



# REVISED PRICE PROPOSAL

Response to the ICRC's draft decision on regulated water and sewerage service prices from 1 July 2018



Quality  
drinking water



Reliable  
supply



Affordable  
pricing



Customer  
service



Environmental  
sustainability

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## Overview

### Background

The prices Icon Water charges for water and sewerage services are set by the Independent Competition and Regulatory Commission (ICRC). The ICRC is currently in the process of determining prices for the period 1 July 2018 to 30 June 2023. As part of that process, Icon Water submitted its 2018–23 pricing proposal to the ICRC in June 2017.

The proposal set out, in comprehensive detail, Icon Water's plan to deliver the outcomes that our customers told us were important to them – quality drinking water, reliable supply, quality customer service and environmental sustainability, at affordable prices. Despite challenges posed by ageing infrastructure, urban densification, higher energy costs and the need to avoid a continuation of recent revenue shortfalls, Icon Water developed a plan that would maintain service performance and see the typical residential water and sewerage bill rising at or below the rate of inflation over the five years.

Since that time, the ICRC has considered Icon Water's proposal and released its draft report and price direction for 2018–23 in December 2017. Icon Water's capital expenditure (capex) planning is continually being updated for changes in risks and forecast land release and development timings. There have also been changes in interest rates, which have a significant effect on the prices required to finance our infrastructure projects.

### Revised pricing proposal

Icon Water is now pleased to release its revised pricing proposal for 2018–23. Our revised proposal maintains the commitment we made in

June 2017 to deliver the service and pricing outcomes that are important to our customers. The revisions to our proposal reflect our response to feedback from the ICRC draft report on our June 2017 proposal, updates to our capex planning and current market conditions affecting interest rates.

We are now able to propose even more affordable prices than those put forward in June 2017. The reduction in prices is primarily due to decreases in interest rates over the past eight months. These decreases lower the cost of financing the infrastructure needed to deliver water and sewerage services. These savings are passed on to our customers. The proposed water and sewerage prices for 2018–23 are set out in Chapter 6, with a summary provided below.

The typical residential customer using 200 kL of water per year will see a \$9 reduction in their annual combined water and sewerage bill in 2018–19. The combined bill is forecast to rise at less than inflation thereafter. The impact on bills for different types of customer is detailed in Chapter 6.

### How our proposed prices are calculated

Our prices are calculated using the building-block method which estimates a revenue requirement by summing the costs of financing prudent and efficient operating and capex and tax. Using forecasts of the number of customers, the volume of water we expect to sell, and revenue from other sources, we then calculate the prices needed to generate that revenue requirement, which are provided in the table below. The revenue that Icon Water needs to finance its revised plan for 2018–23 is set out in Chapter 6, with a summary provided overleaf.

Forecast water prices (\$nominal)	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Supply charge (\$/year)</b>	104.21	120	140	160	180	200
<b>Tier 1</b> 0-0.548 kL/day (\$/kL)	2.68	2.61	2.63	2.65	2.67	2.69
<b>Tier 2</b> >0.548 kL/day (\$/kL)	5.38	4.95	4.95	4.95	4.95	4.95

Forecast sewerage prices (\$nominal)	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Supply charge (\$/year)</b>	537.34	529.90	534.08	538.29	542.53	546.81
<b>Charge for flushing fixtures in excess of two (\$/year)</b>	525.51	518.23	522.22	526.44	530.59	534.77

### How our proposal has changed

Our revised proposal maintains the service delivery targets set out in our June 2017 proposal and proposes lower prices. The key drivers of the changes in the prices are a smaller capital expenditure program and a reduction in the rate of return on capital.

#### *Lower capital expenditure forecast*

Our planning, review and delivery of capex is an ongoing, iterative process that balances cost, risk and performance. Since preparing our initial proposal, we have revised our capital expenditure plans to reflect the latest available information, which included deferring some lower-risk projects beyond 2023.

Overall, our revised capital expenditure program is \$389.8 million (\$2017–18 net of capital contributions) over five years, down from \$405.9 in our June 2017 proposal. More detail is provided in Chapter 2.

#### *Lower rate of return on capital*

Interest rates have fallen since our June 2017 proposal, with resulting cost saving passed on to customers. We have also revised our approach to calculating the cost of debt. Overall, our proposed rate of return is 5.93 per cent, the same rate as the ICRC’s draft decision, and down from 6.07 per cent in the June 2017 proposal.

Revenue requirement (\$m, nominal)	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Water</b>					
Return on capital	51.7	53.5	55.2	56.5	57.4
less other income	14.9	15.2	15.6	16.0	16.4
less CSO revenue	1.8	1.8	1.8	1.8	1.8
plus depreciation	31.1	34.5	37.5	40.1	40.8
plus opex	96.5	98.8	101.5	105.2	108.9
plus tax	2.0	1.5	1.3	1.2	1.5
<b>Net revenue requirement</b>	<b>164.5</b>	<b>171.2</b>	<b>178.1</b>	<b>185.3</b>	<b>190.4</b>
<b>Sewerage</b>					
Return on capital	28.7	30.9	32.6	33.8	34.9
less other income	13.5	13.9	14.2	14.5	14.9
less CSO revenue	0.7	0.7	0.7	0.7	0.7
plus depreciation	26.3	30.3	33.2	35.7	37.8
plus opex	78.2	79.5	81.1	83.9	86.5
plus tax	4.1	3.4	3.0	2.5	2.3
<b>Net revenue requirement</b>	<b>123.2</b>	<b>129.5</b>	<b>135.0</b>	<b>140.7</b>	<b>145.8</b>

The reasons for these changes, and changes to our proposed annual price reset process, are set out in the following sections. Other elements of our proposal are largely unchanged, including operating expenditure forecasts and the treatment of historical capital expenditure.

### **Capital expenditure**

Our forward capital expenditure program is continually being updated to account for changing risks and new information, such as the timing of infill development and land releases. Projects are prioritised based on the level of risk addressed by the project. Those that would result in a higher risk if deferred are given a higher priority. Our latest project prioritisation has resulted in the deferral of some of the projects included in the expenditure forecasts underpinning our July 2017 proposal. Our assessment has found that these projects can be deferred beyond 2023 without imposing material risk.

The deferred projects do not include the three projects over which the ICRC raised concerns in its draft report – the Belconnen Trunk Sewer Augmentation, Lower Molonglo Water Quality Control Centre High Voltage Assets and Fyshwick Sewage Pump Station. We address the ICRC's concerns in Chapter 2. We maintain that these projects are required to address significant risks to customer service standards in the 2018–23 period and we have retained forecast expenditure on these projects in this revised proposal.

### **Rate of return**

In our June 2017 proposal we followed the rate of return method applied by the Industry Panel in its substituted price direction for 2013–18, since the terms of reference for the current ICRC investigation identified that method as a starting point. The ICRC draft report departed from that method. Icon Water's believes that consideration should be given to all aspects of the rate of return where improvements can be made to the Industry Panel methodology including the cost of debt and the market risk premium.

Overall, our revised approach leads to a proposed rate of return of 5.93 per cent. More detail is provided in Chapter 3 of this submission.

### **Tariff structure**

As the forecast revenue requirement has been revised, a proposal is required as to how the tariff structure should change to accommodate the changed overall price level.

We have maintained the same principle followed in our June 2017 proposal, which was to reduce the Tier 2 water usage charge to the greatest extent possible without causing material real bill increases for any customer. This approach is consistent with the findings of the ICRC tariff structure review in 2016-17 and the ICRC's overarching objective of promoting economic efficiency.



## Form of price control

We have revised our proposed approach to annual price resets, based on feedback from the ICRC. In June 2017 we proposed that annual price resets be used to true up any under- or over-collection of revenue relative to the forecast revenue requirement. The ICRC draft report indicated a preference for a continuation of the current hybrid approach where such adjustments occur only at the end of the five-year period and only for revenue variation outside a deadband threshold. We have accepted this hybrid approach in this revised proposal, since we are confident that our demand forecasting methodology, which the ICRC accepted in its draft report, will more closely align with actual demand.

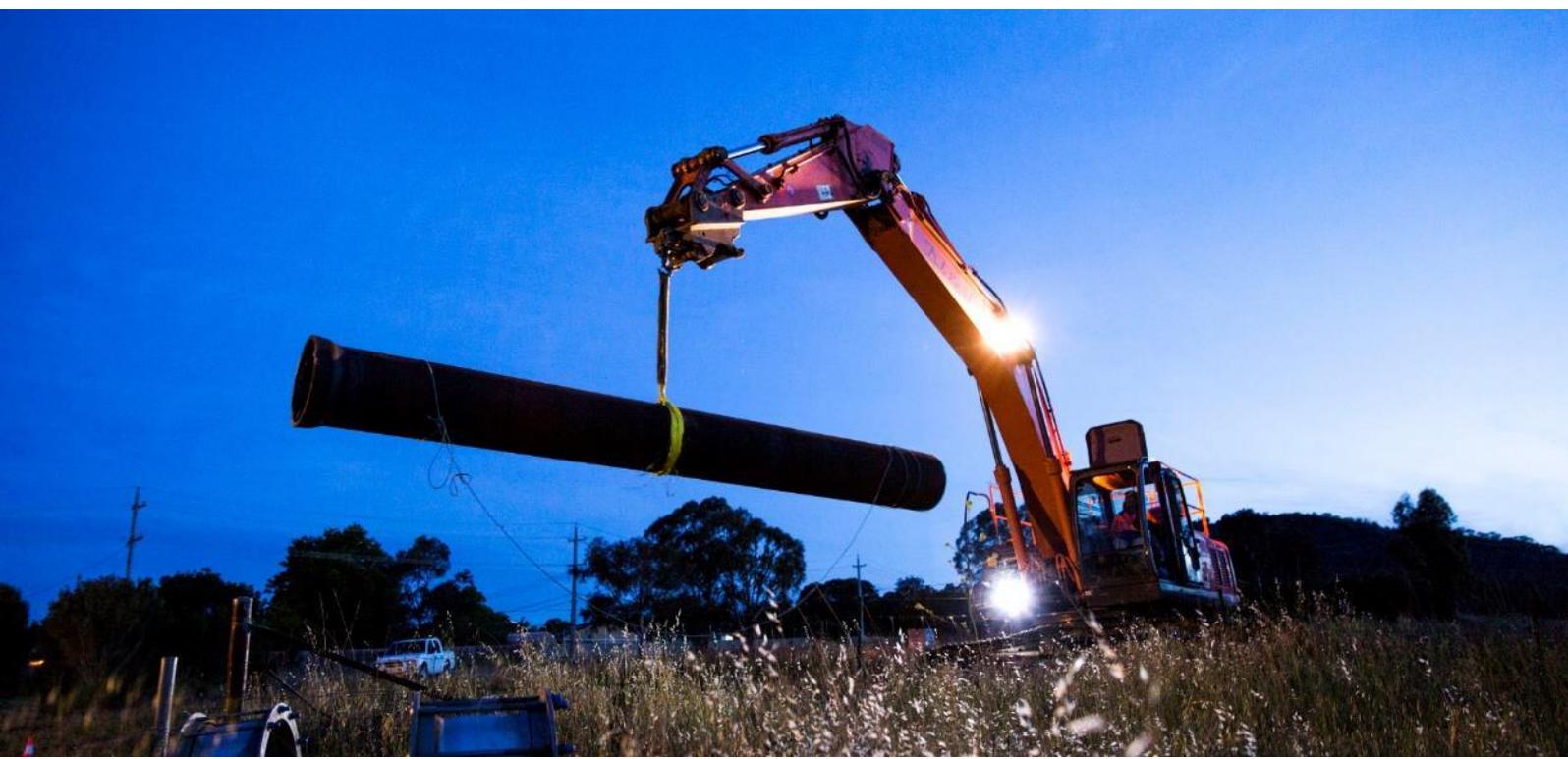
One of the challenges for this ICRC review, as noted in our previous submission and in the ICRC Issues Paper, is the threat of uneconomic bypass – that is, customers being driven to costly alternative water sources as a result of Icon Water’s usage price being set much higher than the marginal social cost of supplying water. This bypass results in a worse outcome for all customers than a situation in which Icon Water is able to offer a prudent discount to the customer to keep them on the primary network.

Our June 2017 proposal addressed this problem in two ways — by lowering the Tier 2 usage price to \$4.95 per kilolitre and by establishing arrangements for the ICRC to approve negotiated pricing agreements with individual customers as part of the annual price reset process. Icon Water would recover revenue forgone due to any prudent discounts through the annual adjustments for revenue variation included in that proposal. This would allow full recovery of the allowed revenue requirement.

Our revised proposal no longer includes annual adjustments for revenue variation in line with the ICRC’s preference, as discussed above, and it is therefore necessary to propose some other means of recovering revenue forgone due to prudent discounts offered in any credible cases of potential uneconomic bypass that might arise during 2018–23.

This revised proposal includes a pass-through provision for this purpose to be applied at annual price resets, if required. This provision is necessary to ensure there is no financial disincentive to Icon Water responding to known cases of potential uneconomic bypass. Further explanation is provided in Chapter 4.

Our revised proposal maintains the commitment we made in June 2017 to deliver the service outcomes that are important to our customers, at more affordable prices.



**Safe, reliable and quality customer service**

Same service level, lower costs

Fair and affordable pricing

Gradual and measured tariff reform

\$9 reduction in the typical residential  
customer combined water & sewerage bill in 2018-19



# 1 Introduction

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## 1.1 Background

In June 2017, Icon Water submitted its price proposal for regulated water and sewerage prices for the 2013–18 regulatory period (June 2017 proposal) to the Independent Competition and Regulatory Commission.

Customer engagement in the 18 months leading up to June 2017 was at the heart of developing our price proposal. We discussed a wide range of issues from customer priorities to tariff reform. The feedback we received proved invaluable in shaping our proposal.

The key outcome of our June 2017 proposal was safe, reliable and quality customer service with fair and affordable pricing. The measured and gradual rebalancing of our water tariff would see the combined water and sewerage bill of a typical residential customer rise at or below the rate of forecast inflation for each year from 2018–19 while maintaining our service performance.

The ICRC reviewed our proposal and published its draft report and proposed price direction (draft decision) in December 2017. This document sets out Icon Water's revised price proposal in response to the ICRC's draft decision.

## 1.2 General response

Icon Water welcomes the ICRC's draft decision as a good basis for delivering excellent price and service outcomes for customers over the next five years. Icon Water's revised proposal accepts the majority of the draft decision, while suggesting a number of amendments that Icon Water thinks will improve customer service outcomes.

The key components of Icon Water's revised proposal include:

- the draft decision operating expenditure allowance;
- the draft decision water sales and customer number forecasts;
- a revised capital expenditure (capex) program, seven per cent lower than our June 2017 gross capex proposal (\$2017–18), that will allow us to continue to deliver safe and reliable water and sewerage services;
- a rate of return on capital similar to the draft decision;
- the same tariff structure proposal that we presented in June 2017 that delivers measured and gradual water tariff reform; and
- a \$9 reduction in the typical residential customer water & sewerage bill in 2018–19 — rising at less than forecast inflation each year thereafter.

## 2 Capital expenditure

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### 2.1 Introduction

Icon Water's June 2017 proposal reported capital expenditure (capex) of \$416 million (\$2017–18) for the 2013–18 regulatory period and forecast gross capex of \$437.6 million (\$405.9 million net of capital contributions) for the 2018–23 period.

Icon Water welcomes the ICRC's draft decision to accept capex invested in the 2013–18 regulatory period as prudent and efficient.

The ICRC's draft decision for forecast net capex of \$358 million (\$2017–18) represents a 12 per cent lower forecast than our initial proposal. This appears to be based largely on an independent review by the ICRC's consultants, Calibre, who reviewed a sample of planned projects to form a view on the prudence and efficiency on Icon Water's program.

Since preparing our June 2017 proposal forecast we have followed our standard process of periodic review and refinement of our forward program. As part of this process, we have considered Calibre's feedback and the comments made in the ICRC's draft decision.

In this chapter we will:

- provide an updated estimate for the 2013–18 regulatory period of \$409.0 million (\$2017–18), which is reflected in our updated RAB roll forward and proposed revenue requirement, as set out in our revised revenue model (see confidential Appendix 1);
- provide an updated net capex forecast for the 2018–23 regulatory period of \$389.8 million (\$2017–18), which reflects the latest available information on our capital program requirements for the period;
- address project specific assessment comments made by Calibre to assist the ICRC in making its final decision;
- address specific issues raised in the draft report on project cost accounting transparency and deliverability; and
- provide an update on program changes relating to the Capital Contribution Code.

### 2.2 Updated capex estimate for 2013–18

Our estimate of actual capex for the 2013–18 regulatory period of \$416 million presented in our June 2017 proposal was based on information as of March 2017 on actual expenditure and budgeted expenditure for the remainder of the period. Our revised estimate of capex for the 2013–18 regulatory period is \$409.0 million, which is two per cent lower than our June 2017 proposal estimate. The annual breakdown is presented in Table 2-1 below. The majority of the difference is driven by minor movements in expenditure cash flows relating to several major projects in the Lower Molonglo Water Quality Control Centre (LMWQCC) upgrade program entering their respective construction phase later than anticipated and therefore rolling into the 2018–19 financial year.

We have revised the roll forward of our RAB for 2013–18 to reflect this update and included this data in the revised revenue model at Appendix 1.

**Table 2-1: Updated 2013–18 actual capex**

<b>\$ million, 2017-18</b>	<b>2013–14</b>	<b>2014–15</b>	<b>2015–16</b>	<b>2016–17</b>	<b>2017–18</b>	<b>Total</b>
Water	36.8	25.9	32.2	35.5	42.0	172.5
Sewerage	19.6	26.1	49.4	62.8	78.6	236.5
<b>Total</b>	<b>56.5</b>	<b>52.0</b>	<b>81.6</b>	<b>98.3</b>	<b>120.6</b>	<b>409.0</b>

Source: Icon Water.

### **2.3 Revised capex forecast for 2018–23**

Our revised price proposal includes a revised net capex forecast of \$389.8 million (\$2017-18), which is four per cent lower than our initial forecast (gross capex is seven per cent lower). Our forecast has been revised based on additional information which has become available as we continue to revise risk assessments and update project level estimates. We have also given consideration to the comments made in Calibre’s review of a sample of projects and in the ICRC’s draft report.

Our initial net capex forecast of \$405.9 million included a number of program reduction measures. In developing the initial capex forecast program, we identified a list of candidate capex projects for the period, to which we applied a rigorous risk-based review process to reduce the program to a level which will minimise costs to customers and result in an acceptable level of risk with respect to service performance, including our ability to meet regulatory obligations. In reducing our proposed program, we applied a range of measures, including the following examples:

- deferral of several reservoir roof renewals following an assessment of program deliverability;
- deferral of regulatory-driven improvements to dams due to uncertainty around regulatory requirements at the time of preparing our capex forecast;
- deferral of major stages of significant works at LMWQCC including the secondary bioreactor upgrade project and secondary clarifier 1-5 renewal project until the following regulatory period; and
- targeted efficiencies in the delivery of water and sewer mains renewals and water meter renewals programs.

Our revised capex forecast reflects these measures, as well as the following changes to update the forecast:

- updated prices from estimates to market (tender) prices where possible;
- changes to accounting determinations, resulting in some projects now being considered opex rather than capex;
- revision of cash flow estimates based on detailed project planning, including extension of proposed cash flows on a number of projects;
- updated estimates based on options assessment and scoping reviews;
- where estimates were a range, we have used the lower end of the range rather than a mid-range estimate; and
- deferral of a number of lower priority projects by one to two years.

Our revised forecast by driver is provided in Table 2-2 below.

Table 2-2: Icon Water's revised capex forecast by driver

\$ million, 2017-18	2018–19	2019–20	2020–21	2021–22	2022–23	Total
Water						
Renewal	22.4	33.1	31.5	23.2	17.6	127.8
Growth	0.6	6.2	0.8	0.0	0.0	7.6
Regulatory	5.2	5.7	4.5	2.1	2.1	19.6
Efficiency	4.0	0.3	0.7	0.4	1.8	7.1
<b>Total capex water</b>	<b>32.2</b>	<b>45.3</b>	<b>37.4</b>	<b>25.7</b>	<b>21.5</b>	<b>162.1</b>
<i>June 2017 proposal for water</i>	<i>37.4</i>	<i>41.6</i>	<i>39.4</i>	<i>33.4</i>	<i>25.0</i>	<i>176.9</i>
Sewerage						
Renewal	40.3	30.3	28.5	19.4	19.4	137.9
Growth	2.2	12.5	15.8	11.0	23.3	64.8
Regulatory	12.5	7.1	3.4	2.8	2.7	28.5
Efficiency	10.0	0.6	1.0	0.4	2.2	14.2
<b>Total gross capex, sewerage</b>	<b>65.0</b>	<b>50.5</b>	<b>48.7</b>	<b>33.6</b>	<b>47.5</b>	<b>245.3</b>
less capital contribution	0.0	0.5	3.0	5.2	9.0	17.7
<b>Total net capex, sewerage</b>	<b>65.0</b>	<b>50.0</b>	<b>45.7</b>	<b>28.4</b>	<b>38.5</b>	<b>227.7</b>
<i>June 2017 net capex proposal, sewerage</i>	<i>66.1</i>	<i>44.9</i>	<i>43.6</i>	<i>40.7</i>	<i>33.8</i>	<i>229.0</i>
<b>Total gross capex</b>	<b>97.2</b>	<b>95.8</b>	<b>86.2</b>	<b>59.3</b>	<b>69.0</b>	<b>407.4</b>
<i>June 2017 gross capex</i>	<i>105.3</i>	<i>93.6</i>	<i>90.7</i>	<i>84.1</i>	<i>64.0</i>	<i>437.6</i>
<b>Total net capex</b>	<b>97.2</b>	<b>95.3</b>	<b>83.2</b>	<b>54.1</b>	<b>60.0</b>	<b>389.8</b>
<i>June 2017 net capex</i>	<i>103.5</i>	<i>86.5</i>	<i>83.0</i>	<i>74.0</i>	<i>58.8</i>	<i>405.9</i>

Source: Icon Water.

**Figure 2-1 Net capex by driver (\$2017–18)**

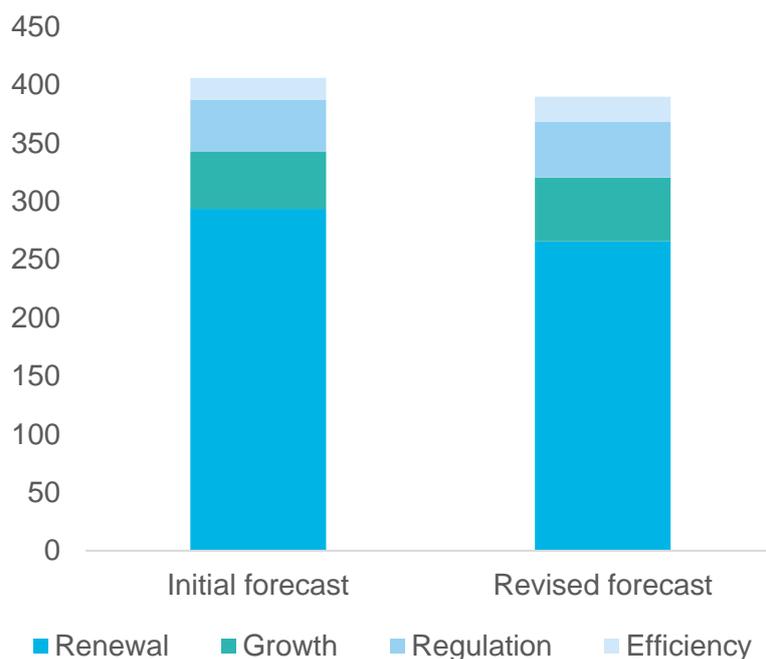


Figure 2-1 shows a comparison of our June 2017 proposal net capex forecast and our revised forecast, which is four per cent lower. The difference is mainly driven by lower renewals capex, offset in part by small increases in our forecast for growth, regulation and efficiency projects.

These variations reflect the additional information which has become available as we continue to revise risk assessments and update project costs, timing and scope accordingly to ensure our program continues to represent prudent and efficient costs.

## **2.4 Response to specific project reductions**

Our revised proposal capex forecast maintains the projects that were the subject of concerns raised by Calibre in its draft report. While we note the concerns of Calibre and the ICRC on these specific projects, we maintain that these are required to meet our service standards and regulatory obligations over the 2018–23 regulatory period. Removal or deferral of these projects as suggested by Calibre would result in unacceptably high risks to the community through likely reductions in service levels. This is likely to include a greater number of customer interruptions to water and sewer services, increased billing inconsistencies, and increased risk of sewer overflows to sensitive water bodies including Lake Burley Griffin, the Molonglo River and Ginninderra Creek.

We note the ICRC's recognition that some of the project-specific uncertainties raised in its investigation might be resolved and that it welcomes further engagement with us following release of the draft report.<sup>1</sup> We are pleased to continue that engagement in this submission by responding to Calibre's concerns and providing additional information for the ICRC's consideration.

We have considered the comments made on specific projects by Calibre and the ICRC and provide specific and detailed responses to these concerns in Appendix 2. These responses provide up-to-date project information and clarification of misunderstandings in the draft report or Calibre's draft report. A summary of Icon Water's response is shown in Table 2-3.

<sup>1</sup> ICRC 2017, *Draft report: Regulated water and sewerage services prices 2018–23*, p.66.

**Table 2-3: Project-specific response summary**

Project	Calibre’s assessment <sup>2</sup>	Icon Water summary response
CX11060 Sewer Mains renewal	‘The proposed budget for the next regulatory period ... is well above what was actually spent to deliver the current level of service performance which is within Icon Water’s target range. Given that Icon Water’s consumers have identified a clear direction to maintain current performance and expenditure on sewer main renewals, we find no reason for an increase in expenditure in this program.’	Our proposed forecast is 9 per cent below what was spent in the 2013 – 2018 period in real terms. We provide clarification of the proposed forecast in real and nominal terms and the efficiency target incorporated in Appendix 2.
CX10066 Belconnen Trunk Sewer Augmentation	‘The timing of when the next stage of the project is required is not clear as the project has been deferred over a number of regulatory periods, since its conception in 2004–05. The current stage of the project is still at ‘Evaluate’ even after being granted funding in three previous regulatory review processes.’	We provide additional information, including recently completed options evaluation, procurement planning reports and updated environmental risk assessment testing in Appendix 2.
CX11176 Water Meter Renewals	‘In relation to efficiency, our assessment is that a minor adjustment [should] be made to reduce the proposed expenditure ... based on an historical expenditure level ... The program combines the four current programs and should rationalise and simplify administration.’	We provide clarification of the proposed forecast in real and nominal terms in Appendix 1. Our proposed forecast included embedded efficiencies to offset growth in the meter fleet (additional 10,000 meters programmed for replacement; a 30 per cent increase in meter numbers)
CX10846 Fyshwick Sewer Pump Station (WSCC Co- funded project)	‘There is a significant degree of uncertainty remaining around this project – in particular, the timing of the development which triggers the need for the project and the outcomes and impacts of the Best for Region strategy (currently being prepared) on this project. We have proposed deferring this project commencement ... to account for this current uncertainty and to allow sufficient time for the implications of the Best for Region strategy on this project to be properly assessed.’	We provide additional information, including updated information on development timing from the ACT Government, clarified timing interaction between the Best-for-Region potential project and updated environmental risk assessment testing in Appendix 2.

<sup>2</sup> ICRC 2017, *Draft report: Regulated water and sewerage services prices 2018–23*, p.62.

Project	Calibre's assessment <sup>2</sup>	Icon Water summary response
CX11065 <sup>3</sup> Water Mains renewal structural program	'Icon Water are currently maintaining a burst rate of 14 bursts/100km/year, which is well under their targets of 20 – 25 bursts/100km/year (Water Distribution, Reticulation and Metering Asset Management Plan) indicating a reduction in spending may be warranted. We have accepted expenditure on hydraulic failure renewals but reduced spend on structural failures in line with clear customer engagement outcomes.'	We provide clarification of our proposed forecast in real and nominal terms, including the adjustment already incorporated in response to customer engagement feedback, as well as replacement rate industry benchmarking in Appendix 2.
CX10950 LMWQCC High voltage Assets	There is no clear reason why Icon Water would be required to maintain or replace an asset that they do not own and can therefore not capitalise expenditure against this asset. No specific operating or maintenance agreement between Icon Water and ActewAGL was provided to indicate otherwise.'	We provide additional information, including correspondence between Icon Water and ActewAGL Distribution (now trading as Evoenergy) confirming Icon Water ownership, and that the asset is not included in Evoenergy's regulatory asset base in Appendix 2.

Source: Icon Water.

## 2.5 Response to program-wide comments raised

### 2.5.1 Catch up and continuing efficiency adjustments

We welcome the ICRC's draft decision not to impose notional catch up and continuing efficiencies on Icon Water's capex program.

As noted above, Icon Water's initial forecast program already included a number of program efficiency assumptions and measures, and our revised forecast includes further efficiencies. Additionally, our opex forecast includes significant efficiency targets, which are being driven by Icon Water's business transformation program (BTP). While this program is expected to deliver capex benefits in the long term (i.e. beyond 2023) through the development of sophisticated data analytics techniques, some efficiencies attributed to the BTP have already been factored into the 2018–23 capex program, such as the water and sewer mains renewals programs.

### 2.5.2 Systematic transparency issues in project cost accounting

The ICRC's draft report notes that Calibre's review identified systematic transparency issues in project cost accounting by Icon Water.<sup>4</sup> Calibre recommended a review of project cost accounting practices by Icon Water and cited issues with project job code splitting into sub-projects, delivery of works against different project codes and not reallocating resources to sub-projects or new codes. Calibre considered a review necessary to improve transparency and traceability of expenditure.

We note Calibre's comments and have already taken steps to improve project accounting traceability and transparency, such as maintaining common, high-level project numbers for large projects. We have observed significant benefit in splitting or merging projects where efficiencies can be obtained and when it increases deliverability and resource capacity. This practice will continue however we are committed

<sup>3</sup> We note that our proposed capex program included two water mains renewal projects: CX11062 – Water main renewals (structural failures) and CX11065 – Water main renewals (hydraulic failures). Although Calibre's (and the ICRC's) report references CX11065, it notes that it accepts expenditure on hydraulic failures renewal but reduced expenditure on structural failures, and so we have provided our response against CX11062.

<sup>4</sup> ICRC 2017, *Draft report: Regulated water and sewerage services prices 2018–23*, p.65.

to continuous improvement and would welcome the opportunity to engage with the ICRC on ways in which to further improve the transparency and traceability of information for regulatory purposes.

### 2.5.3 Deliverability of forward capital program

The ICRC’s draft report notes uncertainty about Icon Water’s capacity to complete the forward capital program within the regulatory period, given both the state of the current planning and historical patterns of proposed and actual capex.<sup>5</sup>

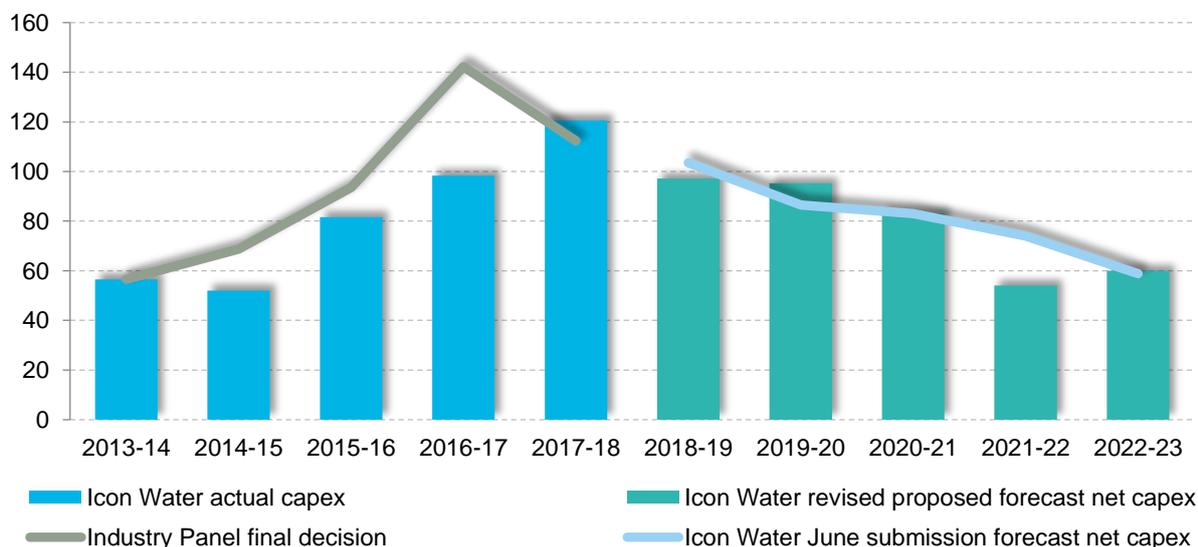
As can be seen in Figure 2-2, annual capex in each year of the 2018–23 regulatory period in our revised forecast is below our actual delivered capex in 2016–17, and significantly below our estimate of capex in 2017–18. In making this comparison, it should be further noted that our forecast for 2018–23 includes \$11.3 million in vehicle lease costs which were previously expensed and should be excluded from any comparison. In addition, the introduction of the Water and Sewerage Capital Contribution Code<sup>6</sup> has increased the forecast projects for which Icon Water is now responsible for partially funding. The net forecast includes approximately \$17 million in class 2 within-precinct infrastructure<sup>7</sup> which, in the absence of the new Code, would have been fully funded and potentially delivered by developers.

During the 2013–18 period Icon Water also delivered class 2 outside-of-precinct infrastructure<sup>8</sup> worth approximately \$8 million. This was not originally included in the resource planning, but was of benefit to Icon Water to deliver due to the scale of the connection and the proximity to the water treatment plant. The Capital Contribution Code has improved the transparency of the total workload and allowed for better resource planning for the next five years.

The past three financial years have seen significant improvement in the capacity to deliver following the organisational changes that followed the reintegration of ActewAGL Water Division into ACTEW Corporation (now Icon Water). The project delivery structure has achieved within 10 per cent of its yearly budget target each year.

As such, we request that the ICRC reconsider its position regarding uncertainty about our capacity to complete the forecast program, as we have a demonstrated capacity to deliver a significantly larger capital program than our revised proposal.

**Figure 2-2 2013–23 net capex**



Source: Icon Water.

<sup>5</sup> ICRC 2017, *Draft report: Regulated water and sewerage services prices 2018–23*, p.66.

<sup>6</sup> ICRC, 2017, *Final determination - Water and Sewerage Capital Contribution Code*, 9 December.

<sup>7</sup> Network augmentations within established suburbs that are subject to shared funding arrangements between Icon Water and developers.

<sup>8</sup> Network augmentations outside of established suburbs that are funded by developers.

## **2.6 Capital Contribution Code update**

Since our June 2017 proposal, the Belconnen trunk sewer augmentation project has progressed, and the preferred technical option has evolved from a surge tank to a new trunk pipeline. This has changed the asset class under the Capital Contributions Code.

This has resulted in a reclassification of the asset, from a class 2 shared asset for the surge tank, which was eligible for inclusion in the approved Capital Contribution Code to be partially funded by Icon Water, to a class 1 headworks asset for the new trunk pipeline, which is ineligible for inclusion in the approved Capital Contribution Code and will therefore be fully funded by Icon Water.

We will submit a revised precinct charge for the 2018–19 period based on this change to the ICRC for approval as part of the agreed annual review process.

## 3 Rate of return

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### 3.1 Introduction

In the draft decision, the ICRC did not accept Icon Water's proposed rate of return for the 2018–23 regulatory period of 6.07 per cent and instead determined a rate of return of 5.93 per cent.<sup>9</sup> In this revised proposal we argue for a rate of return outcome similar to the ICRC's draft decision, but derived according to a different methodology. Icon Water has arrived at its proposed rate by implementing a number of improvements to the Industry Panel methodology, in line with the terms of reference for the 2018–23 price review.

The ICRC diverged from the Industry Panel's methodology for estimating the market risk premium (MRP) in the rate of return. This change reduced Icon Water's estimate of the weighted average cost of capital (WACC) from 6.07 per cent to 5.93 per cent, with the effect of reducing the allowed revenue requirement by \$26 million over five years (in 2018–19 dollars).

As discussed in Icon Water's June 2017 proposal, deviations from the Industry Panel approach could be justified in a number of areas. However, Icon Water chose to adopt the Industry Panel methodology in full for the following reasons:

- this approach is consistent with the terms of reference;
- the application of this methodology results in estimates for each rate of return parameter that are within the range of estimates used by other Australian regulators; and
- the resulting rate of return results in fair and affordable pricing for water and sewerage services.<sup>10</sup>

In this revised proposal, it is Icon Water's view that consideration should be given to all aspects of the rate of return where improvements can be made to the Industry Panel methodology. Specifically:

- the market risk premium should be a forward looking estimate commensurate with prevailing market conditions informed by a range of evidence including historic excess returns<sup>11</sup>, dividend growth models (DGMs)<sup>12</sup>, recent regulatory decisions, survey evidence<sup>13</sup> and cross-check evidence including valuation estimates and estimates derived from the Wright approach<sup>14</sup>;
- the return on debt should be estimated using the ten-year trailing average approach and implemented using one or more third party data series appropriately annualised; and
- averaging periods for the risk-free rate and the return on debt should be extended from the 40-day period adopted by the Industry Panel to a period of 12 months<sup>15</sup> to remove the lottery-style selection of parameter values inherent in the Industry Panel approach.

Icon Water also notes that it is common regulatory practice to nominate the final averaging periods in its draft decision on a confidential basis to ensure the estimate is unbiased and to allow service

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<sup>9</sup> All references to the rate of return in this draft response are expressed in nominal vanilla terms.

<sup>10</sup> Icon Water 2017, *2018–23 Water and Sewerage Price Proposal, 30 June 2017: Attachment 9*, p. 1.

<sup>11</sup> Historical excess returns estimate the realised return that stocks have earned in excess of the 10 year government bond rate.

<sup>12</sup> DGMs examine the forecast future dividends of businesses and derive the return on equity that makes these dividends consistent with the market valuation of the equity of those businesses.

<sup>13</sup> Survey estimates explore investor expectations about the MRP by directly asking them what their expectations are.

<sup>14</sup> The Wright method uses the long run average of a series of annual real market return on equity observations, indexed for inflation to estimate the market risk premium.

<sup>15</sup> Icon Water proposed averaging periods for the 2018–23 regulatory period are provided in confidential Appendix 3.

providers to manage financing arrangements without disclosing potential timing, which could put them at a disadvantage.<sup>16</sup>

The remainder of this section discusses each of the improvements that Icon Water believes should be made to the Industry Panel methodology in the ICRC's final decision. As at 31 December 2017, this approach results in a WACC of 5.93 per cent, which is by circumstance the same value as determined by the ICRC in its draft decision. Icon Water's proposed WACC parameters are set out in Table 3-1 below and compared with the values from Icon Water's regulatory proposal and the ICRC's draft decision.

**Table 3-1: Rate of return parameters**

WACC Parameter	Icon Water June 2017 proposal	ICRC Draft Decision	Icon Water revised proposal
Risk free rate	2.78%	2.78%	2.64%
Debt margin	2.08%	2.08%	NA
Debt raising cost	0.125%	0.125%	0.125%
Equity beta	0.7	0.7	0.7
Market risk premium	7.03%	6.50%	7.00%
Gearing	60%	60%	60%
Return on debt	4.99%	4.99%	4.86%
Return on equity	7.71%	7.71%	7.54%
<b>Nominal vanilla WACC</b>	<b>6.07%</b>	<b>5.93%</b>	<b>5.93%</b>

Source: Icon Water analysis, ICRC Draft Decision.

### 3.2 Market risk premium

In its draft decision, the ICRC relies heavily on the Australian Energy Regulator (AER) and Queensland Competition Authority (QCA) approach, noting that the QCA uses a similar approach to the AER<sup>17</sup>. However, the ICRC appears to simply adopt the value of the MRP used by the AER rather than implement the AER's methodology as set out in its 2013 Rate of Return Guideline (2013 Guideline). Icon Water notes that at the time the AER's 2013 Guideline was published, the methodology set out in the 2013 Guideline resulted in an MRP estimate of 6.5 per cent. However, over four years have now passed since the 2013 Guideline was published and relevant evidence and empirical estimates have evolved. Despite this, the AER has not changed its estimate of the MRP, using 6.5 per cent in every decision since the 2013 Guideline was published. The AER has been criticised for this approach.<sup>18</sup>

<sup>16</sup> See for example AER 2018, *Attachment 3 – Rate of return, ElectraNet transmission draft determination*, p. 3-61 and IPART 2017, *Review of our WACC method, Draft Report*, p. 19-20.

<sup>17</sup> ICRC 2017, *Draft report: Regulated water and sewerage prices, 2018–23*, p. 98-99.

<sup>18</sup> See for example, Queensland Treasury Corporation 2017, *Response to Rate of Return Guideline Review Issues Paper*, p. 3-5, ENA 2017, *Response to AER Issues Paper on Rate of Return Guidelines*, p. 22-30, AusNet Services 2016, *Gas Access Arrangement Review 2018–2022, Access Arrangement Information*, p. 194-202, APA Victorian Transmission System 2017, *Access Arrangement Submission*, p. 144-163, Transgrid 2017, *Revenue Proposal 2018/19-2022/23*, p. 171-181.

The AER's approach of setting a constant MRP allowance of 6.5 per cent produces implausible outcomes in some market conditions, including current market conditions. Given that the AER determines the return on equity by adding its constant MRP estimate to the contemporaneous government bond yield, the consequence is that the allowed return on equity falls one-for-one with falls in the government bond yield. Since government bond yields have fallen sharply since the 2013 Guidelines (the three lowest government bond yields in history occurred in the three years since the Guideline was produced), the AER's allowed return on equity has also fallen – by more than 13 per cent since 2013. This occurs in spite of evidence, including the AER's own DGM estimates, that the required return on equity has remained remarkably stable since the Guideline.

Implementation of the AER's 2013 Guideline approach using updated evidence results in a MRP of least seven per cent. This is demonstrated in an analysis undertaken by Frontier Economics for Evoenergy and is summarised in Box 1 below.<sup>19</sup>

**Box 1: Frontier Economics implementation of the AER's 2013 Guideline approach for the MRP**

The AER's 2013 Guideline approach involves establishing a range derived by combining historical excess returns evidence and dividend growth model (DGM) evidence, and then choosing a point estimate that 'lies between the historical average range and the range of estimates produced by the DGM'. The AER's Guideline material states that it would also give some consideration to survey evidence and limited consideration to other evidence (including conditioning variables and other regulators' estimates of the MRP). The worked example in the 2013 Guideline material settled on a point estimate very close to the mid-point between the historical excess returns range and the DGM range.

The current evidence and empirical estimates used to implement the 2013 Guideline methodology are as follows:

- The AER's excess return estimates have increased somewhat to support a range of 6.0 per cent to 6.5 per cent.
- DGM estimates have increased substantially to support a range of 7.14 per cent to 8.18 per cent.
- Recent decisions by other Australian regulators have been almost exclusively above 7.0 per cent. The New South Wales Independent Pricing and Regulatory Tribunal's (IPART) August 2017 Biannual WACC update determined a MRP estimate of 7.7 per cent. The Western Australia (WA) Economic Regulation Authority's (ERA), October 2017 final decision for WA rail networks determined a MRP estimate of 7.2 per cent. The QCA's November 2017 Draft Decision on bulk water charges for Seqwater concluded that the best empirical estimate of the MRP at the present time is 7.0 per cent.
- The most recently available Fernandez survey, on which the AER placed primary regard in its 2013 Guideline, supports a MRP estimate well in excess of 7.0 per cent.
- Cross-checked evidence in the form of recent reports from valuation experts and estimates derived from the Wright approach provide strong directional evidence that the MRP in prevailing market conditions is materially higher than 7.0 per cent.

Therefore, using the AER's 2013 Guideline methodology and updated evidence and empirical estimates, the MRP in prevailing market conditions is at least seven per cent.

Source: Frontier Economics 2017, *The market risk premium, a report prepared for ActewAGL Distribution*.

Icon Water also notes that in addition to relying heavily on the AER approach, the ICRC also states that it gives more weight to the QCA approach. However, the recent regulatory developments reported by

<sup>19</sup> For full details of the Frontier Economics analysis see Appendix 8.4 of Evoenergy's electricity regulatory proposal for the 2019–24 regulatory period.

the ICRC in its draft decision excludes the QCA's most recent decision for Seqwater's bulk water pricing where the QCA states that it has adopted its standard approach for the cost of equity.<sup>20</sup> In relation to the MRP, the QCA states that a MRP of seven per cent is appropriate at this time:

We updated our MRP estimation methods for recent data, and assessed each resulting estimate on the basis of the relative strengths and weaknesses of the underlying method. In coming to a point estimate, we took these considerations into account and exercised our judgement. Our conclusion is that the best empirical estimate of the MRP is 7.0 per cent at this time.<sup>21</sup>

The ICRC's draft decision also does not consider the most recent Australian WACC regulatory review undertaken by IPART.<sup>22</sup> IPART's methodology has been recognised as stable, predictable and replicable not only by regulated firms, but also by Moody's<sup>23</sup> — a global credit rating agency — which has highlighted the role that IPART's increasingly predictable and transparent approach to estimating the WACC has played in positively influencing the credit rating for Sydney Water.<sup>24</sup>

With respect to estimating the MRP, IPART estimates both a historical and current MRP and ensures consistency across all WACC parameters. That is, IPART matches its historical MRP with a historical risk-free rate and its current MRP with a current risk-free rate. For example, in its August 2017 WACC update, IPART matched its historical MRP estimate of 6.0 per cent with a historical risk free rate (10 year average) of 4.1 per cent.<sup>25</sup> Similarly, it matched its current MRP estimate of 9.5 per cent with a current estimate of the risk-free rate of 2.6 per cent.

If the ICRC is to adopt a current estimate of the risk-free rate, as it did in the draft decision, then it is Icon Water's view that it should also use a current estimate of the MRP. As discussed above, this can be achieved by considering a range of evidence, in addition to historical excess returns, that better reflects the current MRP. Based on the evidence provided in Icon Water's June 2017 regulatory proposal (including the expert report from Frontier Economics) and in this response, it is Icon Water's view that the current MRP is at least seven per cent.

### 3.3 Return on debt

This section explains why Icon Water proposes the use of a ten-year trailing average approach to estimating the return on debt and sets out the appropriate data sources and adjustments that should be made in implementing this approach.

#### 3.3.1 Ten-year trailing average approach

As discussed in Icon Water's June 2017 proposal, there are a number of different methodologies used by Australian regulators for estimating the return on debt<sup>26</sup>. However, the Industry Panel's 'on-the-day'

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<sup>20</sup> QCA 2017, *Seqwater Bulk Water Price Review 2018–21, Draft report, November*, p. 51.

<sup>21</sup> QCA 2017, *Seqwater Bulk Water Price Review 2018–21, Draft report, November*, p. 54.

<sup>22</sup> IPART 2017, *Review of our WACC method, Draft Report, October*.

<sup>23</sup> Moody's Investors Service (Moody's), is the bond credit rating business of Moody's Corporation, representing the company's traditional line of business and its historical name.

<sup>24</sup> Moody's Investor Service 2016, *Rating Action: Moody's changes outlook for Sydney Water Corp's Aa3 rating to Stable, October*.

<sup>25</sup> <https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/WACC/Market-Update/Spreadsheet-WACC-Model-August-2017>.

<sup>26</sup> Icon Water, *2018–23 Water and Sewerage Price Proposal: Attachment 9 Rate of return and forecast inflation*, p. 15.

approach, which reflects the prevailing cost of debt at the commencement of the regulatory period, is no longer used on its own by any other Australian economic regulator.

Given that the ICRC has departed from the Industry Panel approach for the MRP, it is Icon Water's view, that it should also consider a more appropriate method for estimating the return on debt.

The overarching objective of the ICRC, when making a price direction in a regulated industry, is to promote the efficient investment in, and efficient operation and use of regulated services for the long term interests of consumers in relation to the price, quality, safety, reliability and security of the service.

In Icon Water's view, this requires the methodology for estimating the return on debt to meet the following criteria:

- replicable – it must be able to be implemented by the benchmark efficient entity;
- low transaction costs – if there are two equally implementable debt raising strategies, the strategy that involves the lowest transaction costs should be preferred;
- minimises estimation error – a business should be able to be confident that, if it manages its debt in line with the benchmark strategy, its cost of debt will move with the ICRC's estimate of costs;
- minimises price volatility for customers – customers are not well placed to hedge against the resulting volatility in network prices and especially do not want to be facing higher prices when they are facing broader budgetary pressures, for example, due to a financial crisis; and
- reflect standard practice – the benchmark debt management strategy should reflect the standard practice of businesses operating in similar environments to network energy businesses.

These criteria ensure that the costs of funding the network are minimised and that the regulated business is not given the incentive to over or under invest in the network. If the criteria are met then the cost of debt associated with any capital expenditure will, over the life of the asset, be expected to reflect efficient costs associated with standard business practice. As such, the resulting return on debt will promote efficient investment, which is in the long-term interests of consumers.

For the following reasons, it is Icon Water's view, that a ten-year trailing average cost of debt is the benchmark debt management strategy that best satisfies the above criteria, while the 'on-the-day' approach does not.

- A ten-year trailing average approach largely mimics the debt management strategy employed by infrastructure businesses around the world. Almost all businesses, including regulated infrastructure businesses, tend to have staggered debt profiles in which their debt portfolios consist of a number of debts that mature at different times. This is in contrast to a strategy in which the firm structures all of its debt in a single bond or several bonds falling due at the same time (i.e. 'on-the-day' approach).
- The potential for estimation error and volatility is significant if the benchmark cost of debt is reset at a single point in time. For customers subject to paying 'on-the-day' costs, this volatility around 2008–09 could not have been more poorly correlated with their own operating environments or personal circumstances. Business customers faced higher network prices at a time when their own debt costs were escalating and when uncertainty about future revenues was high. Many households were facing higher network prices during a time of heightened uncertainty about their own economic prospects. These outcomes are inevitable if a benchmark debt management strategy is based on the spot cost of debt as opposed to long-term averages.
- There is no available financing strategy that allows a regulated business to replicate the return on debt estimated by the 'on-the-day' approach. For most regulated businesses in Australia, the benchmark debt term (usually 10 years) is set based on the efficient term of debt used by

a regulated business to fund long term assets. Given regulatory periods are typically set for five-year periods, the efficient benchmark term is longer than the length of the regulatory cycle. The 'on-the-day' approach therefore exposes the regulated business to interest rate risk as it is assumed to issue ten-year debt at interest rates that reset every five years.

- The 'on-the-day' approach exposes the business to significant refinancing risk as it assumes the regulated business issues 100 per cent of its debt at the beginning of each regulatory cycle. If a business did attempt to replicate this strategy, it would be exposed to significant refinancing risk since it requires businesses to issue a very large amount of debt in a short period. The trailing average approach produces less refinancing risk since the regulated business is assumed to stagger its debt evenly over the entire debt term. With an assumed ten-year debt term, the business issues only 10 per cent of its debt in any one year, thereby lessening the possibility that it will have to raise large amounts of debt in financially difficult times.
- The 'on-the-day' approach resets prices at the beginning of every regulatory period which can result in substantial changes to the return on debt and significant price volatility across regulatory periods. This is evident in comparing the 'on-the-day' return on debt estimated by the Industry Panel of 6.48 per cent with the current 'on-the-day' rate that is below 5.0 per cent. In contrast, under the trailing average approach, a change in the cost of debt in any one year will only have one-tenth effect on the return on debt, which will be applied to each of the next ten years. The trailing average approach therefore smooths interest rate volatility over ten years such that the annual return on debt will typically be less volatile compared with the annual cost of debt series.

For the above reasons, Icon Water proposes that the ICRC adopts a ten-year trailing average approach to the return on debt.

### **3.3.2 Implementing the ten-year trailing average approach**

For the purposes of implementing the ten-year trailing average approach, Icon Water proposes adoption of the AER's methodology. This involves taking the simple average of:

- the RBA broad-BBB rated 10 year curve, extrapolated to an effective term of ten years; and
- the Bloomberg Valuation Service (BVAL) broad-BBB rate curve (10 year estimate).

A step-by-step guide to calculating the adjusted RBA and Bloomberg curves is provided in recent AER final determinations<sup>27</sup>. Given that Icon Water proposes an averaging period of 12 months for the return on debt, there is no need to interpolate the RBA series (which is published once a month) to arrive at daily estimates. Importantly, the AER's steps include converting the ten year semi-annual yields to effective annual rates. This conversion is also undertaken by the ERA and QCA, and has been proposed by IPART in its WACC Review Method.<sup>28</sup>

Icon Water proposes to follow the AER methodology for updating the return on debt annually at the time of annual price recalibrations. For the purposes of Icon Water's response to the draft decision, Icon Water has adopted the AER's proposed transition implementation of the ten year trailing average approach, which involves moving gradually from the 'on-the-day' approach to the full ten year trailing average over a period of ten years.

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<sup>27</sup> See for example AER 2015, *Attachment 3 – Rate of return, ActewAGL final decision 2015–19*, p. 3-548.

<sup>28</sup> IPART 2017, *Review of our WACC method, Draft Report*, p. 38-40.

### **3.4 Averaging periods**

The Industry Panel adopted an averaging period of 40 days for the risk-free rate, MRP and debt margin. The difficulty with this approach is that there is significant volatility in these estimates over short periods. For example, in the 12 months to December 2017 the risk-free rate range was between 2.63 per cent and 2.98 per cent, a difference of 63 basis points. This translates to a difference of \$45 million in Icon Water's total revenue requirement due to nothing other than a difference in the choice of averaging period for the risk-free rate.

To avoid this 'lottery-style' approach to estimating the risk-free rate and return on debt, Icon Water proposes to adopt a longer averaging period of 12 months for both parameters. Icon Water's proposed averaging periods for the 2018–23 regulatory period are provided in confidential Appendix 3.

## 4 Form of control

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### 4.1 Introduction

This chapter discusses two matters related to the form of control that will be applied by the ICRC over the 2018–23 regulatory period to adjust water and sewerage prices. The first concerns prudent discounts and the second relates to the Best-for-Region (BFR) sewage treatment project

### 4.2 Prudent discounts

One of the challenges for this price review is the threat of uneconomic bypass – that is, customers being driven to costly alternative water sources as a result of Icon Water’s high Tier 2 usage price. The ICRC has acknowledged this issue in the pricing principles set out in its Issues Paper and its Tariff Structure Review Final Report, which also noted:

...of potentially more importance, a high usage price is likely to create incentives for uneconomic bypass, where large users purchase water from an alternative source that is less costly to them but of higher cost than the true cost to the community.

...it would be necessary to have some flexibility in total charges for high water users to ensure they do not bypass the supply of water services provided by Icon Water.<sup>29</sup>

The immediacy of the problem has been highlighted by the recent decision by the Department of Parliamentary Services to incur significant infrastructure costs in order to bypass the primary water network via its Lake Water Supply Project.<sup>30</sup>

Uneconomic bypass results in a worse outcome for all customers than a situation in which Icon Water is able to offer a prudent discount to the customer to keep them on the lower-cost primary network.<sup>31</sup>

Our June 2017 proposal addressed this problem in two ways — first by lowering the Tier 2 usage price to \$4.95 per kilolitre and second by establishing arrangements for the ICRC to approve negotiated pricing agreements with individual customers as part of the annual price reset process. Icon Water would recover revenue forgone due to any prudent discounts through the annual adjustments for revenue variation included in that proposal.

Our revised proposal no longer includes annual adjustments for revenue variation in line with the ICRC’s preferred form of control, and it is therefore necessary to propose some other means of recovering revenue forgone due to prudent discounts offered in any credible cases of potential uneconomic bypass that might arise during 2018–23. Our revised proposal is that a pass-through provision be included in the price direction to provide a mechanism for the ICRC to:

- consider, at annual price resets, whether any negotiated price agreement proposed by Icon Water represents a legitimate prudent discount intended to avoid a credible uneconomic bypass alternative; and
- make an adjustment to tariffs for the recovery of forecast revenue forgone due to any approved negotiated price agreement.

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<sup>29</sup> ICRC 2017, *Tariff Review Final Report*, p. xvii, 42.

<sup>30</sup> Canberra Times, 12 January 2018, *Parliament House to pump Lake Burley Griffin for water supply in \$5m project*.

<sup>31</sup> Icon Water 2017, *2018–23 Water and Sewerage Price Proposal: June 2017*, Attachment 2 p. 18-21, Attachment 12 p. 11.

This provision is necessary to ensure there is no financial disincentive to Icon Water responding in known cases of potential uneconomic bypass, so Icon Water has every opportunity to earn its allowed revenue.

The commentary in the ICRC's draft report concluded that further action to prevent uneconomic bypass was not required, noting:

In relation to Icon Water's proposal for separate pricing arrangements to prevent uneconomic bypass, the Commission notes that its price direction sets a maximum price and a revenue cap. This arrangement gives Icon Water substantial latitude to tailor prices and negotiate accordingly. Icon Water's submission did not demonstrate an inability to negotiate prices that would prevent both uneconomic bypass and full cost recovery.<sup>32</sup>

This statement does not accord the ICRC's proposed price direction. The proposed price direction sets maximum prices, but does not set a revenue cap. It is not possible to prevent uneconomic bypass while maintaining ex ante expectations of achieving full cost recovery under the proposed price direction. This follows from the fact that full cost recovery is achieved when all customers are charged the maximum prices. When a prudent discount is offered to one customer, the price direction does not permit prices to increase for any other customer and, as a result, forecast revenue falls short of the forecast revenue requirement. Only in the unlikely circumstance in which water sales variance exceeds  $\pm 6$  per cent over the regulatory period would the draft price direction allow recovery of revenue forgone due to a prudent discount. Icon Water requests further consideration from the ICRC to ensure there is a regulatory mechanism to respond to the threat of uneconomic bypass.

The ICRC requested that Icon Water 'establish the volume at risk of uneconomic bypass, the potential impact on general prices, and how these risks differ substantially from the standard demand risk embodied within medium-term forecasting.' The volume at risk of uneconomic bypass is unknown. Abstraction from Lake Burley Griffin is not the only potential means of bypass. There may be potential for stormwater harvesting and recycling at other locations in Canberra. Around seven GL of water are used by just 200 installations each year and many of these installations serve the same organisation (for example, National Capital Authority and Australian National University each have several installations). These types of customer use substantial amounts of water and, until gradual tariff reform has reduced the usage price for these customers, they will have a strong incentive to consider bypass options. The approximate impact on prices from bypass of 100 megalitres (ML) per year is shown in the illustrative example in Appendix 4.

The risks of uneconomic bypass differ from the standard demand risk embodied within medium-term forecasting in two very important respects. They are asymmetric and they are permanent. Bypass can only reduce demand, not increase demand. Failure to account for bypass does not merely increase uncertainty in medium-term forecasting, it biases the forecast. Further, it does not result in a temporary fluctuation in demand, such as those arising from changes in weather, but a permanent shift in demand for water from the primary network that will have an ongoing impact on consumer welfare.

To illustrate how the proposed price direction could discourage Icon Water from offering prudent discounts, consider a situation in which a large customer is considering a capital investment, such as a water treatment plant, in year 2 of the regulatory period and there is a two-year lag between the decision to construct and the plant being operational. As shown in Appendix 4, although preventing bypass by offering a prudent discount would be in the long-term interest of consumers, it would be to Icon Water's disadvantage (see the 'profit' row in each scenario) in the absence of a pass-through provision.

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<sup>32</sup> ICRC 2017, Draft Report: Regulated water and sewerage services prices, 2018–23, p. xix.

A pass-through provision would provide an incentive to Icon Water to seek to prevent bypass, thus aligning Icon Water incentives with consumer interests.

The administrative costs resulting from the provision are unlikely to be significant, since only a very limited number of customers would be in a position to meet the criteria for a credible bypass threat in any given year.

Prudent discount provisions have been included in other regulatory frameworks designed to promote the long-term interests of consumers, including the National Electricity Rules (Rule 6A.26) and the National Gas Rules (Rule 96).

### 4.3 Best-for-Region sewage treatment project

Icon Water's June 2017 proposal included a contingent project mechanism for the Best-for-Region (BFR) sewage treatment plant project. Icon Water is examining options for addressing approaching capacity constraints in the eastern part of Canberra's sewerage network. It may be that the lowest-cost option for ACT consumers would be to decommission the ageing Fyshwick treatment plant and develop a larger treatment plant jointly with Queanbeyan-Palerang Regional Council (QPRC) at Oaks Estate that would service both Queanbeyan and eastern ACT. QPRC requires a new plant during the 2018–23 regulatory period due to infrastructure condition and capacity constraints at its existing plant. The opportunity to develop a joint plant may be lost if Icon Water defers its decision. However, the options analysis and cost estimation are at too early a stage to allow Icon Water to include this project in its capex forecasts for the 2018–23 period.

A contingent project mechanism would allow Icon Water to make a submission to the ICRC during the 2018–23 regulatory period, which would include:

- the business case for the project, including the forecast opex and capex requirements; and
- documentation and expert advice providing evidence of the prudence and efficiency of the forecast opex and capex.

On receipt of the submission, Icon Water proposes that the ICRC would assess the prudence and efficiency of the proposed project costs (but not adjust prices in the 2018–23 period).

This mechanism would allow Icon Water to pursue a better outcome for its customers should benefit-cost analysis indicate there is such an opportunity as estimates firm up. Such an approach provides assurance to the ICRC that Icon Water is undertaking careful and appropriate planning to address potential ways of capturing efficiencies that are identified at the start of a regulatory review, and being transparent with ICRC about the likely costs and benefits.

The ICRC decided against including a contingent project mechanism in its proposed price direction. It stated:

In the Commission's view, the Best for Region project does not originate from legislation or regulatory or administrative processes; nor does there appear to be a ministerial direction to declare the costs as a pass-through fee. Should ministerial directions or legislative provisions be implemented to develop a Best for Region project, this event will fall under the category of a regulatory obligations event. Regulatory obligations events are listed as pass-through events in the current regulatory period and in the draft decision for the forward regulatory period.<sup>33</sup>

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<sup>33</sup> ICRC 2017, *Draft Report: Regulated water and sewerage services prices, 2018–23*, p. 18.

In this revised proposal, Icon Water agrees that the BFR project should not trigger a cost pass-through under the provisions included in the current price direction. However, the question that needs to be addressed is whether it would be in consumers' interests for the 2018–23 price direction to include a new, specific contingent project pass-through provision for the BFR project.

The ICRC stated:

The Commission encourages Icon Water to develop a Best for Region sewage treatment solution at lowest cost. The decision to develop and implement this contingent project is within Icon Water's discretion.<sup>34</sup>

In practice, the decision whether to invest in a joint project of this magnitude is influenced by expectations and uncertainty regarding the likely regulatory treatment of the investment. An ex ante assessment of the prudence of the project is a practical means by which the ICRC can reduce uncertainty and encourage Icon Water to adopt the lowest-cost solution for ACT consumers.

We understand that the ICRC does not provide an ex ante assessment of each and every capex project that arises over the course of a regulatory period. We believe that an exception is warranted in this instance for two reasons. First, a project of this magnitude in the sewerage business arises only once every few decades. Second, the project is joint and cross-border in nature, and the regulatory treatment of project costs is more uncertain as a result.

Icon Water's revised proposal maintains that a contingent project mechanism for the BFR project should be included in the price direction.

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<sup>34</sup> *Ibid.*

## 5 Tariff structure

### 5.1 Introduction

The ICRC's draft decision on tariff structure is similar to Icon Water's June 2017 proposal, as shown in Table 5-1. Icon Water welcomes and supports the draft decision to rebalance the fixed and usage components of the water tariff and to retain the existing sewerage tariff structure. The lengthy and comprehensive customer engagement and consultation undertaken by Icon Water and the ICRC over the past two years has allowed agreement to be reached on most aspects of tariff structure reform. This process was described in detail in Attachment 12 of our June 2017 proposal.

**Table 5-1: Comparison of tariff structures**

(\$nominal)	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Water</b>						
Supply charge (\$/year)						
Icon Water Proposal	<b>\$104.21</b>	\$120.00	\$140.00	\$160.00	\$180.00	\$200.00
Draft Decision		\$120.00	\$140.00	\$160.00	\$180.00	\$200.00
Tier 1 (\$/kL)						
Icon Water Proposal	<b>\$2.68</b>	\$2.73	\$2.76	\$2.79	\$2.81	\$2.84
Draft Decision		\$2.55	\$2.57	\$2.60	\$2.62	\$2.65
Tier 2 (\$/kL)						
Icon Water Proposal	<b>\$5.38</b>	\$4.95	\$4.95	\$4.95	\$4.95	\$4.95
Draft Decision		\$4.95	\$5.00	\$5.04	\$5.09	\$5.14
<b>Sewerage</b>						
Service charge (\$/year)						
Icon Water Proposal	<b>\$537.34</b>	\$541.84	\$546.39	\$550.97	\$555.59	\$560.24
Draft Decision		\$536.51	\$535.68	\$534.85	\$534.02	\$533.20
Fixtures (\$/year)						
Icon Water Proposal	<b>\$525.51</b>	\$529.92	\$534.36	\$538.84	\$543.35	\$547.91
Draft Decision		\$524.70	\$523.88	\$523.07	\$522.26	\$521.46

Source: Icon Water analysis, ICRC Draft Decision.

While we accept that the tariff structure in the draft decision performs well against the pricing principles and preferred tariff features set out in the ICRC's 2016 Tariff Review final report,<sup>35</sup> our view is that two minor amendments would lead to a superior outcome for the community. These amendments relate to:

- negotiated pricing agreements in cases of potential uneconomic bypass; and
- the gradual reform in structure over the regulatory period.

Each of these matters is discussed below.

## 5.2 Uneconomic bypass

Our most significant concern is that the draft decision has not addressed the problem of uneconomic bypass. While reducing the Tier 2 usage price to \$4.95 per kilolitre will help to prevent bypass options costing more than \$5 per kilolitre, the price remains well above estimates of social marginal cost (including the ICRC's estimate of \$1.74 per kL) and the threat of uneconomic bypass therefore remains. As discussed in section 4.2, without a mechanism for recovering revenue forgone due to any prudent discounts, it may not be in Icon Water's financial interests to prevent uneconomic bypass. Our primary response to this issue is set out in section 4.2, but we provide further comments here on the interaction of this issue with tariff structure reform.

Following the ICRC's public hearing on 7 February 2018, Icon Water understands that the ICRC's preferred means of addressing this issue would be for Icon Water to propose a separate non-residential tariff. The ICRC's draft decision also indicated a desire to consider a separate non-residential tariff:

[The ICRC] further suggests that Icon Water give consideration to introducing a differential fixed supply charge component set at a higher value for non-residential consumers while providing a long transition period for these customers.<sup>36</sup>

However, the proposed price direction maintained the current arrangement of applying the same water tariff to residential and non-residential customers and did not set out any alternatives for consultation.

In the lead up to its June 2017 proposal, Icon Water examined several options for addressing the problems caused by the misalignment between the current tariff structure and marginal costs. The most promising options were raised with customers as part of our engagement program. Varying non-residential fixed charges within a plausible range did not have a significant impact on residential tariffs and did not address the primary issue of the marginal price. All of the options that involved a material difference between residential and non-residential tariffs resulted in material adverse bill impacts for a large group of customers – either residential customers or smaller non-residential customers. Another complication arises because many mixed-use developments are serviced by a single meter.

One way of managing these impacts is to start reform at the large-customer end of the market. We considered an opt-in tariff involving a higher fixed charge and a lower usage charge. It would result in significant bill reductions for a few very large customers, funded by the rest of the customer base. Our ultimate proposal – negotiated pricing agreements in cases of credible bypass opportunity – was preferred because it would focus reform where the community benefits would be greatest and limit bill impacts for residential and small non-residential customers. It is a very practicable way of dealing with the threat of uneconomic bypass without imposing material bill impacts on large segments of the customer base.

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<sup>35</sup> ICRC (2017), *Final report: Tariff Structure Review 2016–17 - Regulated water and sewerage services*, p. 1-90.

<sup>36</sup> ICRC 2017, *Draft Report: Regulated water and sewerage services prices, 2018–23*, p. 24.

In other words, the introduction of a mechanism for negotiated pricing agreements in specific circumstances is the most suitable first step in a gradual reform process for non-residential tariffs.

Icon Water looks forward to discussing with the ICRC the non-residential tariff options and corresponding bill impacts that were analysed as part of the development of our pricing proposal, including those presented to the Community Consultative Forum on 26 October 2016 and 2 February 2017.<sup>37</sup> However, it would not be in consumers' interests for Icon Water to propose such a change in the tariff structure for the purposes of the ICRC's final decision, without having provided the opportunity for further in-depth consultation.

Over the course of the 2018–23 regulatory period, we intend to engage the community in further discussion of these and other options and to work through the economic, environmental and social merits of any proposal and potential barriers to implementation, such as the current practice of installing a single meter for mixed-use developments.

### **5.3 Measured and gradual reform**

In June 2017 Icon Water proposed a measured and gradual reform of the water tariff structure, with increases in the supply charge by \$20 per year, a decrease in the Tier 2 usage price to \$4.95 per kL in 2018–19, and further real reductions in the Tier 2 usage price over time by keeping it constant in nominal terms at \$4.95 per kL. The draft decision adopted the first two components of this approach, but not the third. Instead, the proposed price direction involved increases in the Tier 2 usage price in the out years by CPI minus 1.52 per cent – the same rate of increase applied to the Tier 1 usage price – and so makes less progress towards economic efficiency than does Icon Water's proposal.

Icon Water maintains a preference for a decreasing ratio of Tier 2 to Tier 1 usage prices over the course of the regulatory period, as it would sustain gradual reform that recognises and addresses the fact that gains in economic efficiency made by reducing the Tier 2 usage price are greater than the gains made by reducing the Tier 1 price. It would also send a signal to any large customers considering bypass about the trajectory of the Tier 2 price beyond 2023.

We note the ICRC's concern that holding the Tier 2 price constant in nominal terms would result in smaller customers bearing a disproportionate share of 'the expenditure risks associated with changes in the CPI and non-controllable payments.'<sup>38</sup> In response, we have revised our pricing proposal so that the Tier 2 usage price changes by CPI minus 2.5 per cent, rather than being held constant in nominal terms.

Our proposed price path is set out in section 6.4.

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<sup>37</sup> Available at: <http://www.iconwater.com.au/Community-and-Education/Talking-Icon-Water/Community%20Consultative%20Forum/Community%20Consultative%20Forum%20minutes%20and%20presentations.aspx>.

<sup>38</sup> ICRC 2017, *Draft Report: Regulated water and sewerage services prices, 2018–23*, p. 24.

## 6 Revised price proposal and customer impacts

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### 6.1 Introduction

This chapter sets out our revised price proposal which reflects:

- the ICRC's draft decision operating expenditure allowance;
- the revised capex program as set out in Chapter 2, seven per cent lower than our June 2017 proposal, that will allow us to continue to deliver safe and reliable water and sewerage services;
- a rate of return on capital outcome similar by circumstance to the draft decision as discussed in Chapter 3;
- the same tariff structure proposal that we presented in June 2017 that delivers measured and gradual water tariff reform as noted in Chapter 5; and
- the ICRC's draft decision on water sales and customer number forecasts.

This chapter also presents the impacts of our revised proposal on our customers' combined water and sewerage bills.

### 6.2 Forecast net revenue requirement

Icon Water's revised net revenue requirement (NRR), which is the amount we propose to recover from our customers over the 2018–23 regulatory period, is detailed in Table 6-1 (more detail is provided in Appendix 1). This reflects a reduction of 2.2 per cent compared to our June 2017 proposal.

**Table 6-1: Forecast net revenue requirement (\$ million, nominal)**

	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Water</b>					
Return on capital	51.7	53.5	55.2	56.5	57.4
less other income	14.9	15.2	15.6	16.0	16.4
less CSO revenue	1.8	1.8	1.8	1.8	1.8
plus depreciation	31.1	34.5	37.5	40.1	40.8
plus opex	96.5	98.8	101.5	105.2	108.9
plus tax	2.0	1.5	1.3	1.2	1.5
<b>Net revenue requirement</b>	<b>164.5</b>	<b>171.2</b>	<b>178.1</b>	<b>185.3</b>	<b>190.4</b>
<b>Sewerage</b>					
Return on capital	28.7	30.9	32.6	33.8	34.9
less other income	13.5	13.9	14.2	14.5	14.9
less CSO revenue	0.7	0.7	0.7	0.7	0.7
plus depreciation	26.3	30.3	33.2	35.7	37.8
plus opex	78.2	79.5	81.1	83.9	86.5
plus tax	4.1	3.4	3.0	2.5	2.3
<b>Net revenue requirement</b>	<b>123.2</b>	<b>129.5</b>	<b>135.0</b>	<b>140.7</b>	<b>145.8</b>

Source: Icon Water.

### 6.3 Demand forecasts

The revised proposal adopts the ICRC's draft decision on water sales volumes and water and sewerage customer (installation) number forecasts. Billed water sales by tier are shown in Table 6-2, with forecast installation and billable fixtures detailed in Table 6-3.

**Table 6-2: Forecast billed water sales by tier, 2018–19 to 2022–23**

Year	Total sales (GL)	Tier 1 sales (GL)	Tier 2 sales (GL)
2018–19	41.32	25.29	16.03
2019–20	41.62	25.65	15.97
2020–21	41.88	25.99	15.89
2021–22	42.28	26.37	15.91
2022–23	42.66	26.75	15.92

Source: ICRC 2017, *Draft Report: Regulated water and sewerage services prices, 2018–23*, p. 123.

**Table 6-3: Forecast installation and billable fixtures, 2018–19 to 2022–23**

Year	Water installations	Sewerage installations	Billable fixtures
2018–19	178,795	178,344	64,380
2019–20	182,083	181,609	65,377
2020–21	185,432	184,933	66,389
2021–22	188,842	188,318	67,417
2022–23	192,315	191,765	68,461

Source: ICRC 2017, *Draft Report: Regulated water and sewerage services prices, 2018–23*, p. 123.

## 6.4 Prices

### 6.4.1 Water prices

Our proposed price path for the 2018–23 regulatory period is set out in Table 6-4 for each water tariff component. The supply charge would be set in advance in nominal terms, with the Tier 2 price changing by CPI minus 2.5 per cent. The Tier 1 price will depend on CPI and cost pass-through adjustments.

**Table 6-4: Revised forecast water tariffs**

	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Supply charge (\$/year)</b>	<b>104.21</b>	<b>120</b>	<b>140</b>	<b>160</b>	<b>180</b>	<b>200</b>
<b>Tier 1</b> 0–0.548 kL/day (\$/kL)	<b>2.68</b>	2.61	2.63	2.65	2.67	2.69
<b>Tier 2</b> >0.548 kL/day (\$/kL)	<b>5.38</b>	4.95	4.95	4.95	4.95	4.95

Note: Nominal dollar terms, assuming 2.5 per cent forecast inflation.

## 6.4.2 Sewerage tariff

Icon Water proposes to retain the current sewerage tariff structure with its annual supply and fixtures charge, and introduce trade waste charging arrangements during 2018–23 regulatory period. Our proposed price path is set out in Table 6-5 for each sewerage tariff component.

**Table 6-5: Revised forecast sewerage services tariffs**

	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Supply charge (\$/year)</b>	<b>537.34</b>	529.90	534.08	538.29	542.53	546.81
<b>Charge for flushing fixtures in excess of two (\$/year)</b>	<b>525.51</b>	518.23	522.22	526.44	530.59	534.77

Note: Nominal dollar terms, assuming 2.5 per cent forecast inflation.

## 6.5 Customer impacts

The impacts of these forecast tariffs on the bills of various types of customer are set out in Table 6-6 and Table 6-7, assuming CPI growth of 2.5 per cent per annum. Under our proposed price path:

- there will be a \$9 reduction in the typical residential customer water and sewerage bill in 2018–19, rising at less than forecast inflation each year thereafter; and
- non-residential customers will see a decrease in the first year of between one and eight per cent in their combined bills.

**Table 6-6: Forecast residential bill impacts**

	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Residential customer using 100 kL per year</b>					
Combined water and sewerage bill (\$ per year)	911	937	963	990	1,016
Change in bill (\$)	1	26	26	26	26
Change in bill (%)	0.1	2.9	2.8	2.7	2.7
<b>Residential customer using 200 kL per year</b>					
Combined water and sewerage bill (\$ per year)	1,191	1,219	1,247	1,276	1,304
Change in bill (\$)	-9	28	28	28	28
Change in bill (%)	-0.8	2.4	2.3	2.3	2.2
<b>Residential customer using 300 kL per year</b>					
Combined water and sewerage bill (\$ per year)	1,666	1,695	1,723	1,751	1,780
Change in bill (\$)	-49	28	28	28	28
Change in bill (%)	-2.9	1.7	1.7	1.6	1.6

Note: Nominal dollar terms, assuming 2.5 per cent forecast inflation.

**Table 6-7: Forecast non-residential bill impacts**

	2018–19	2019–20	2020–21	2021–22	2022–23
<b>Non-residential customer using 1,000 kL per year, with 10 fixtures charged</b>					
Combined water and sewerage bill (\$ per year)	9,784	9,849	9,914	9,980	10,046
Change in bill (\$)	-415	65	65	66	66
Change in bill (%)	-4.1	0.7	0.7	0.7	0.7
<b>Non-residential customer using 7,000 kL per year, with 10 fixtures charged</b>					
Combined water and sewerage bill (\$ per year)	39,484	39,549	39,614	39,680	39,746
Change in bill (\$)	-2,995	65	65	66	66
Change in bill (%)	-7.1	0.2	0.2	0.2	0.2
<b>Non-residential customer using 7,000 kL per year, with 100 fixtures charged</b>					
Combined water and sewerage bill (\$ per year)	86,125	86,558	86,993	87,433	87,875
Change in bill (\$)	-3,650	433	436	439	442
Change in bill (%)	-4.1	0.5	0.5	0.5	0.5

Note: Nominal dollar terms, assuming 2.5 per cent forecast inflation.

## **Appendix 1      Revised revenue model - confidential**

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Icon Water's revised revenue model is provided to the ICRC as a commercial-in-confidence Excel file.

## **Appendix 2      Project information – confidential**

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This appendix is provided commercial-in-confidence to the ICRC.

## **Appendix 3      Proposed averaging periods – confidential**

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This appendix is provided commercial-in-confidence to the ICRC.

## Appendix 4

# Uneconomic bypass and prudent discounting

**Table A-1 Illustrative example of alternative responses to potential uneconomic bypass**

	Year ending 30 June						
	2019	2020	2021	2022	2023	2024	2025
<b>Bypass scenario</b>							
Forecast demand (GL)	40	40	40	40	40	39.9	39.9
- customer A	0.1	0.1	0.1	0.1	0.1	0	0
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Forecast revenue (\$'000)	200,000	200,000	200,000	200,000	200,000	199,800	199,800
Price (\$/kL)							
- customer A	5	5	5	5	5	5.008	5.008
- other customers	5	5	5	5	5	5.008	5.008
Actual demand (GL)	40	40	40	40	39.9	39.9	39.9
- customer A	0.1	0.1	0.1	0.1	0	0	0
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Actual revenue (\$'000)	200,000	200,000	200,000	200,000	199,500	199,800	199,800
Actual cost (\$'000)	200,000	200,000	200,000	200,000	199,800	199,800	199,800
<b>Profit (\$'000)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-300</b>	<b>0</b>	<b>0</b>
<b>Prudent discount scenario without pass-through</b>							
Forecast demand (GL)	40	40	40	40	40	40	40
- customer A	0.1	0.1	0.1	0.1	0.1	0.1	0.1
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Forecast revenue (\$'000)	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Price (\$/kL)							
- customer A	5	5	3.5	3.5	3.5	3.5	3.5
- other customers	5	5	5	5	5	5	5
Actual demand (GL)	40	40	40	40	40	40	40
- customer A	0.1	0.1	0.1	0.1	0.1	0.1	0.1
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Actual revenue (\$'000)	200,000	200,000	199,850	199,850	199,850	199,850	199,850
Actual cost (\$'000)	200,000	200,000	200,000	200,000	200,000	200,000	200,000
<b>Profit (\$'000)</b>	<b>0</b>	<b>0</b>	<b>-150</b>	<b>-150</b>	<b>-150</b>	<b>-150</b>	<b>-150</b>
<b>Prudent discount scenario with pass-through</b>							
Forecast demand (GL)	40	40	40	40	40	40	40
- customer A	0.1	0.1	0.1	0.1	0.1	0.1	0.1
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Forecast revenue (\$'000)	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Price (\$/kL)							
- customer A	5	5	3.5	3.5	3.5	3.5	3.5
- other customers	5	5	5.004	5.004	5.004	5.004	5.004
Actual demand (GL)	40	40	40	40	40	40	40
- customer A	0.1	0.1	0.1	0.1	0.1	0.1	0.1
- other customers	39.9	39.9	39.9	39.9	39.9	39.9	39.9
Actual revenue (\$'000)	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Actual cost (\$'000)	200,000	200,000	200,000	200,000	200,000	200,000	200,000
<b>Profit (\$'000)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Source: Icon Water analysis.

**Base Scenario**

Customer A develops bypass and does not purchase supply from Icon Water after 1 July 2022. Icon Water bears the cost of reduced sales in 2022-23. From 2023-24, demand forecasts are revised and prices increase to account for the bypass.

**Prudent discount scenario without pass-through**

Icon Water applies a prudent discount to Customer A from 1 July 2020. Customer A chooses not to bypass the primary network. Demand is unchanged. With no pass-through provision for prudent discounts, Icon Water forgoes the discount annually in perpetuity.

**Prudent discount scenario with pass-through**

Icon Water applies a prudent discount to Customer A from 1 July 2020. Customer A chooses not to bypass the primary network. Demand is unchanged. Prices for other customers are increased slightly from 1 July 2020 via a pass-through adjustment so that revenue is unchanged.

## Abbreviations and acronyms

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ACT	Australian Capital Territory
AER	Australian Energy Regulator
BFR	Best-for-Region
BVAL	Bloomberg Valuation Service
CPI	Consumer price index
CSO	Community service obligation
DGM	Dividend growth model
EDA	Enterprise Decision Analytics
EPA	ACT Environment Protection Authority
ERA	Economic Regulation Authority (Western Australia)
GL	Gigalitre
HV	High voltage
ICRC	Independent Competition and Regulatory Commission
ICT	Information and Communication Technology
IPART	NSW Independent Pricing and Regulatory Tribunal
kL	kilolitre (one thousand litres)
LMWQCC	Lower Molonglo Water Quality Control Centre
ML	Megalitre
MRP	Market risk premium
NRR	Net revenue requirement
PARMS	Pipeline Risk and Asset Management System
QCA	Queensland Competition Authority
QPRC	Queanbeyan-Palerang Regional Council
RAB	Regulated asset base
RBA	Reserve Bank of Australia
WACC	Weighted average cost of capital