storage in Echuca West for security of supply and delivery of service pressure. A further 3 ML storage will be built in future years (not included in our Pricing Submission).

The number of customers in Echuca is expected to increase by 9% over the next seven years. Modelling results show all Echuca customers west of the Midland Highway will experience less than 12m head at times of peak demand.

This project is pivotal to achieving the Customer Outcomes to provide infrastructure and services to meet customer needs now and into the future.

Table C23 – *Summary of Echuca West tank expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ -	$ 0.07	$ 2.65	$ 1.50	$ -
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ 0.03

Heathcote Water Reclamation Plant compliance works

The purpose of this project is to address the long term capacity constraints at Heathcote WRP and to protect the environment. The scope of works includes minimising flows from Heathcote WTP to Heathcote WRP, increasing lagoon capacity to achieve disinfection requirements and increasing irrigation capacity within the Heathcote WRP system.

The project is required to reduce future risk of emergency discharges from the Water Reclamation Plant to McIvor Creek and achieve compliance with EPA requirement to contain 90th percentile wet year inflows of treated wastewater.

This project is pivotal to achieving two Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future, and
2. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

Table C24 – *Summary of Heathcote WRP compliance expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 1.60	$ 0.59	$ -	$ 1.85	$ -
Consequential Operating Expenditure	$ -	$ (0.05)	$ (0.05)	$ (0.05)	$ (0.04)

Echuca Water Treatment Plant Additional Clear Water Storage

The purpose of this project is to maintain services standards to our customers in Echuca. The preferred solution involves the construction of a new clear water storage (CWS) to improve security of supply to all of Echuca and reduce the risk of the town running out of water during peak times. Water treatment plant operators have reported that on particularly hot days the existing CWS level is very difficult to manage due to the limited volume.

The number of customers in Echuca is expected to increase by 9% over the next seven years. The current storage in Echuca represents only around 9 hours of peak day demand. This is significantly short of the required design of 16 hours available storage and poses a risk if a major incident were to occur in the town.

This project is pivotal to achieving the Customer Outcomes to provide infrastructure and services to meet customer needs now and into the future.

Table C25 – *Summary of Echuca WTP security of supply expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ 0.05	$ -	$ -	$ 0.56	$ 2.25
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

Epsom Huntly water mains augmentation

The purpose of this project is to maintain service standards to our customers in Huntly. The preferred solution involves duplicating and often upsizing water mains to provide increased pressures and flows to the suburb. This will facilitate growth in the region and allow for rapid development to continue.

The number of new customers in Huntly is expected to increase by around 50%. Modelling indicates that by 2023, with additional growth in the area, almost the entire suburb of Huntly will experience peak day pressures of 5m or less. There are currently pressure problems in the suburb, particularly in the supply of new developments, however this issue is expected to worsen significantly in the coming years.

This project is pivotal to achieving the Customer Outcomes to provide infrastructure and services to meet customer needs now and into the future.

Table C26 – *Summary of Epsom Huntly water main augmentation expenditure, 2018-19 to 2022-23*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23
Gross Capital Expenditure	$ -	$ -	$ 0.10	$ -	$ 2.52
Consequential Operating Expenditure	$ -	$ -	$ -	$ -	$ -

C7.4 Capital Programs

In alignment to ESC guidance, we have allocated all capital expenditure that is not part of a "Top 10" to a program for the purposes of ESC reporting. Given that some programs (for example, vehicle replacements) do not readily lend themselves to water/sewerage/recycled/rural categories, we have made arbitrary percentage allocations of some of these programs to the mandatory ESC category of major service category.

For the purposes of clarity and comparability, we have disaggregated our biosolids capitalisation and non-operational BOOTs as a separate program. Also, our Delivery Assurance Margin, a negative allocation equivalent to 10% of our portfolio target in any given year, is separately listed in the financial template. This Margin ensures we are incentivised to find efficiencies as well as ensuring timely delivery of corporate capital expenditure budgets on an annual basis. Further information about this is available on request.

To ensure we are representing a balanced portfolio of works, our entire $142 million capital portfolio is allocated for the purposes of this section into six separate programs:

- Historical BOOTs
- Water
- Sewerage
- Rural
- Recycled Water
- Biosolids

Given the financial template requires greater disaggregation of capital works by cost driver and asset class, more granular information about these programs is available in the financial template.

Historical BOOTs

The objective of this program is to maximise the benefit achieved through leveraging the private sector to support in delivery of certain treatment plant operations and maintenance via a BOOT arrangement.

There is no change between historical and future forecast expenditure as the expenditure is a fixed amount (in nominal terms) as agreed upon in the contract negotiations.

This program is pivotal to achieving three Customer Outcomes

1. To supply high quality water you can trust
2. Provide infrastructure and services to meet customer needs now and into the future, and
3. Open and transparent about pricing and service disruptions, and easy to do business with.

***Table C27** -- BOOTs Capital Investment by Service Category 2013-14 to 2022-23*

$m 01/01/18	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Water	$ 6.79	$ 6.82	$ 6.81	$ 6.72	$ 6.58	$ 6.43	$ 6.29	$ 6.15	$ 6.01	$ 5.88
Sewerage	$ 4.53	$ 4.54	$ 4.54	$ 4.48	$ 4.39	$ 4.29	$ 4.19	$ 4.10	$ 4.01	$ 3.92
Totals	**$ 11.32**	**$ 11.36**	**$ 11.35**	**$ 11.20**	**$ 10.97**	**$ 10.72**	**$ 10.48**	**$ 10.25**	**$ 10.02**	**$ 9.79**

Water

The objective of this program is to deliver capital infrastructure upgrades and new assets to meet renewals, improved service and growth targets to meet the needs of our customers.

This program represents a significant increase in comparison to the prior regulatory period which is due to meeting the growth and compliance requirements across the regions for water related infrastructure.

This program is pivotal to achieving all Customer Outcomes

1. To supply high quality water you can trust
2. Provide infrastructure and services to meet customer needs now and into the future,
3. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations,
4. Open and transparent about pricing and service disruptions, and easy to do business with, and
5. Support the liveability of the region.

***Table C28 –** Water services capital expenditure in the third and fourth regulatory periods (less BOOTs)*

$m 01/01/18	Year 1	Year 2	Year 3	Year 4	Year 5
Third Regulatory Period	$ 18.69	$ 14.59	$ 13.89	$ 11.49	$ 9.57
Fourth Regulatory Period	$ 12.22	$ 17.79	$ 16.25	$ 14.10	$ 16.69

Sewerage

The objective of this program is to deliver capital infrastructure upgrades and new assets to meet renewals, improved service and growth targets to meet the needs of our customers.

There is little difference between the historical and proposed expenditure for this program. The number of individual projects has reduced with a greater focus on on-going renewals program.

This program is pivotal to achieving three Customer Outcomes

1. Provide infrastructure and services to meet customer needs now and into the future,
2. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations, and
3. Open and transparent about pricing and service disruptions, and easy to do business with.

***Table C29 –** Sewerage services capital expenditure in the third and fourth regulatory periods (less BOOTs)*

$m 01/01/18	Year 1	Year 2	Year 3	Year 4	Year 5
Third Regulatory Period	$ 13.03	$ 11.03	$ 19.09	$ 8.52	$ 6.55
Fourth Regulatory Period	$ 10.58	$ 5.04	$ 9.10	$ 14.59	$ 13.98

Rural

The objective of this program is to deliver renewal and improved service outcomes mainly related to raw water transfer and headwork assets.

The main reason for the significant cost difference is less capital project works in the next regulatory period program in comparison to the prior regulatory period.

This program is pivotal to achieving three Customer Outcomes

1. To supply high quality water you can trust
2. Provide infrastructure and services to meet customer needs now and into the future, and
3. Open and transparent about pricing and service disruptions, and easy to do business with.

Table C30 – *Rural services capital expenditure in the third and fourth regulatory periods*

$m 01/01/18	Year 1	Year 2	Year 3	Year 4	Year 5
Third Regulatory Period	$ 12.64	$ 9.40	$ 19.75	$ 3.88	$ 9.20
Fourth Regulatory Period	$ 0.75	$ 1.88	$ 1.96	$ 1.43	$ 0.52

Recycled Water

The objective of this program is to deliver capital infrastructure upgrades and new assets to meet renewals, improved service and growth targets to meet the needs of our customers.

The main reason for a change in this program relates to one particular project in the Pricing Submission requiring the construction of storage lagoons whereas this was not a requirement for historical projects.

This program is pivotal to achieving all Customer Outcomes

1. To supply high quality water you can trust
2. Provide infrastructure and services to meet customer needs now and into the future, and
3. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations.

Table C31 – *Recycled water services capital expenditure in the third and fourth regulatory periods*

$m 01/01/18	Year 1	Year 2	Year 3	Year 4	Year 5
Third Regulatory Period	$ 2.01	$ 0.78	$ 0.62	$ 0.78	$ 1.74
Fourth Regulatory Period	$ 1.81	$ 0.81	$ 0.19	$ 2.03	$ 0.18

Biosolids desludging

The objective of this program is to deliver capital infrastructure upgrades and new assets to meet renewals, improved service and growth targets to meet the needs of our customers.

The main reason for a change in this program is that historically some biosolids expenditure was treated as operating expenditure whereas our proposal from 2018-19 is that all biosolids expenditure is capitalised. This reduces the level of prices paid for by customers.

This program is pivotal to achieving the following Customer Outcome

1. Reduce our environmental footprint and achieve a socially responsible, sustainable business for future generations

Table C32 – *Capitalised biosolids expenditure, 2018-19 to 2027-28*

$m 01/01/18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Biosolids Capitalisation	$ 0.69	$ 1.14	$ 0.78	$ 0.34	$ 0.94	$ 0.37	$ 0.22	$ 0.88	$ 0.36	$ 0.26

C7.5 Capital expenditure not included for pricing purposes

In proposing a record low level of capital expenditure per customer in this Pricing Submission, we note the business is taking on risk in a number of areas:

- Water Reclamation Plants: no inclusion of capital expenditure to upgrade a large treatment plant specifically for an industrial customer, as that customer has not yet committed to paying extra

revenue to recover the cost of the upgrades. This ensures we are not pass the cost and risk burden onto other customers. Further information will be made available to the ESC upon request.

- Dam Safety: While all water corporations have risk due to dam safety, by operationally managing this risk rather than purchasing insurance we are reducing the cost burden for customers. For example, we will not undertake a dam upgrade to allow storage increases when we can alternatively manage the dams to a lower level.
- Castlemaine Link Interconnector and Goldfields Superpipe: We are not including costs related to these projects in our revenue requirement at this time. Instead, these are designated pass through items.
- Greenfields works: To ensure we are not including uncertain capital expenditure, we have only nominally included 50% of the cost of all "likely" works in greenfield areas.
- Urban Water Strategy – Trentham: We are operationally monitoring source water at Trentham rather than including expenditure to resolve issues in the town. We anticipate digital metering will reduce the level of non-revenue water in the town and this may defer these works even longer.

C8 Regulatory asset base (RAB)

Regulatory asset base (RAB) remains stable over the period reducing future price risk for customers. In addition:

- ✓ Customer Contributions remain in line with the third regulatory period
- ✓ Vehicle sales and the majority of water allocation sales offsetting the RAB which adds value to customers
- ✓ Existing assets depreciated at 6.2% in line with external financial advice
- ✓ Regulatory rate of return is 4.2% based on an 'Advanced' PREMO assessment

C8.1 RAB Summary

In any building blocks model, RAB is an important indicator of both financial viability and future price levels. In our situation, our Debt:RAB ratio has been well over 100% although has decreased to 93% in 2017-18 and is forecast to decrease to 65% in 2027-28. Our forecast is for a stable RAB as regulatory depreciation broadly offsets capital expenditure.

All historical values (up to and including 2016-17) are as approved by the ESC and our Board and this section outlines future changes that are proposed. Levels of capital expenditure are as outlined in section C7 Capital expenditure and there are no anticipated prescribed government contributions. Non-prescribed revenue and expenditure is excluded from the RAB.

Table C33 *– Forecast Regulatory Asset Base, 2017-18 to 2027-28*

$m 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Opening asset base	$ 481.42	$ 496.29	$ 496.41	$ 495.58	$ 495.24	$ 497.77	$ 498.51	$ 498.87	$ 498.86	$ 499.54	$ 500.05
plus capital expenditure	$ 38.03	$ 36.78	$ 37.15	$ 38.52	$ 42.52	$ 42.11	$ 42.48	$ 42.67	$ 43.68	$ 43.53	$ 43.81
less customer contributions	$ 4.39	$ 3.59	$ 3.85	$ 3.72	$ 3.79	$ 3.86	$ 3.93	$ 4.00	$ 4.08	$ 4.15	$ 4.23
less government contributions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
less regulatory depreciation	$ 17.23	$ 31.53	$ 32.58	$ 33.59	$ 34.66	$ 35.97	$ 36.65	$ 37.14	$ 37.38	$ 37.33	$ 37.78
less disposals	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54	$ 1.54
Rolled Forward RAB	**$ 496.29**	**$ 496.41**	**$ 495.58**	**$ 495.24**	**$ 497.77**	**$ 498.51**	**$ 498.87**	**$ 498.86**	**$ 499.54**	**$ 500.05**	**$ 500.31**
Debt:RAB Ratio	**0.93**	**0.90**	**0.87**	**0.84**	**0.81**	**0.78**	**0.75**	**0.72**	**0.70**	**0.67**	**0.65**

Customer Contributions

Section C9 Prices and tariff structures outlines our proposed changes to New Customer Contributions (NCCs) tariffs. The number of NCCs payable is derived from the change in customer numbers as outlined in section C10 Demand and customer growth. Table C34 outlines the forecast level of NCCs.

Table C34 *- New Customer Contributions by service, 2017-18 to 2027-28*

$m 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water	$ 2.10	$ 2.00	$ 2.04	$ 2.07	$ 2.11	$ 2.14	$ 2.18	$ 2.22	$ 2.25	$ 2.29	$ 2.33
Sewerage	$ 2.24	$ 1.54	$ 1.76	$ 1.60	$ 1.62	$ 1.65	$ 1.68	$ 1.71	$ 1.74	$ 1.77	$ 1.80
Recycled	$ 0.05	$ 0.05	$ 0.05	$ 0.06	$ 0.06	$ 0.07	$ 0.07	$ 0.08	$ 0.09	$ 0.10	$ 0.11
Rolled Forward RAB	**$ 4.39**	**$ 3.59**	**$ 3.85**	**$ 3.72**	**$ 3.79**	**$ 3.86**	**$ 3.93**	**$ 4.00**	**$ 4.08**	**$ 4.15**	**$ 4.23**

Proceeds from Disposal

We are proposing that water allocations sales and vehicle sales will form our proceeds from disposal and offset the RAB, as outlined in table C35.

In line with strong regulatory precedent whereby multiple Regulatory Accounts that have been approved by Board and the ESC, 71.7% of our allocation sales revenue will offset the RAB. This is on the basis that 71.7% of our water assets were included in the RAB after being paid for by customers and the balance were gifted to the business many years ago and hence were never included in the RAB. Our forecast is for $2.0 million of water allocation sales annually of which $1.43 million will offset the RAB each year.

Revenue from vehicle sales is forecast to remain steady over the period.

***Table C35** - Proceeds from disposal of assets, 2017-18 to 2027-28*

$m 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water Allocation Sales	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43	$ 1.43
Vehicle Sales	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11	$ 0.11
Total Proceeds	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**	**$ 1.55**

Gifted assets

The value of gifted assets is as forecast in table C36.

***Table C36** - Gifted assets, 2017-18 to 2027-28*

$m 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Gifted Assets	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82	$ 6.82

Regulatory Depreciation

As is noted in this Pricing Submission, customers have expressed a strong preference for long-term price stability. Regulatory depreciation impacts prices directly as it is recovered from customers and indirectly as it is deducted off the RAB reducing the regulatory return. Higher regulatory depreciation today increases the revenue received from customers and decreases the value of the RAB. For example, increasing regulatory depreciation by $1 million increases the overall revenue requirement by $0.98 million. Conversely, in future years, revenue is lower as the value of the RAB has reduced. This needs to be balanced; if regulatory depreciation is too low today we are imposing higher prices on future customers through a larger RAB. Any choice of regulatory depreciation is therefore NPV neutral – it is not a matter of whether customers are paying "more" in totality, it is a matter of whether price increases are left for future generations. Where there is a standing regulatory assumption that real operating expenditure per customer is decreasing, an increasing RAB can lead to long term price levels trending upwards. This would violate a key message we heard from our customers – our price should increase less than inflation over the long term.

We have paid careful consideration to the relationship between regulatory depreciation and the financial stability of the business. Given that the ESC has approved regulatory depreciation rates ranging between 1.5% and 8%, we commissioned RMCG Consulting to review the long term price impacts of us adopting a higher RAB. This research found that we could have a regulatory depreciation rate of up to 6.8% while maintaining a stable RAB. However, this rate of depreciation leads to a price increase in 2019 and we decided this was not in alignment with customer preferences. To balance customer preferences, we have chosen a regulatory depreciation rate of 6.2%.

As we would like to transition in the long term to a lower rate of regulatory depreciation, we have ensured that all new assets entering the RAB have lower rates of regulatory depreciation. This will provide the appropriate balance between immediate financial return on our assets and the value of the RAB.

We have heard from our customers that a small to moderate price decrease would not lead to improved perceptions of value or trust. Of the 48 customers in attendance at our first Pricing Forum, just one recommended we have a large price decrease in 2018-19, other customers choosing either a CPI or a CPI minus adjustment. Therefore, it is central to our entire value proposition that our regulatory depreciation be accepted by the ESC.

Regulatory rate of return

As advised by the ESC, the real cost of debt is presently expected to be 3.66%. We acknowledge this will change as the 10 year rolling average substitutes estimated debt figures with actuals prior to the Determination. Our proposed PREMO rating of Advanced implies a 4.9% return on equity. Based on the longstanding 60:40 debt:equity benchmark, this implies a regulatory return of 4.2%.

C9 Prices and tariff structures

With the exception of the ones outlined below, prices for all existing tariffs will be set to follow a price path of CPI minus 1%, with inflation assumed to be 2.3%. This presents a guaranteed real decrease in prices amounting to 10% by 2027-28. The following tariffs will see price movements different to this:

- ✓ Abolition of Recycled Water Access charges for residential customers to avoid their payment of two access fees
- ✓ Finalisation of price harmonisation between Central and Northern districts to ensure uniform prices for all customers and better reflectivity of marginal costs to all users
- ✓ Rebate for water entitlements not used for rural customers to ensure charges only reflect the service received
- ✓ Discount to NCCs in non-growth towns to stimulate development in these areas, while a further discount on sewer connections ensure our costs again, reflect the service provided
- ✓ Implementation of new trade waste category ensures customer's potential risk to the system is priced efficiently
- ✓ Revisions to Land Development charges allows for the fast-tracking of applications for those requiring it and the increased re-work fees incentivises more accurate work the first time around

C9.1 Global Price Path

Following extensive customer engagement and collaboration, we firmly believe that the best interests of customers are served with a price path of an average CPI minus 1% each year through to 2028. In order to be relevant and understood by customers, we did not launch into engagement to focus on optimal rates of regulatory depreciation or regulatory rate of return. At our first customer Pricing Forum independently facilitated by Insync, we gave customers a clear choice between:

- A large price decrease up front, followed by CPI or gradual price increases in the long term. This leads to increasing debt levels each year; or
- A small price decrease (compared to inflation) with meaningful debt repayment and bill stability for the long term; and
- CPI price increases, with enhanced debt repayment and increased levels of service

At the conclusion of the forum, each customer was offered the opportunity to "vote with their feet" and stand in front of their preferred option, or somewhere between two options if undecided. All bar one customer chose either the CPI option, the CPI minus option, or somewhere between the two. One customer out of forty eight chose the large price decrease option. Combining this with other research and investigations, we believe that there is a high degree of customer empathy with our financial position, as customers witnessed how debt spiralled during the Millennium Drought to make necessary but expensive investments including the Goldfields Superpipe, recycling and irrigation modernisation. Our customers know that, ultimately, our debt is theirs, and that our debt reduction allows us to either increase services or reduce prices in the long term.

Financial modelling confirmed that the preferred option (small price decreases compared to inflation) can lead to a stable RAB and an improving credit rating as subsequently assessed by Moody's. This therefore became our headline price change in our Pricing Submission 2018 Community Draft. The CPI option was ruled out owing to an increasing annual regulatory adjustment being required and the view that this was not the best possible proposal that could be made.

In proposing a customer friendly CPI minus 1% price path, the business is taking a balanced risk position. While we are taking on significant risk in terms of customer and community rebates, a high operating efficiency and excluding possible capital works, the business is taking on significant extra risk which requires a Hybrid

Revenue Cap to restore balance. Therefore, this chapter should be read in conjunction with the rest of the proposal, especially Form of price control and Adjusting prices and the main Pricing Submission document.

C9.2 Fixed / Variable tariff split

At our second customer Pricing Forum, we engaged with customers to seek a recommendation regarding the preferred mix of fixed and variable tariffs in customer bills. Ten options for water pricing were presented ranging from:

- Variable price: $4.23 per kL, no fixed charge
- Variable price: $1.18 per kL, fixed charges of $411 per customer.

Each table was provided a spreadsheet allowing them to consider the impacts on different customer groups. While individuals attending noted that different scenarios might benefit them or one group more than others, participants were broadly supportive of continuing the current mix between fixed and variable charges (approximately 70:30, inclusive of wastewater access charges).

They told us that the current mix gives bill certainty for larger water users, avoids large shocks from seasonal demand variation and also provides an incentive to be water efficient to reduce overall bill size. However, we note the intertemporal variation between this insight and the more commonly expressed view that fixed charges are too high and should be rebalanced down. As we heard from some customers that they would like to have a different mix apply to them, or that this view would vary in times of water scarcity, we are achieving customer wishes by proposing a Hybrid Revenue Cap that allows us to modify tariffs in response to customer desires over the period.

We note that our volumetric price of water is higher than the short-run marginal cost of treating and supplying it. The marginal cost of supplying water can vary over time – in years of strong inflows we source our water from the Coliban River headworks and gravity feed channels (for very low marginal cost), however in years of low inflows we source water from Lake Eppalock and Lake Eildon for a much higher cost (with additional costs of water and high pumping costs). We have experienced both scenarios in the past two years alone. For this reason, setting a variable water price in line with short-run marginal cost would not be prudent or efficient and would lead to huge price shocks year to year.

Our long-run marginal cost of water, particularly in the face of future climate uncertainty and strong customer (and hence demand) growth, is much higher. The actual long-run cost is uncertain and also varies, given lack of clarity around the need for and timing of lumpy capital projects to meet future water demand including the Castlemaine Link, Goldfields Superpipe upgrade, and potential need to purchase additional water entitlements.

We are confident that the current pricing structure meets the needs of our customers and provides sufficient incentives for water efficiency while also allowing them to use water to live, grow and enjoy. It will also send clear price signals to customers for the efficient long-term cost of providing water services. It avoids potential price volatility that would be introduced given our highly volatile cost of sourcing and supplying water and the potential need for large long-term investment to meet future demand growth and climate uncertainty. And finally, we look forward to engaging with customers over the regulatory period to more promptly respond to customer desires and modify tariff splits within the regulatory period subject to the Hybrid Revenue Cap and Customer Safety Net.

C9.3 Modified Tariffs

Residential Recycled Water Access

Our urban recycled water residential customers are located in urban areas with access to treated water services. Their recycled water connections represent an additional service fee that they have historically paid in addition to the standard potable water service fee. This means residential recycled water customers are paying two separate fixed charges. We intend to abolish the residential recycled water access charge as it is inequitable for these customers to pay higher fixed charges yet receive a lower quality of service relative to a potable only customer.

Table C37 – *Recycled Water access charges, 2017-18 to 2022-23*

$ 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Recycled Water Access						
20mm meter or less	$114.25	$0.00	$0.00	$0.00	$0.00	$0.00

Harmonisation of Urban Water Variable Charges

Historically, customers in our northern pricing zone (Echuca, Cohuna, Rochester, Leitchville and Gunbower) have paid lower variable water prices than customers in other towns. This was an anomaly of historical pricing and does not reflect the actual differences in costs to supply these customers. If anything, the cost of supplying water to these communities is higher, due to the larger town of Bendigo having economies of scale due to its size.

Our customers have consistently supported the notion of fairness in prices for water and sewer services, and postage stamp prices are in place or being transitioned to rather than charging the true marginal costs of supplying water and wastewater services in each town. This upholds our commitment to customers paying a similar price for similar service.

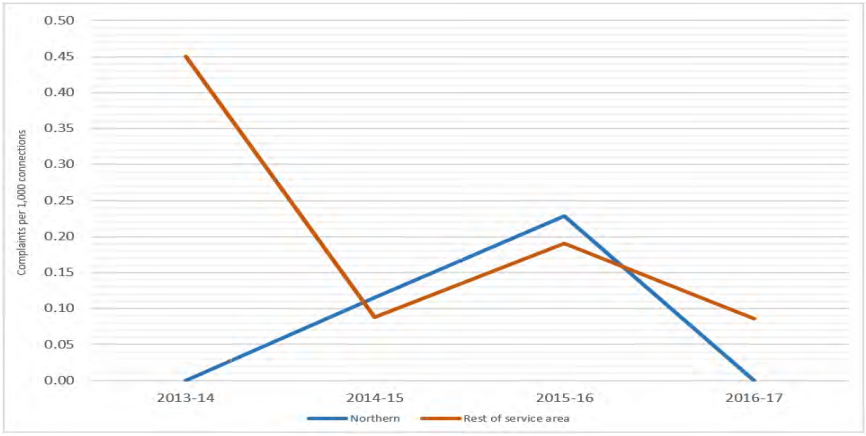
With our commitment to postage stamp pricing across our region, we applied for and received approval from the ESC to transition northern zone prices during the third regulatory period with real annual price increases. Harmonisation is due to be completed in 2019-20 and customers in this zone will see a 10.6% increase in the volumetric price in 2018-19 and 2019-20.

Table C38 – *Price harmonisation of variable water charges, 2017-18 to 2027-28*

$ 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water - Variable Charge											
Central	$2.2554	$2.2328	$2.2104	$2.1882	$2.1663	$2.1446	$2.1231	$2.1018	$2.0807	$2.0598	$2.0392
Northern	$1.8038	$1.9990	$2.2104	$2.1882	$2.1663	$2.1446	$2.1231	$2.1018	$2.0807	$2.0598	$2.0392

Despite increases in the variable water price in excess of 10%, we have not seen a significant rise in affordability or billing complaints. As seen in Figure C5, complaints of this type from northern zone customers remain in line with all other customers.

Figure C5 – *Affordability and billing complaints during the price harmonisation period*



Rural Infrastructure

As part of the suite of rural tariffs, our rural customers pay an infrastructure charge which is a fixed amount per ML of their licence volume. Our Rural Customer Advisory Group and rural customers more broadly have consistently told us they are concerned about paying the full infrastructure charges if we do not make seasonal allocations of 100%. We are therefore proposing that our customers will receive a discount to this charge if we allocate less than 100% of their allocation in a year. For example, a customer who receives 70% of their rural water entitlements will receive a 30% reduction on the infrastructure charge. This ensures our customers only pay for the water that is available and return the charge to how it operated in the second regulatory period.

We note that this discount will be in the form of a rebate – we intend to continue to manage our water supplies with intention of supplying 100% of allocation to our rural customers each year.

Standpipes

There are 35 standpipes in operation throughout the Coliban region, each owned and operated by the business or local councils. For those standpipes that are not operated by us, we have no control over the tariff charged to end customers. This can reflect poorly on us, with customers not understanding that we don't own and operate those standpipes and thus believing we are charging higher prices than we actually are. To address this, we have been negotiating with local councils to reclaim all standpipes in the region. While this will not

directly affect the revenue we receive, it will ensure more equitable pricing for our customers across our region.

Rural Outlet

Based on feedback from rural customers and to ensure tariff simplicity, we will change our Outlet Fees tariff so there is a single price per additional outlet, rather than the two levels currently in place. From the beginning of the upcoming regulatory period, all our rural customers will see a uniform tariff per additional outlet.

Table C39 – *Revised Rural Water outlet charges, 2017-18 to 2027-28*

$ 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Rural Water - Outlet Fees (per additional outlet)											
2-5 outlets	$27.51	$27.23	$ 26.95	$ 26.68	$ 26.41	$ 26.14	$ 25.87	$ 25.61	$ 25.35	$ 25.09	$ 24.83
6+ outlets	$38.56	$27.23	$ 26.95	$ 26.68	$ 26.41	$ 26.14	$ 25.87	$ 25.61	$ 25.35	$ 25.09	$ 24.83

C9.4 New Tariffs

Trade Waste

We are proposing a significant reform to the structure of our fees and charges for trade waste customers in the next regulatory period with the creation of a new Intermediate trade waste category that will sit between the already-existing Minor and Major categories. This reform allows us to work cooperatively with our trade waste customers for better environmental outcomes.

We began a major review of its trade waste classification procedures in 2016. We engaged a trade waste expert as well as undertaking extensive consultation with trade waste customers, including face to face interviews with our major trade waste customers and surveyed minor trade waste customers. In total, more than 120 trade waste customers were interviewed or responded to the survey.

Our trade waste customers are supportive of a 'user pays' principle, with 67% of respondents in favour of having customers who present a greater risk to the operation of the sewer system paying more.

Historically our criteria for a customer to be classified as a major trade waste customer were:

- trade waste discharge exceeded 5,000 kL per year; and/or
- "significant impact" on the operation of wastewater networks and treatment plants and the reuse of reclaimed water and biosolids

Under our new risk-based approach to trade waste classification and pricing, customers with both high volumes and high risk will continue to be classified as major and customers with low volumes and low risk will continue to be classified as minor. Customers with medium to high risk trade waste content and low to high volumes would move into the new intermediate classification.

Table C40 - *Proposed risk-based trade waste classification system*

Waste Content			Waste Volume		Score	Trade Waste Category
3	High Risk	x	2	High Volume (>5,000kL)	6	Major
2	Medium Risk				3-4	Intermediate
1	Low Risk		1	Low Volume (<5,000kL)	1-2	Minor

Minor trade waste customers, the largest trade waste group with approximately 1270 customers, will continue to be charged a small trade waste access fee along with volumetric sewerage charge (less an allowance of 230 kL of discharge, i.e. the volume expected from a large household). Major trade waste customers will continue to be charged an access fee in line with pricing principles, while the volume charge and quality charges will follow the CPI minus 1% path.

To ensure that our customers are classified correctly, we are collecting baseline data between now and December 2018 to accurately measure the trade waste content and discharge volumes of customers we believe may move to the new intermediate trade waste category. It is important to note that the cost of sampling and data analysis in this period will fall onto the business, and will not be passed onto the customers involved.

In the event that the data confirms they meet the criteria for the intermediate trade waste classification, we will undertake further consultation regarding the reclassification.

Based on preliminary analysis, we expect that the adoption of a risk-based classification process will result in the number of major trade waste customers reducing from 18 to 11, resulting in approximately $0.1 million reduction in annual revenue from trade waste. Pending further data collection, up to 20 businesses may move to the intermediate category.

Creation of the Intermediate trade waste classification evidences our goal to develop a more cost-reflective, risk-based, pricing structure for our customers, and better environmental outcomes for our communities. The Intermediate fixed access fee represents an incremental increase in charges for some customers that should not be in the minor category.

In order to ensure that transitional arrangements are fair and reasonable, we will undertake an extended review period of customer waste, including sampling as appropriate, and provide a draft categorisation prior to raising a customer's classification. We intend on applying these categorisations in 2019-20 and our financial template outlines additional revenue from new customers who become Intermediate category.

Where we downgrade a customer's classification, it will apply immediately and this will be the case for a number of customers who will have reduced Trade Waste charges from 2018-19.

Recreational Water (green open spaces)

As we have learned from our *Voice of the Customer* and subsequently had reiterated via targeted engagement for the Pricing Submission, our customers value our ability to be able to provide water to councils for the purposes of greening open spaces.

Outcome 5: Support the liveability of the region lists a performance measure that is the volume of water supplied to councils for recreational purposes. Throughout 2017-18 and 2018-19 we will develop concessional prices for council owned and managed facilities. We will continue our recent strong performance regarding customer engagement to determine the priorities and costs that should apply to the valuable community service that we provide our communities. Any changes to recreational water pricing will be incorporated annually in conjunction with the customer engagement that we undertake to propose tariffs to apply the following year in accordance with our Hybrid Revenue Cap.

Elmore STED Wastewater access fee

Following engagement in customers in Elmore and Lockington, we empowered customers in each town to choose between four different options including whether they wanted to have a discount to their sewer tariff or have us undertake desludging every three years. This was necessary to ensure that all our customers are paying the same for a similar service.

Customers in Elmore chose to have a discount of $120 in their annual wastewater access fee.

For information on how we are implementing the desires of Lockington customers, refer to C6 Operating expenditure.

C9.5 Land Development Charges

New Customer Contributions

Our proposed New Customer Contributions (NCCs) forecasts for the next regulatory period have been developed after extensive consultation with land developers who are active in our region. These are compliant with the principles as outlined in ESC Guidance. We are proposing a small reduction in revenue from NCCs in 2018-19 to provide better incentive for regional growth and to acknowledge that sewer NCCs may be subject to increase over the regulatory period. We are proposing a CPI increase to NCCs each year.

Table C41 – *New Customer Contributions charges, 2017-18 to 2027-28*

$ 01/01/18	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Water - New Customer Contributions											
Growth area	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10	$1,596.10
Non-growth area	$1,596.10	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88	$1,276.88
Sewerage - New Customer Contributions*											
Growth area	$1,596.10	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69	$1,356.69
Non-growth area	$1,596.10	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35	$1,085.35
Recycled Water - New Customer Contributions											
All	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05	$798.05

**From 2019-20 the Sewer NCC will include provision for actual cost of pump stations commissioned in previous year*

Promote regional growth

We have heard from customers over many years there is a perception of unfairness regarding developments occurring in our smallest regional towns. While the NCC principles refer to infrastructure and other costs, it is much harder to justify NCCs in towns that have very little proposed growth infrastructure.

With the benefit of promoting regional development by reducing the cost of development in our small towns, we are proposing to introduce a concessional NCC that will apply to low-growth towns. The level of the NCC for the designated concessional towns will be set at 80% of the standard rate applicable to towns paying the full rate. Table C42 shows our proposed growth and non-growth towns.

Table C42 – *Growth (full tariff) and non-growth (concessional tariff) towns by system*

Full NCC	Concessional NCC
Bendigo System	Boort
Bridgewater/Inglewood	Borung
Castlemaine System	Dingee
Cohuna	Gunbower
Echuca	Jarklin
Elmore	Korong Vale
Goornong	Laanecoorie System
Heathcote/Tooborac	Lockington
Kyneton System	Macorna
Leitchville	Mitiamo
Trentham	Mysia
	Pyramid Hill
	Rochester
	Serpentine
	Wedderburn
	Wychitella

Sewer pump stations passthrough

Our engagement has revealed dissatisfaction with the requirement we impose on developers to build sewer pump stations and rising mains. Anecdotally, we are aware of situations in which developers have altered their development plans in order to avoid paying for and installing a pump station, often which will have direct benefit to adjoining developers who is ultimately a competitor.

In order to limit the disincentive for developers to build major infrastructure such as pump stations, we have decided to implement a developer suggestion whereby the cost of pump stations is initially excluded from the level of NCCs and then passed back to all developers when the pump station expenditure is committed. We believe that by passing through this expenditure to customers when incurred (rather than in advance) we are reducing the planning risk that customers experience and ensuring that customers do not pay for assets that are not constructed.

To avoid increasing costs applying to developers, we are proposing to initially reduce the sewer NCC by 15% in 2018-19. From this point, the sewer NCC may well rise in following years to account for the actual cost of new pump stations and rising mains installed. Our proposal is that for any expenditure by us in the construction of sewer pump stations and rising mains, the NCC will rise by an amount sufficient to fully recover the incremental capital expenditure over the coming five years. For example, with a forecast of (say) 1000 lots per year and pump station expenditure of $0.4 million, the sewer NCC will rise by $80 per year for the following five years before reverting to the pre-existing level.

This change to the pricing structure makes the NCC more reflective of actual costs faced by the business and is compliant with the NCC principles.

Fast Tracking

In keeping with our principle of having an “equal service for an equal price” we have consulted with local land developers and created a Fast Track option for our mains extension fees. The tariff, which is initially priced at a 50% premium to the standard fees allows those developers in need of faster processing times to be granted

the opportunity. A second fast-track option on practical completions is also proposed and priced at $250. The price levels proposed have been determined with careful consideration of the effect fast-tracked mains extension applications will have on the standard applications. It is expected that these standard applications will not be adversely affected by the volume of fast-track applications. In the event that there is high uptake of the proposed option, additional resourcing will be arranged for within the affected teams.

Re-work Fees

We are proposing to introduce two new re-work fees that are charged to customers based on additional revisions developers wish to make to initial plans or when they require a site to be reinspected at practical completion.

The two charges, which will be set at $200 and will be charged on a per submission basis. The price level proposed is on the basis of cost recovery while providing incentives for developers to limit the need for plan revisions and site reinspections. We note these charges are standard at many other water businesses.

Project management fees

We believe that land development fees relating to project management costs we incur should reflect the cost of provision of this service. Similar to the principles that apply to NCCs, this ensures there is neither a net cost transfer to or from developers. At present, the level of project management fees is not covering the cost of delivering this service. Therefore, we are proposing a 10% increase in this fee in 2018-19. We are also proposing additional labour resourcing for responding to project management services and to respond to fast-track applications.

Future fee levels will depend the preference of developers for higher (or lower) levels of service and will be subject to annual customer engagement before we submit our proposed prices to the ESC annually.

Connection Services

All meter connection services are currently outsourced to approved plumbers who we accredit as “Quick Connect” agents.

We are currently investigating whether we should undertake this service internally as we believe we can offer a better level of service at a lower cost to customers while improving the accuracy of data that then subsequently enters our asset system.

Given the uncertainty, we have assumed no revenue for undertaking this service and incorporated no costs into our operating expenditure. If we proceed with undertaking this service, costs will be set on a cost recovery basis.

C10 Demand and customer growth

Forecasting for the next regulatory period will be based around climatic conditions, customer growth and customer demand. Following rigorous scenario modelling and application of industry heuristics, the key parameters were determined:

- ✓ Prevailing climate conditions have demonstrated high variability upon which water consumption is highly dependent
- ✓ Customer growth assumed to be 1.7% in line with recent trends
- ✓ Water demand forecasting has been modelled using a ground-breaking, multi-variable regression of temperature and new BOM soil moisture data
- ✓ Demand elasticity is immaterial given small changes to real prices
- ✓ Residential water consumption estimated at 188 kL per connection on average
- ✓ Non-residential water consumption has been estimated based on a three-tier size classification
- ✓ Rural water consumption forecast at 4,500 ML each year

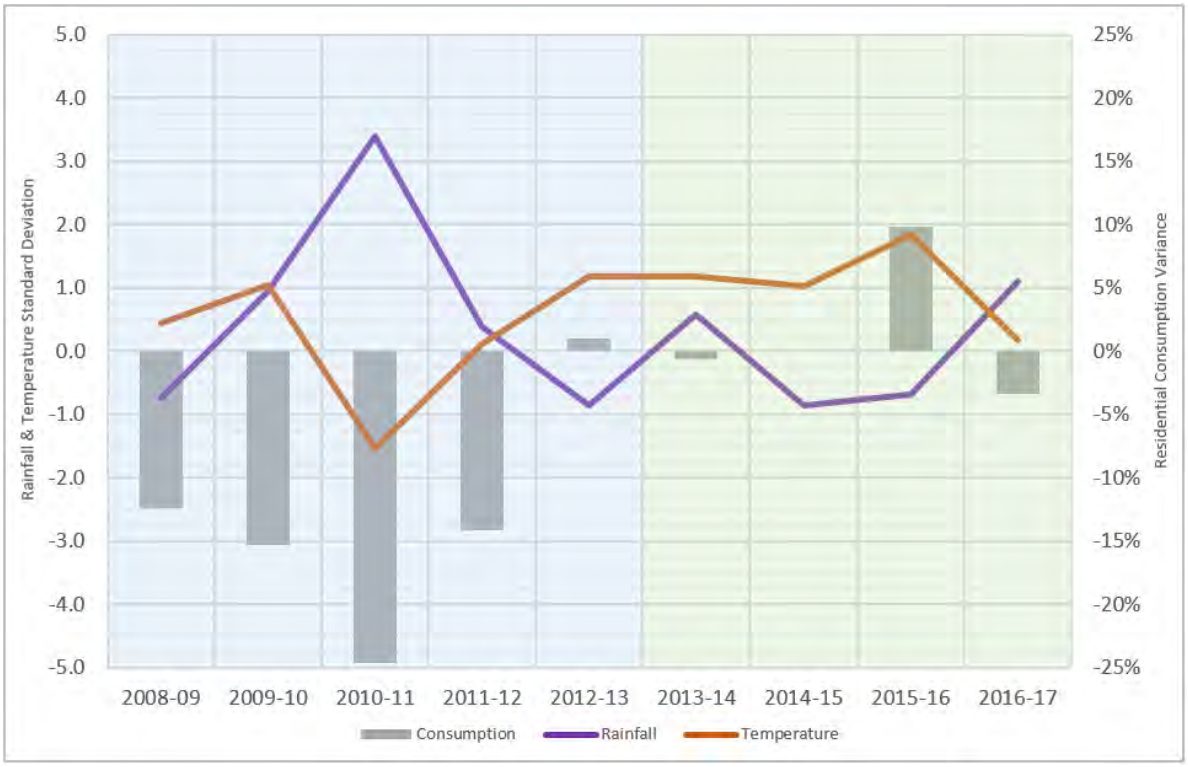
We are pleased with our innovative use of new soil moisture data that underpins our residential demand forecasting, although we note that under the Hybrid Revenue Cap the risk of demand forecasting errors faced by our customers is significantly diminished. Nevertheless, every effort has been made to ensure the forecasts outlined in this section are based on the best available data and are reasonable, complete and accurate in all material respects.

C10.1 Climatic conditions

In the second regulatory period, Bendigo and its surrounding areas experienced initially much drier than usual then much widespread flooding in 2010-11. Comparatively, the third regulatory period was both drier and warmer. Save for the year just ended, average temperatures in each year have been approximately 1°C to 1.5°C warmer than the long-term (1992 to 2017) historical average. Rainfall has been approximately in line with the long-term average.

Figure C5 presents a snapshot of the prevailing climatic conditions in the second (blue) and third (green) regulatory periods using the key weather metrics of maximum daily temperature and annual rainfall (standard deviations from the mean). Plotting historic water consumption shows a clear relationship between demand and rainfall and temperature.

Figure C6 – *Effect of rainfall and temperature against residential water consumption, 2008-09 to 2016-17*[6]



A key customer goal over the past decade has been to ensure sufficient water is available for customers to live, grow and enjoy. We have commissioned the Goldfields Superpipe, purchased additional water entitlements, invested in water recycling and rural channel modernisation. Thanks to these initiatives and a kinder climate, all towns have avoided water restrictions in the third regulatory period (noting that Permanent Water Saving Rules (PWSR) remain in place).

C10.2 Customer Growth Rates

We are forecasting an average customer growth rate of 1.70% over the next five years. This has been developed using the weighted average of residential and non-residential customer growth, with the methodologies outlined in following subsections.

In our last submission, we forecast an average growth across the region of 1.74%. Actual growth over the period has to date been around 1.6%.

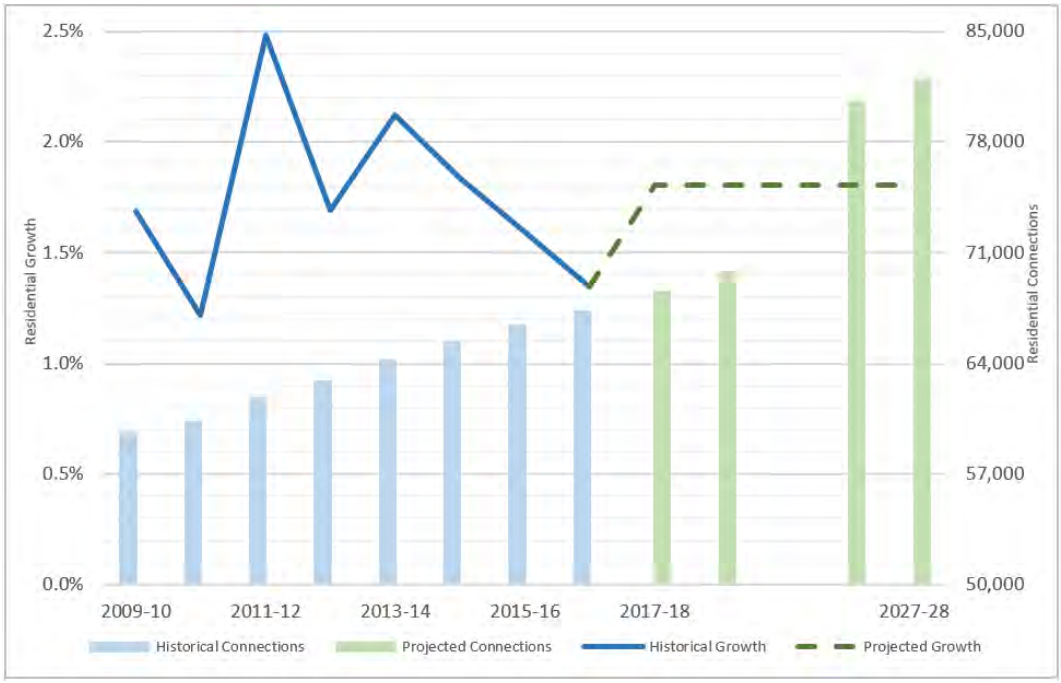
Residential

We have based residential customer growth on internal modelling of historical data, complemented by consultation with local councils and the 2016 *Victoria In Future* (VIF2016) forecasts. Analysing actual growth of

[6] Source: bom.gov.au

customer connections, growth has been slowing in the region following a temporary spike at the back-end of the second regulatory period.

Figure C7 – *Residential customer growth and connections, 2009-10 to 2027-28*



A residential customer growth rate of **1.81%** is forecast, primarily driven by rapid development in Bendigo, Castlemaine and Echuca. We note *VIF2016* estimates a growth of 1.64% for the Bendigo region between 2011 and 2021 (table C43). However, these forecasts tend to be less accurate for the purposes required due to lack of detail as a result of the inclusion of smaller towns and the misalignment of our service areas.

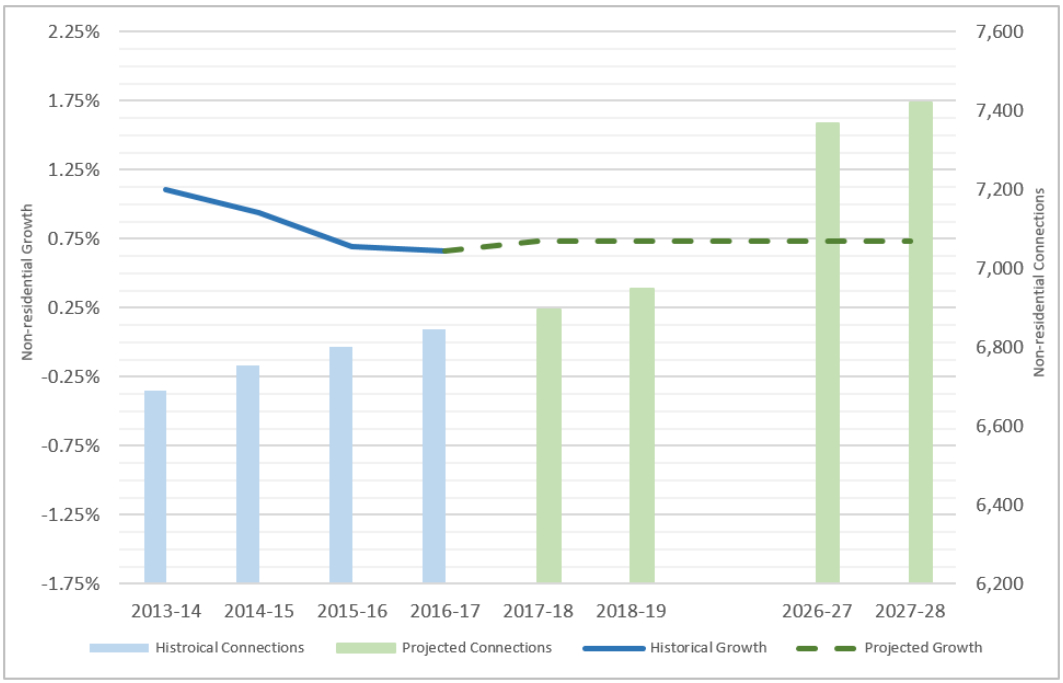
Table C43 *– Household growth forecasts for the City of Greater Bendigo (Victoria In Future 2016)*

Total households	2011	2021	2031	2041	2051	Average annual percentage change			
						2011-2021	2021-2031	2031-2041	2041-2051
Bendigo	58,700	69,100	80,900	92,900	105,400	1.64%	1.59%	1.39%	1.27%

Non-residential

Non-residential growth has been forecast in a similar manner to the above. There is a plateauing effect observed in the non-residential data, with an average growth over the coming regulatory period of 0.74% forecast. In conducting this particular analysis, data from 2014-15 to 2016-17 has been used as this period represents a smooth, recent growth rate.

Figure C8 – *Non-residential customer growth and connections, 2013-14 to 2027-28*



Recycled water

Recycled water became available to select areas in Bendigo from 2009-10. Growth rates for new recycled water connections have fallen year-on-year while the physical number of new connections has been steady. We anticipate that there will be a slightly higher uptake of recycled water connections in the coming period. We estimate average annual growth of 9.7%. For our non-residential recycled customers, we expect their growth to align with the non-residential treated water growth outlined above.

Rural

Continued population growth around Bendigo is seeing previously rural areas rezoned for urban development. We are therefore expecting to see a decline in the number of rural customers within the Coliban network. Factoring in for the natural growth of the population over the next ten years, it is anticipated that this will result in zero net growth of rural customer numbers and net demand.

Trade Waste

Trade waste growth has remained stagnant throughout the third regulatory period with no appreciable increases. For the next regulatory period we are proposing a new categorisation system for our trade waste customers to better reflect a risk-based approach to dealing with this waste. While some customers are likely to move trade waste category, this is not expected to affect the overall growth rate which is anticipated to move in alignment with the rate of growth of non-residential customers generally.

C10.3 Water demand

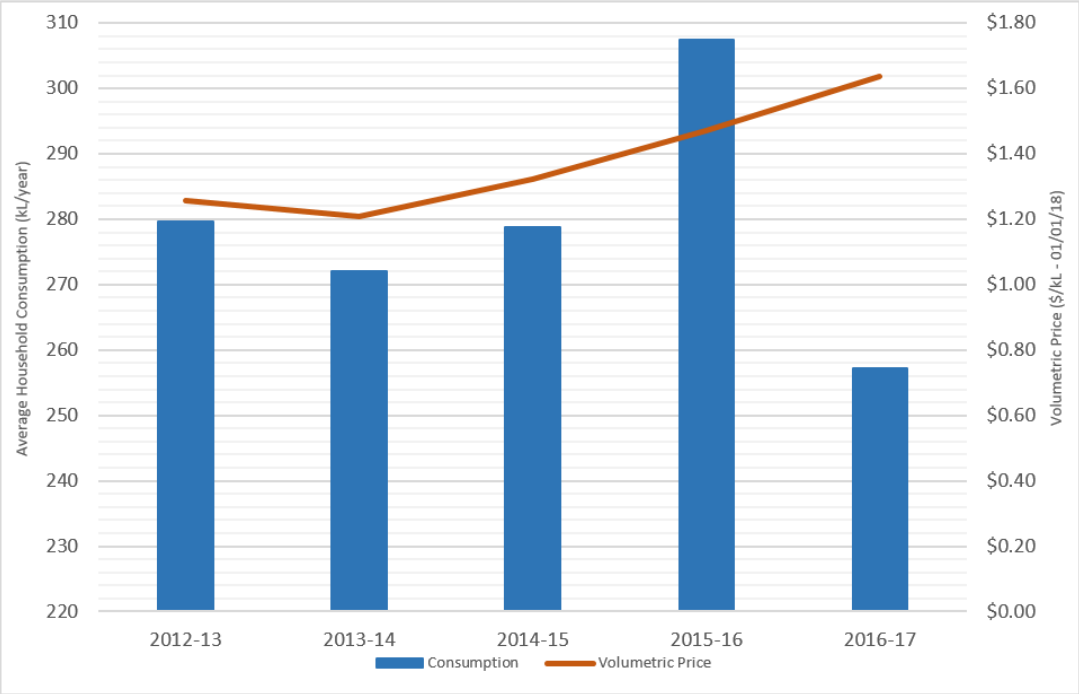
Elasticity

Over the coming regulatory period, there is no significant annual price change proposed. While we note previous work done regarding price elasticity, due to these small incremental price changes we are not anticipating any price elasticity factor.

The one area that has seen significant price changes over the past few years is in our supply zone along the Murray River, where variable water prices are harmonising with prices in the rest of our service district over the period to 2019-20. Variable water prices in this supply zone have risen by around 10.5% each year, translating to around a 4.7% increase in average bills. Despite this, water demand in our Murray townships has not shown appreciable price sensitivity, and any impact of price rises has been swamped by natural variation in demand due to temperature or rainfall. This aligns with previous findings through research undertaken in

partnership with La Trobe University[7]. Figure C9 shows average demand and variable water prices over the third regulatory period in our Murray supply towns. Demand has fluctuated year on year, independent of the change in water prices.

***Figure C9** - Average household water demand and variable water price, Northern region, 2012-13 to 2016-17*



Urban Water Demand

To help inform our Pricing Submission and ensure a robust and accurate forecast of customer consumption, we engaged RMCG to derive forecasts of urban water consumption. In this collaboration, we have developed ground-breaking analytical models that employ the use of soil moisture content data to help predict household water demand.

Rainfall data collected from dry climates, such as Bendigo, is only a reasonable explanatory variable for demand regression due to lags in response and the high variation of usage between seasons (even if rainfall is similar). Recently, BOM made available current historical soil moisture data. This has the advantage of eliminating the need for rainfall data as an explanatory variable. In addition, the analysis also uses maximum daily temperature as an explanatory variable to attain a more robust model. The basic assumption has been made that indoor household consumption remains relatively constant, with the major point of variation being outdoor usage.

Residential

In a comprehensive analysis of our service region in its entirety, residential demand has been observed around the major population hubs of Bendigo, Castlemaine and Echuca. This results in a detailed study around the biggest economic areas of Coliban – accounting for over 80% of total residential water consumption - as well as splitting the region geographically between central (Bendigo), southern (Castlemaine), and northern (Echuca). Additionally, it allows for climatic (rainfall / soil moisture and temperature) impacts on demand as well as potential effects of differing tariff structures to be captured. Typically, demand increases the further north you travel.

Three separate regression models were tested to determine residential consumption:

Model 1: Temperature as explanatory variable

Model 2: Soil moisture as explanatory variable

Model 3: Temperature and soil moisture combined as explanatory variables

[7] Refer to our *2013 Water Plan*

In most cases, Model 3 provided the best predictor for historical consumption.

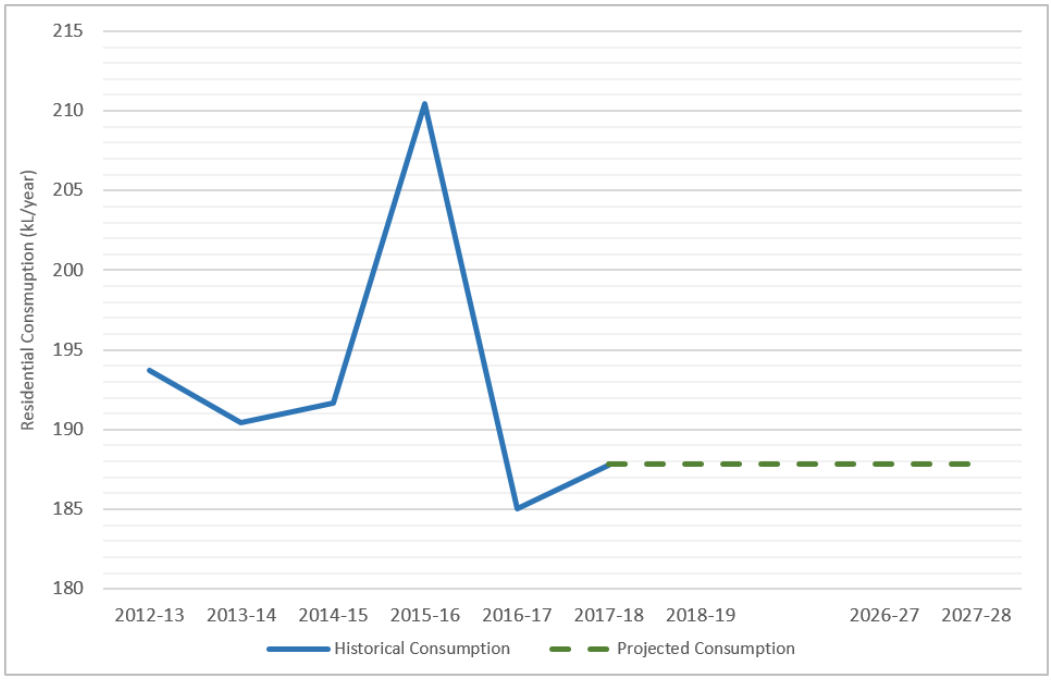
Annual consumption was then taken as the summation of estimated monthly consumption based on median temperature and soil moisture values. Average historical consumption in smaller satellite towns around each of Bendigo, Castlemaine and Echuca was used to align forecasts for these towns to their bigger neighbours.

***Table C44** – Estimated household demand for our major towns and those of their satellites*[8]

Central	
Bendigo	181 kL
Bendigo satellites	141 kL
Castlemaine	157 kL
Castlemaine satellites	155 kL
Northern	
Echuca	270 kL
Echuca satellites	245 kL
Average	**188 kL**

The household weighted average figure of **188 kL** will be used for average residential water demand for each year in the fourth regulatory period. Figure C10 shows the forecast consumption as well as recent historical average residential consumption rates.

***Figure C10** - Average residential water consumption, 2011-12 to 2027-28*



Non-residential

Unlike residential consumption, non-residential consumption has been posited to be less affected by prevailing climatic conditions. As such, the regression model outlined above would not be valid. Instead, forecast consumption has been determined from observed historical consumption. In addition to being split by central / northern / untreated, non-residential customers have been further separated into categories based on their size:

- Small (less than 1,000 kL)
- Medium (1,000 kL to 10 ML)
- Large (greater than 10 ML)

[8] Source: Pricing Period 4: Demand Forecasting – Coliban Water, RMCG, 2017

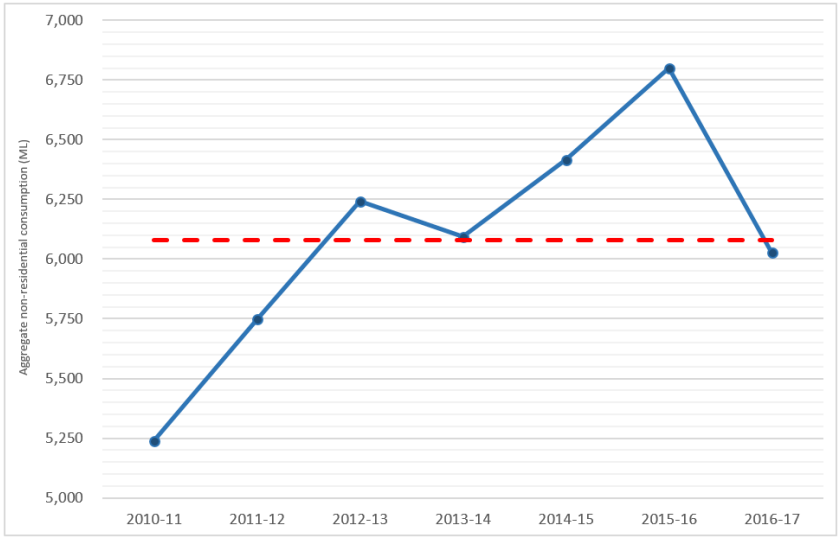
Given these categories, the historical averages over the 2009-10 to 2015-16 periods were calculated to give the resultant consumption estimates shown in Table 13.3.

Table C45 – *Estimated non-residential demand by Pricing Zone & size category*

Pricing Zone	Category	Average Demand (kL)
Central	< 1,000 kL	149
	1 - 10 ML	2,708
	> 10 ML	60,097
Northern	< 1,000 kL	201
	1 - 10 ML	2,420
	> 10 ML	83,223
Non-potable	< 1,000 kL	174
	1 - 10 ML	1,377

Our large (>10 ML) non-residential customers, despite only accounting for 1.15% of non-residential connections, are responsible for nearly 60% of our non-residential variable water consumption and can be highly variable year-to-year. Our single largest non-residential customer consumes 10% of total non-residential water. As such, our prescribed revenue is heavily impacted by these customers. An accurate estimation of their demand is pivotal in ensuring reasonable and accurate forecasts.

Figure C11 – *Aggregate non-residential water consumption, 2010-11 to 2016-17*



The 2016-17 financial year is representative of historical consumption and is climatically the most "normal" year we have since 2011-12. We have considered the consumption patterns of our 150 largest non-residential customers and analysed their usage over the past seven years. Median consumption over the seven year period was then derived for these customers. We also used our knowledge of our twenty largest consumers and otherwise derived their forecasted average demand over the next 10 years.

Historical and forecast water consumption for small, medium and large non-residential customers are shown below (Figures C12 – C14).

Figure C12 - *Average non-residential water consumption – large customers, 2010-11 to 2027-28*

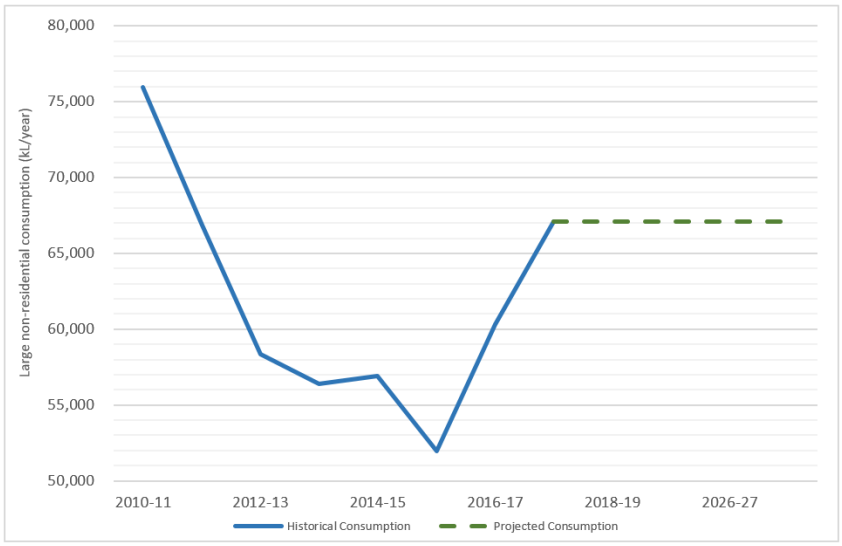


Figure C13 - *Average non-residential water consumption – medium customers, 2010-11 to 2027-28*

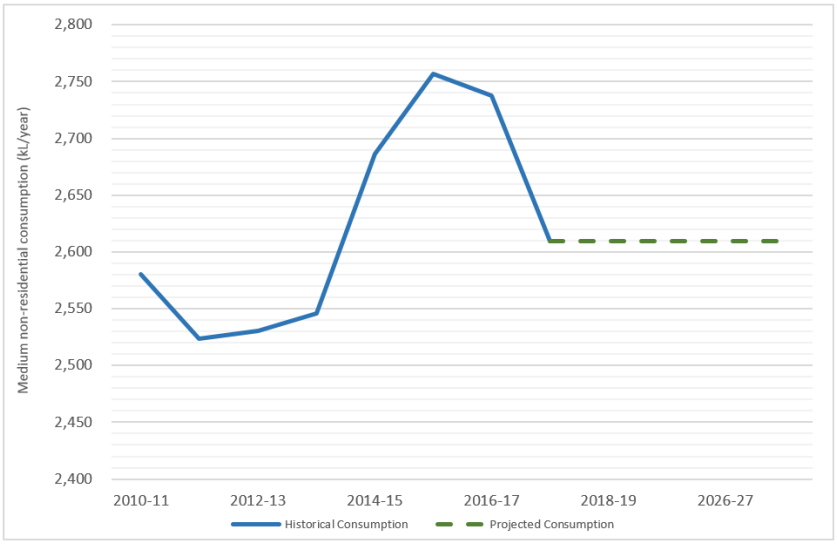
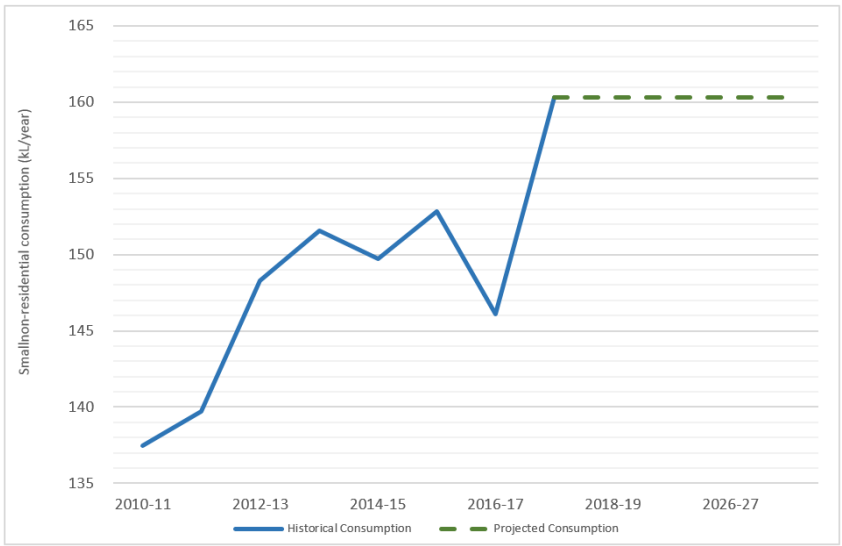


Figure C14 - *Average non-residential water consumption – small customers, 2010-11 to 2027-28*



Standpipes

We currently have 35 standpipes in operation within our network that are owned by us or councils. Together, they supply an average 188 ML each year. This consumption is highly variable year to year, so a simple average has been used.

Table C46 –*Aggregate standpipe consumption (ML) across the Coliban-serviced region*

2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Average
126	82	119	269	189	200	328	175	**188**

Recycled water

Recycled water is a relatively new service available only to a small pocket of the Bendigo population and a small number of council managed sites. Consumption has increased with greater uptake by residential customers in particular, with very low and therefore unrepresentative consumption in early years. As such, only consumption in the third regulatory period has been used for forecasting. Assuming a median demand across these years corrects for the unusually high demand in 2015-16, and results in a forecast annual residential consumption of 44 kL per household and 281 ML all non-residential customers.

Rural water

Total rural consumption in the third regulatory period was highly variable, ranging from 3,380 ML to 6,023 ML. Like residential urban demand, rural demand is highly dependent on climate. To accurately forecast future rural demand, we looked at historical consumption over the past five years and consulted directly with the Rural Customer Advisory Group regarding trends. From this, we have forecast rural demand figure of 4,500 ML per year. We note that this consumption is highly climate dependent but believe the forecast figure is reasonable and unbiased.

Wastewater

Where a non-residential customer exceeds an assumed wastewater discharge of 630 litres per day (230 kL per annum), we deem their sewer service utilisation to be above that of even a large household. Therefore, we charge a separate wastewater volumetric fee for consumption above this level. Analysis of historical wastewater flows determined that 2016-17 represents close to average historical service utilisation and is a suitably representative year on which to base non-residential wastewater volume forecasting. Our forecasts for non-residential wastewater demand are therefore proportional to water consumption in the same ratio as 2016-17.

Table C47 – *Non-residential wastewater demand as a function of non-residential water demand (ML)*

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2022-23
Non-residential Water Consumption	6,211	5,975	6,767	6,938	6,414	6,454	6,502	6,550
Non-residential Wastewater Consumption	1,739	1,200	1,274	1,426	1,341	1,350	1,359	1,369
% Wastewater/Water	**27.99%**	**20.09%**	**18.83%**	**20.55%**	**20.91%**	**20.91%**	**20.91%**	**20.91%**

Trade waste

As is the case for most non-residential services, trade waste services can be difficult to predict accurately. Both Trade Waste volumetric and quality load have been forecast based on a simple average of load in 2015-16 and 2016-17. Basing forecasts on data prior to this introduces too much variance and uncertainty, thus compromising the accuracy of the forecast.

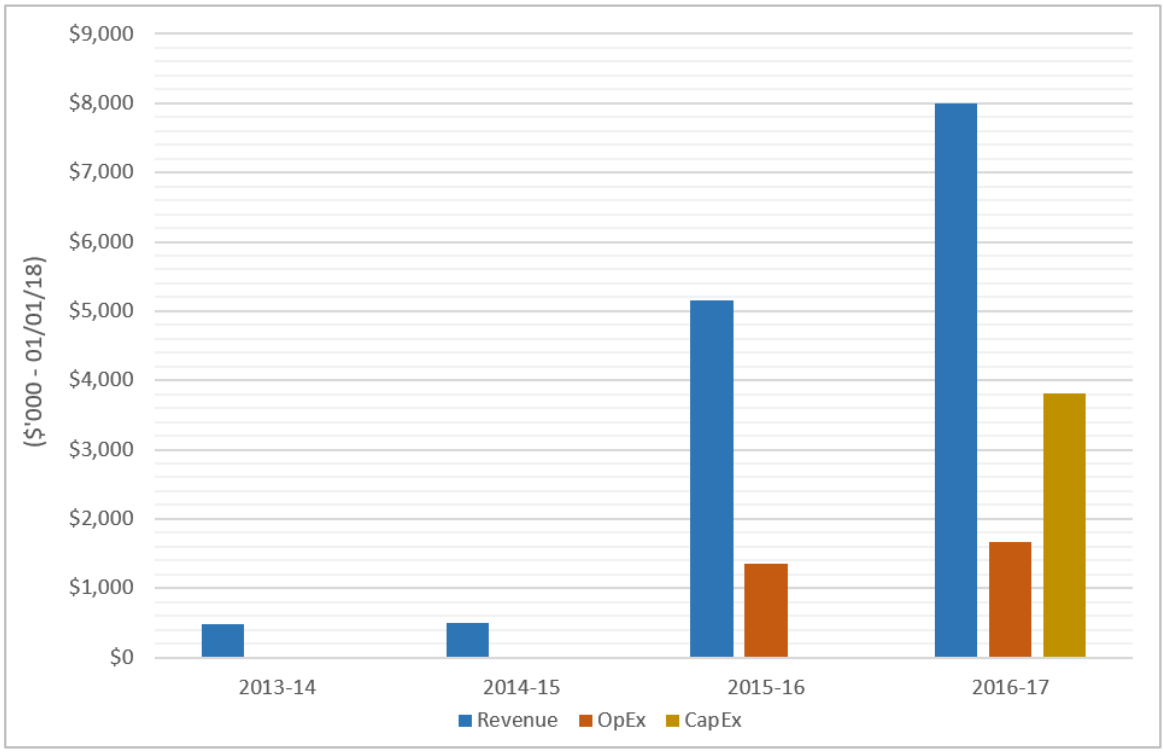
Table C48 *– Forecast trade waste volume and key quality parameters*

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Volume (ML)	1,330	1,362	1,346	1,346	1,346	1,346	1,346	1,346
COD (tonnes)	2,851	2,165	2,508	2,508	2,508	2,508	2,508	2,508
Suspended Solids (tonnes)	502	340	421	421	421	421	421	421
Total Kjeldahl Nitrogen (tonnes)	98	84	91	91	91	91	91	91
Phosphorus (tonnes)	28	17	23	23	23	23	23	23
Total Dissolved Solids (tonnes)	318	326	322	322	322	322	322	322

C11 Non-prescribed services

In accordance with a strong precedent from successively approved regulatory accounts, both the ESC and Coliban Water Board have previously endorsed Land Sales and 28.3% of water allocation sales to be non-prescribed. Traditionally, our non-prescribed revenue has been relatively low (see Figure C15). This has increased significantly with the Bendigo Groundwater project commencing 2015-16.

Figure C15 - *Non-prescribed revenue and expenditure, 2013-14 to 2016-17*



The Bendigo Groundwater project is a multi-year project to remove and treat contaminated groundwater from beneath Bendigo. As the local expert in water treatment and removal, the government commissioned us to undertake this project on a cost recovery basis. We have argued (and the ESC has previously accepted) that as this project does not relate to our core business of supplying water and wastewater services to our customers, it should sit in non-prescribed revenue. All revenue, capital and operating expenditure associated with the project are non-prescribed and are being managed separately to our core business.

In the event that this project becomes prescribed expenditure in the future, such expenditure will then form part of a future revenue requirement.