Attachment 1

Operating expenditure

December 2022

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1.1 Introduction

This attachment sets out Icon Water's response to the Independent Competition and Regulatory Commission's (the Commission's) assessment of our operating expenditure (opex) over the 2023–28 regulatory period in their Draft Decision of October 2022. As part of our response, we have revised our opex forecast for the next five years, reflecting the prudent and efficient operating costs required to deliver the services our customers have told us they value, including:

- reliable water and wastewater services
- quality drinking water
- affordable pricing
- responsive customer service.

The Commission engaged consultants Marsden Jacobs Associates (MJA) to assess our opex forecast and agreed with MJA's recommendations to significantly reduce our forecast. Icon Water considers that these proposed reductions are unachievable and will not provide a sufficient budget to deliver our services and undertake the necessary planning work to ensure our region's water security and improve climate resilience.

In this attachment, we provide further information to respond to the Commission's Draft Decision. Box 1-1 summarises the key points.

Box 1-1: Key points summarising Icon Water's revised opex forecast

- Icon Water's revised opex forecast for the 2023–28 regulatory period is $1,073.0 million, which is 2.7 per cent higher than our initial forecast of $1,045.1 million, and 9.6 per cent higher than the Commission's Draft Decision of $979.2 million (in real 2022–23 inflation-adjusted terms, noting that inflation has been updated).
- We consider the Commission's Draft Decision to reduce our opex forecast by 6.3 per cent to be unachievable in the current economic environment, with inflation expected to be over 7 per cent in 2022–23 and considering other external drivers impacting costs.
- Although our revised forecast is higher than our initial proposal, holding step changes constant, our opex forecast is 1.2 per cent lower than our initial proposal. Part of the step change has already been assessed as prudent and efficient (either as opex or capex) in the Commission's Draft Decision.
- Our revised forecast maintains the base-step-trend forecasting approach and reflects the most up-to-date data, including:
  - An updated base year (2021–22) to reflect actual costs, including the actual allocation of expenditure between our water and wastewater services. Our forecast also accepts the Commission's Draft Decision base year adjustment for regulatory compliance costs, licence fees, and royalties to be included in non-controllable opex with an annual pass-through provision.
  - Updated labour, chemicals, and electricity cost escalators, which change at a rate different from inflation.
  - A proposed productivity growth rate of 0.7 per cent annually, which is within the range of evidence-based frontier shift and catch-up efficiency while still stretching our capacity to meet reliability and other service standards.
  - Updated step change forecasts for insurance premiums driven by factors outside of our control and meeting Security of Critical Infrastructure (SoCI) regulatory obligations.
  - An additional step change of $25.2 million for ICT Software as a Service (SaaS) investment – a substitution from capex (in our proposal) to opex (in our revised forecast). In its Draft Decision, the Commission considered these costs as part of the

capital investment plan and found them prudent and efficient. Due to clarification of accounting standards, several costs have been reclassified from capex to opex. Our revised forecast has included these costs as opex.

- A step change for additional costs related to delivery of the ACT Government's Managing Buildings Better reforms.
- Acceptance of the Commission's Draft Decision to include a negative step change for efficiencies associated with the Cotter Pump Station upgrade.

Our opex forecast will be sufficient to maintain, but not improve current service performance, and importantly does not put at risk the current level of reliability and service standards.

1.1.1 Improving the resilience of ACT's water and wastewater services

To support achievement of our customer focussed outcomes for the 2023–28 regulatory period, particularly *Outcome 1: Prepare and plan for the future*, we must actively plan for a growing Canberra and a future where climate change has impacted our systems. We must routinely reassess our water security, water catchment quality, drought management actions and wastewater systems to inform our operating and investment decisions.

The significant drought in the ACT from 2016 to 2020 instigated a review of our water supply strategy and an update of our water resource model, completed in early 2022. The model update included improvements to rainfall-runoff models, climate change assumptions, demand and population forecasts, and operating cost models, and incorporated drought management response actions.

The updated model predicts reduced dam inflows during droughts, resulting in lower long-term source water security compared to our previous forecasts. This would result in more frequent water restrictions and bring forward the timeframe for the augmentation of the next water source.

In response to this reduced water availability, we revised how we operate our water supply system. We now operate the system more securely by increasing supply from Cotter Dam and increasing the triggers for the transition from Permanent Water Conservations Measures (PWCM) to temporary water restrictions (TWRs). Operating the system more securely reduces the likelihood of experiencing emergency storage levels (below five per cent of total storage), however, it incurs additional operational costs associated with treatment and pumping.

The outcomes of the model update have brought forward our timeframes for progressing investigations into our next future water source. In the 2023–28 regulatory period, significant investment will be required to progress investigations to maintain water security and climate resilience. The investigations will include consideration of new or augmented dams, additional river pumping, groundwater, demand management, recycled water and desalination.

With our dams currently overflowing and with the recent announcement by the ACT Government to establish the Office of Water, it is an opportune time to build upon our *Let's Talk* engagement program and further engage with the community, customers and stakeholders about how we can best manage our long-term water security as well as prepare for, and respond to, future droughts. In our strategic customer engagement program[1], our customers told us that water security is the top priority, and they expect us to plan for the future. This includes investing in water security and exploring alternative water sources. We need to consider the appetite for demand management, water restrictions and investing in new water supply infrastructure, including alternative water sources such as recycled water. Significant engagement will also be required with the ACT Government's Office of Water as it refreshes the *ACT Water Strategy 2014–44*.

[1] Icon Water, *Price Proposal - Attachment 2, Customer and Community Engagement*, 30 June 2022

Our wastewater services are also nearing capacity, and we are exploring how our wastewater system can best meet Canberra's future needs. Understanding the critical role that our wastewater system plays in supporting our water supply system, our Drought Management Plan, and achieving our net zero targets, will help drive innovation and inform future investment decisions.

To support increased resilience in the ACT, Icon Water has strategic ambitions to implement an Integrated Water Management Program (IWMP). The IWMP would bring together our system strategies (Water System Strategy, Wastewater Strategy and Non-Drinking Water Strategy) and our Drought Management Plan to inform key future investment decisions and deliver sustainable value for our community and shareholders. The IWMP would also help achieve the objectives of our Climate Change Adaptation Plan, Circular Economy Plan and eMission Possible Plan. This would support the ongoing achievement of other customer-focussed outcomes as outlined in Attachment 3 of our original submission.

This is a significant body of work, which is largely opex in nature, and of critical importance given our role in securing water and wastewater services into the future. This represents a key backdrop for Icon Water's opex pressures in the coming years.

1.2 Our revised forecast

Our revised forecast maintains the base-step-trend forecasting approach. It involves establishing an efficient base year to trend forward opex, accounting for changes in real input costs, network scale, and productivity. Step changes and non-controllable opex are added to the forecast to capture prudent and efficient costs not accounted for in the base year or the trend components of the forecast.

Icon Water considers that our revised opex forecast is prudent and efficient. The base year reflects operating costs for delivering regulated water and wastewater services at the current service standards. We have accepted the Commission's Draft Decision to adjust the base year for regulatory compliance costs, licence fees, and royalties, which will be included in the non-controllable opex forecast. Opex is trended forward, accounting for updated expectations of labour, electricity, and chemicals prices. The trend also captures changes in network-scale as Canberra's population and demand increases.

The opex forecast captures costs that the Commission has determined to be prudent and efficient as part of its Draft Decision on capital expenditure (capex), related to ICT expenditure, SoCI, and Managing Buildings Better reforms. Due to relevant ICT market offerings and accounting standards, some capex included in the initial proposal is now included as opex in our revised forecast. The opex forecast also includes an updated step change for insurance premiums, driven by market factors outside our control and not accounted for in other components of the opex forecast. We have accepted the Commission's Draft Decision to include a negative step change for the Cotter Pump Station upgrade, representing potential efficiencies outlined in the business case.

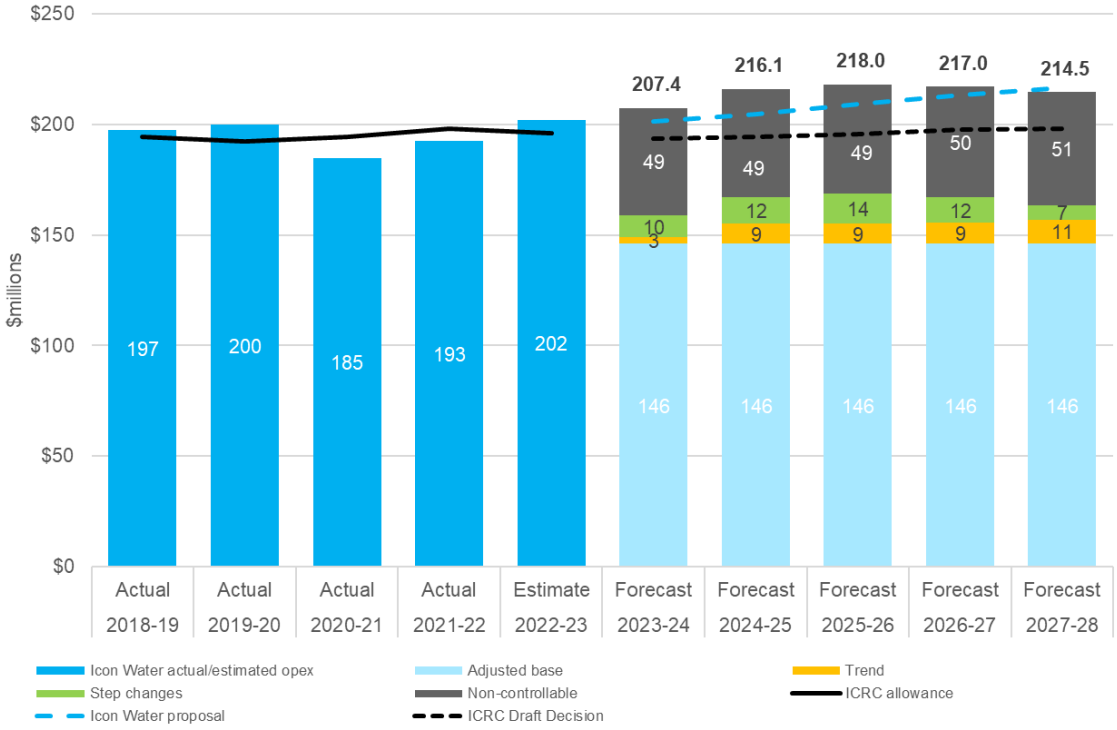
Icon Water's revised opex forecast reflects the expected expenditure required to maintain current service standards, including a highly ambitious productivity challenge while delivering improved resilience and water security. We consider that the prudency and efficiency of each opex component should be carefully assessed based on the most up-to-date evidence, ensuring we can recover the prudent and efficient costs needed to continue delivering safe and reliable water and wastewater services to our customers. Our revised opex forecast is shown in Table 1-1 and Figure 1-1.

Table 1-1: Operating expenditure forecast components 2023–28 ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026-27	2027–28	Total
Adjusted base	$146.0	$146.0	$146.0	$146.0	$146.0	**$730.2**
Price change	$2.1	$7.2	$5.9	$5.2	$5.4	**$25.9**
Output change	$1.9	$4.1	$6.3	$8.6	$11.0	**$32.0**
Productivity change	-$1.1	-$2.2	-$3.3	-$4.4	-$5.6	**-$16.6**
Step changes	$9.7	$12.1	$13.8	$11.7	$6.6	**$53.9**
Non-controllable	$48.7	$48.9	$49.2	$49.9	$51.0	**$247.7**
Total	**$207.4**	**$216.1**	**$218.0**	**$217.0**	**$214.5**	**$1,073.0**

Source: Icon Water. Totals may not sum due to rounding.

Figure 1-1: Actual, estimated, and forecast operating expenditure ($millions, 2022–23)



Source: Icon Water.

1.3 Base year

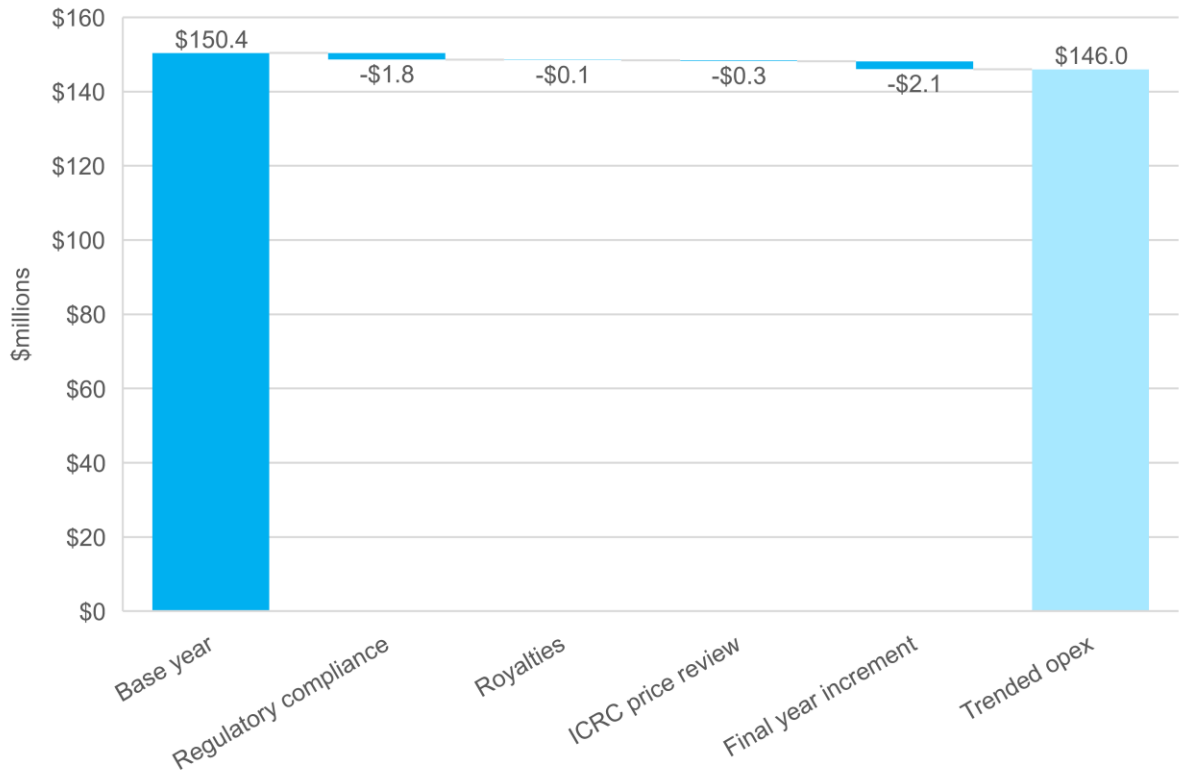
The base year (2021–22) reflects recurrent and sustainable costs needed to deliver services at current reliability and service levels.[2] Icon Water does not undertake the same operating activities annually; we manage the ebbs and flows of costs established in the opex allowance.

The Commission's Draft Decision adopted MJA's recommendations for base year adjustments, including:

- adjusting base year opex for overhead capitalisation, which was impacted by COVID-19 construction disruptions
- treating regulatory compliance and licence fees (including fees we pay to the Commission) and royalties as non-controllable expenditure
- treating price review costs as a step change.[3]

Icon Water has updated the base year for actual incurred expenditure, and removed regulatory compliance and licence fees, as shown in Figure 1-2. Adjustments to the base year are discussed in the following sections.

Figure 1-2: Opex base year adjustments ($millions, 2022–23)



Source: Icon Water.

[2] This includes costs associated with some services that are not price-regulated, with an adjustment made to the revenue requirement to ensure there is no cross-subsidisation from the regulated water and wastewater prices

[3] ICRC, *Draft Report, Regulated water and sewerage services 2023–28,* October 2022, p. 24; MJA, *Icon Water 2023–28 expenditure review – Final Report,* 12 October 2022, p. 35-26

1.3.1 Overhead capitalisation

The Commission's Draft Decision was to accept MJA's recommendation to adjust our base year for differences in overhead capitalisation:

> Icon Water annually capitalises a share of overhead costs, for costs related to capital projects. As shown above, this is an offset to controllable operating costs. In 2021-22, the overhead capitalisation was lower than historical level of capitalisation at $6.19 million. Icon Water noted that the level of capitalisation was lower than average with the COVID-19 construction freezes limiting its ability to allocate existing internal resources to capital work. Icon Water provided a separate forecast for the 2023-28 regulatory period for overhead capitalisation, which averaged $8.1 million per annum. This forecast was based on an internal long-term forecast. We consider it prudent to adjust the base year opex to include the updated forecast capitalisation expected over the 2023-28 regulatory period. This results in an increase in overhead capitalisation of $1.87 million in the base year.[4]

Overhead allocation refers to allocating overhead and indirect costs incurred in managing, administering, and supporting Icon Water's core operations. Core operations comprise activities that are both operational and capital in nature. Overhead capitalisation refers to the portion of overhead costs that are allocated to capital activities (projects). These capital costs are included in the asset values added to the Regulatory Asset Base (RAB). The overhead capitalisation process moves costs from opex to capex, thereby generating an offset (reduction) to opex. The amount capitalised differs annually and is based on Icon Water's cost allocation methodology (CAM) and is consistent with accounting standards.

Icon Water considers that the Commission's overhead capitalisation adjustment was taken out of context, is inconsistent with the CAM, the top-down base-step-trend forecasting methodology, and the building block regulatory approach.

Capitalisation adjustment is taken out of context and inconsistent with accounting procedures

The forecast overhead capitalisation was used in isolation and out of context of the overall forecast from which it was taken, resulting in an anomalous outcome. Further, the adjustment was based on an internal forecast, which had been provided for illustrative purposes only. Icon Water considers that the calculations used to adjust base year opex for capitalisation have been taken out of context.

Historically, and in the 2023–28 forecast provided, capitalised overhead averaged four per cent of controllable opex, eight per cent of payroll costs, and 60 per cent of direct capitalised labour. The proposed $8.1 million capitalisation ($1.87 million suggested adjustment to the 2021–22 base year) increases the relative measures to six per cent, 11 per cent and 82 per cent, respectively (refer to Table 1-2). The proposed overhead capitalisation adjustment does not reflect the underlying cost base to which it has been applied (refer to Table 1-3), which is unrealistic. In practical terms, the only way to achieve the resultant opex reduction would be to reduce costs elsewhere, which is inconsistent with the overall construct of this proposed adjustment. Icon Water considers that MJA's recommendation is inconsistent with the application of the CAM and standard accounting procedures.

[4] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022

Table 1-2: Icon Water base year capitalisation ($millions, nominal)

	2021–22 Base MJA approach	2021–22 Base Actual
Capitalised overhead ($M)	-$8.1	-$5.8
Controllable opex base year ($M)	$144.0	$144.0
Capitalised overhead/Controllable opex	6%	4%
Capitalised overhead/Payroll costs	11%	8%
Capitalised overhead/Direct labour	82%	60%

Source: Icon Water; MJA.

Table 1-3: Forecast capitalisation rates ($nominal)

	2021–22	2023–24	2023–25	2023–26	2023–27	2023–28
	MJA approach	*Estimate*	*Estimate*	*Estimate*	*Estimate*	*Estimate*
Capitalised overhead/Controllable opex	6%	5%	5%	5%	5%	5%
Capitalised overhead/Payroll costs	11%	10%	10%	10%	10%	10%

Source: Icon Water; MJA.

Capitalisation adjustment is inconsistent with the Cost Allocation Methodology

The amount of overhead expenditure capitalised is relative to two key drivers, the amount of direct labour attributed to capital projects and the amount of overhead incurred by Icon Water. Therefore, the application of a fixed value of overhead is inconsistent with the application of the CAM.

Overhead capitalisation is a function of the underlying overhead expenditure and the amount of direct labour attributed to capex projects. As a relative measure, it is not possible to apply a fixed level of overhead capitalisation to an unrelated expenditure base. Applying the fixed overhead capitalisation adjustment is inconsistent with Icon Water's CAM.

Capitalisation adjustment is inconsistent with the base-step-trend forecasting approach

Additionally, the base-step-trend forecasting approach is predicated on the base year being reflective of recurrent and sustainable costs required to deliver services at the prescribed service levels. This approach fundamentally differs from a bottom-up forecast approach, which would consider individual activities and expense lines that underpin the aggregate. The proposed overhead capitalisation adjustment contravenes the premise of a base-step-trend methodology by adjusting an individual line item in isolation from the overall opex base.

By its nature, overhead is also impacted by inflation and other price changes, which is allowed for in the trend component through real cost escalators. The approach to adjusting capitalisation has disregarded price drivers of capitalisation, including labour costs.

Icon Water considers that a capitalisation opex base year adjustment is inconsistent with the top-down base-step-trend forecasting approach. The opex forecast has not been derived from a bottom-up build,

with each cost line item assessed individually. Therefore, isolated adjustments of individual expense lines are not aligned with the forecast methodology.

Capitalisation adjustment is inconsistent with the building block regulatory approach

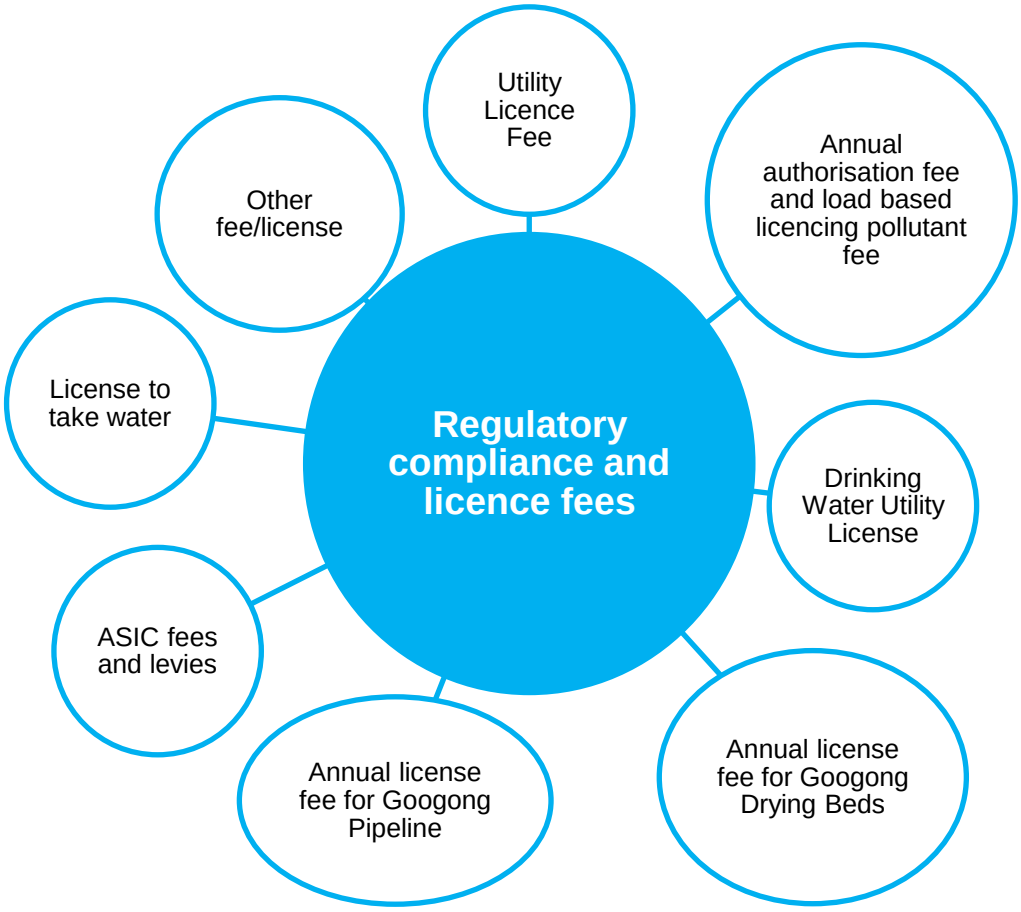
Finally, by definition, an increase in overhead capitalisation (causing an opex reduction) would result in an increase in the amount of overhead transferred from opex to capex, and, therefore, an increase to the capital expenditure allowance. The corresponding capex increase has not been applied through an increase to the RAB. Instead of applying the underlying concepts of the CAM by reflecting the movement of overhead between opex and capex, with no net change in the overhead incurred by Icon Water, this proposed adjustment has effectively reduced Icon Water's opex and, therefore, revenue requirement inconsistently with the building block methodology.

As a capitalisation adjustment is inconsistent with the application of the CAM, accounting procedures, a top-down forecasting methodology, and not assessed from a total expenditure perspective consistently with capex and the RAB, we have not included an adjustment in our revised forecast.

1.3.2 Regulatory compliance, licence fees, and royalties

Icon Water considers that regulatory compliance costs, licence fees and royalties are non-discretionary, government-determined expenditures required to deliver water and wastewater services. Such expenditure includes but is not limited to operating licence fees, wastewater treatment licences, water abstraction fees, fees to the economic regulator and environmental contributions. Regulatory compliance costs and licence fees are presented in Figure 1-3.

Figure 1-3: Costs that contribute to regulatory compliance and licence fees



Source: Icon Water.

The Commission's Draft Decision accepted MJA's recommendation:

> Some non-controllable costs were included in controllable costs. This included regulatory and compliance costs to various agencies including the ICRC, which includes the utility licence fee and additional price review costs, and royalty payments to the ACT government. This approach is consistent with the approach to other non-controllable costs, including the Utilities Network Facilities Tax and Water Abstraction charge. We recommend shifting these from controllable costs into non-controllable costs. These costs are included as a bottom-up forecast, rather than base step-trend approach. We have also included additional ICRC fees of $0.31 million in 2026-27 and $1.0 million 2027-28 for the 2028 price review process under non-controllable costs.[5]

Icon Water considers that moving the Commission's price review costs, regulatory compliance costs, licence fees, and royalties into non-controllable opex with a pass-through provision provides increased transparency. These non-controllable costs do not comprise a material proportion of our annual costs. We agree with MJA's assessment that the Commission's price review costs recovered through Icon Water, regulatory compliance costs, licence fees, and royalty payments to the ACT Government should be treated consistently with non-controllable costs such as the UNFT, including an annual true-up as the costs are imposed on Icon Water and not within our control. As such, we have updated our opex forecast to remove these expenditure items from the controllable opex base year and included an annual pass-through provision to allow a symmetrical true-up for under or over-forecasting costs, detailed in Attachment 3.

1.3.3 Commission price review costs

Many costs are directly attributable to the Commission's five-year price review process, including consumer engagement expenditure and other consultancy fees associated with preparing a regulatory submission and developing an evidence-based revenue forecast. During this process, both the Commission and Icon Water incur additional costs.

The Commission's Draft Decision adopted MJA's recommendation to apply a negative base year adjustment for price review costs and has added a step change to reflect the view that these costs are not recurrent:

> Price review costs – Icon Water has stated that it has incurred $0.93 million controllable price review operating costs in 2021-22, which is made up of external consulting costs. We consider that these costs will not be ongoing and should be removed from the base year. To account for additional price review costs for 2028, we have included $0.93 million as a step change in external consulting costs in 2026-27.[5]

For the following reasons, Icon Water considers that a price review base year adjustment is not a suitable regulatory approach:

- Icon Water's price review costs are incurred over multiple years of the regulatory period. Icon Water's expenditures related to price review costs are aligned to the timing of our price review activities, which vary with each price review cycle. We also incur additional expenditure associated with price reset principles (such as the demand, incentive mechanism and Weighted Average Cost of Capital (WACC) reviews completed in the 2018–23 regulatory period). The recommended base year adjustment disregards the timing over which costs are incurred.

[5] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022

- The adjustment undermines the underpinning principles of the base-step-trend forecasting approach, where the opex forecast is not derived from a bottom-up build of costs. Removing a proportion of opex ($0.94 million) from the base year does not reflect the base-step-trend top-down forecasting approach, which allows Icon Water to manage the ebbs and flows of operating costs. Icon Water undertakes many projects that differ from year to year and may complete more costly projects in years when lower price review costs are incurred so we can continue to deliver safe and reliable services within our resourcing limits set by the Commission's regulatory allowance. Icon Water considers that MJA's price review cost adjustment is inconsistent with the forecasting approach as a bottom-up forecasting methodology has not been proposed or suggested. Price review costs are also incurred in the final year of the current regulatory period, which is not accounted for in the base-step-trend forecasting approach.
- While MJA has suggested that a portion of price review costs are added into the forecast through a step change, it has disregarded multiple drivers of this type of expenditure, such as the increase in real labour prices and the cost of highly specialised contracted services based on the focus and relevant issues addressed in the context of price reviews.
- Icon Water considers that price review costs, as suggested by MJA, do not meet the general regulatory accepted criterion of a step change as it is not due to a new regulatory, legal, or technical obligation and is not driven by any changes to regular business activity.

The actual and estimated costs associated with Icon Water's price review costs, excluding Commission price review costs, are shown in Table 1-4. Notably, the timing of price review expenditure may vary between regulatory periods.

Table 1-4: Icon Water Price review costs ($millions, nominal)

	2018–19	2019–20	2020–21	2021–22	2022–23
	Actual	*Actual*	*Actual*	*Actual*	*Estimated*
Icon Water price review costs	$0.00	$0.00	$0.08	$0.90	$0.10

Source: Icon Water information request OP31.

1.4 Trend

The trend component of the base-step-trend approach to forecasting operating expenditure accounts for:

- real input price change
- the additional operating expenditure needed to service growing customer numbers and volumes (output growth)
- improvements over time in our ability to do more with less (productivity growth).

Icon Water has updated the trend for the most recently available information, including an upper bound estimate of a challenging productivity target for the next regulatory period. The estimated trend components of the opex forecast are presented in Table 1-5 and are discussed in the following sections.

Table 1-5: Estimated opex trend components ($millions, 2022–23)

	Icon Water proposal	Commission Draft Decision	Icon Water revised proposal
Average input price change (annual %)	*0.4%*	*0.3%*	*0.7%*
Input price change ($)	**$10.1**	**$7.6**	**$25.9**
Average output change (%)	*1.7%*	*1.4%*	*1.4%*
Output change ($)	**$40.2**	**$30.6**	**$32.0**
Productivity adjustment (annual %)	*0.5%*	*1.4%*	*0.7%*
Productivity adjustment ($)	**-$12.1**	**-$31.44**	**-$16.6**
Cumulative trend (%)	*8.7%*	*1.4%*	*7.4%*
Trend ($)	**$38.2**	**$6.7**	**$41.3**

Source: Icon Water. Totals may not sum due to rounding.

1.4.1 Real price inputs

Real price inputs capture ACT-specific cost escalators for components of opex that increase at a different rate from inflation, including labour, chemicals, and electricity.

In the Draft Decision, the Commission accepted BIS Oxford Economics (BISOE) forecasts for labour and chemicals and included an alternative cost escalator for electricity prices. The Commission accepted MJA's recommended electricity forecast based on employed market simulation modelling, with results impacted by underlying assumptions such as coal generator retirements, investment expectations, and transmission projects.[6]

We have updated cost escalators to reflect current market conditions and capture more recent publicly available data, shown in Table 1-6. We have projected that materials and other costs will increase in line with the inflation forecast.

[6] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 52

Table 1-6: Real price inputs and weights

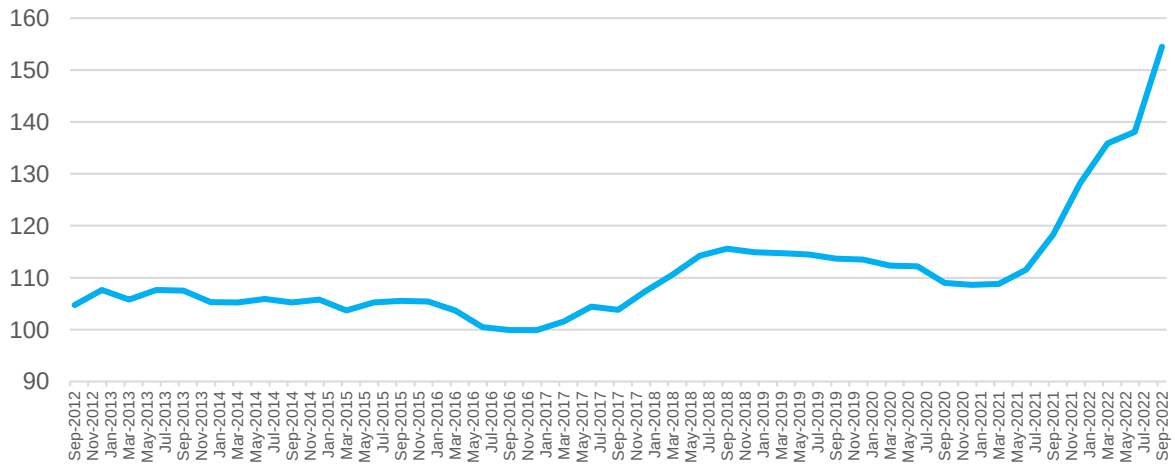
	2023–24	2024–25	2025–26	2026–27	2027–28	*Weights*
Labour [6]	-0.6%	1.4%	1.7%	0.9%	0.7%	*40.2%*
Chemicals	-10.4%	-6.0%	-4.3%	0.1%	-0.1%	*4.1%*
Electricity	30.6%	53.3%	-27.5%	-15.2%	-1.4%	*5.5%*
Other	0.0%	0.0%	0.0%	0.0%	0.0%	*50.2%*

Source: BISOE, November 2022; Icon Water analysis.

As outlined by BISOE, wages in the ACT utilities sector are expected to increase in real inflation-adjusted terms by 0.8 per cent on average over the 2023–28 regulatory period. Wages are expected to increase as the sector is capital-intensive, employees have a specific skill set, there is strong unionisation of the industry, increases in individual agreements are likely to strengthen as the labour market tightens, and demand for labour will be higher with significant utilities investment expected.

Chemical prices have increased substantially over the current regulatory period, as evident in the previous ten years of the Basic Chemical Manufacturing producer price index, shown in Figure 1-4. Chemical prices change at a rate different to inflation as factors outside our control, such as international exchange rates and oil prices drive them. Just as one example, the price of Quicklime which is a chemical in our wastewater treatment process has increased by over 40 per cent compared to last year. We are experiencing examples like this across a number of the chemicals required for our operations.

Figure 1-4: Basic chemical and chemical product manufacturing producer price index



Source: Australian Bureau of Statistics, *Procedure Price Indexes,* https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/producer-price-indexes-australia/latest-release, September 2022.

Notably, the actual price uplift in chemical costs is not directly captured because the base-step-trend forecasting approach does not include the uplift in actual costs incurred in the final year of the current regulatory period and unduly penalises utilities if this is not addressed. Therefore, Icon Water has applied the BISOE geometric six-year average of forecast chemicals escalators of –0.5% annually to smooth cumulative changes in projected expenditure.

Electricity prices are impacted by wholesale costs, spot market prices, network prices, the costs of green schemes, retail prices, and other costs such as metering and ACT Government jurisdictional schemes. Icon Water's updated forecast reflects BISOE's revised methodology based on actual

historical data. It is expected that electricity prices will increase substantially in 2023–24 and 2024–25 before significantly decreasing in the later years of the next regulatory period.

1.4.2 Productivity and output growth

Icon Water's proposal

In our pricing proposal, we proposed the output growth factors in Table 1-7 based on econometric modelling of the relationship between cost and customer numbers, water volumes, and wastewater volumes.

Table 1-7: Output growth forecast in June 2022 pricing proposal

	2023–24	2024–25	2025–26	2026–27	2027–28
Output growth	1.64%	1.68%	1.79%	1.82%	1.81%
Output growth (cumulative)	1.64%	3.35%	5.20%	7.12%	9.05%

Source: Icon Water.

We proposed a forecast productivity growth rate of 0.5 per cent per year based on a range of evidence from econometric cost function modelling, recent regulatory decisions, and historical productivity growth.[7] Icon Water submitted a report by Quantonomics, which recommended a productivity growth factor within a range of -0.1 to 0.8 per cent per year based on evidence from econometric cost function modelling.[8]

The Commission's Draft Decision

In its Draft Decision, the Commission accepted Icon Water's approach to forecasting output growth but updated the calculation with inputs consistent with its Draft Decision on demand forecasts.

The Commission did not accept Icon Water's forecast rate of productivity growth but instead included a productivity growth of 1.4 per cent per year. The Commission's Draft Decision was based on recommendations from MJA to revise selected assumptions in the Quantonomics econometric modelling, particularly:

- a shortening of the period over which historical productivity growth is averaged
- redefining the frontier from the 67th percentile to the 75th percentile.

The Commission indicated this forecast rate of productivity growth is conservative because a higher rate would be needed for Icon Water to reach the efficiency frontier within five years. The Commission also had regard to a selection of recent regulatory decisions.

Icon Water's response to the Draft Decision

Icon Water welcomes the Commission's Draft Decision on output growth. However, Icon Water does not accept the Draft Decision on the forecast rate of productivity growth, which is inconsistent with the Commission's application of output growth weights and econometric evidence.

[7] Icon Water, *Price Proposal - Attachment 6, Operating Expenditure,* 30 June 2022, p. 25-27

[8] Cunningham, M., Lawrence, D. and Hirschberg, J. (Quantonomics), *Final report: Icon Water expenditure benchmarking*, August 2022

We contend in this section that:

- some of MJA's criticisms of the Quantonomics econometric modelling are based on misconceptions, are inconsistent with established practices, or are incorrect or invalid
- MJA's recommended revisions to the use of econometric modelling results, on which the Commission relied, are based on erroneous assumptions and therefore have no sound basis
- a more comprehensive view of the regulatory context shows Icon Water's proposed rate of productivity growth is within the range of what utilities in other jurisdictions have been challenged to achieve.

Some of MJA's criticisms of the Quantonomics econometric modelling are based on misconceptions, are inconsistent with established practices, or are incorrect or invalid

Icon Water engaged Quantonomics, an economic consultancy with significant expertise in benchmarking, to prepare a response to MJA's criticisms of its study, presented in Appendix 1.2. Icon Water considers that:

- Some of MJA's criticisms of the methodology are based on misconceptions, including conflating the Multilateral Törnqvist index with the bilateral or chained Törnqvist index, misunderstanding the practical feasibility of alternative econometric methods, and use of utility-specific time trends in the inefficiency parameters.
- Quantonomics concluded MJA's methodological criticisms, including criticisms of the use of log-log functional forms and the time-varying decay of inefficiency specification in the SFA model, are inconsistent with established practices:

> MJA's methodological criticisms are inconsistent with widely accepted principles and practices among experts in the relevant disciplines of index numbers, and the econometrics of cost and production functions. The criticisms are inconsistent with established empirical literature, the benchmarking practices of regulatory agencies such as the AER and Ofwat, and the established practices in the use of index numbers and in the calculation of productivity trends by Australian and international statistical agencies including the ABS, the OECD and the international standards for Systems of National Accounts. MJA ought to have disclosed this, because we do not believe that a broad-based rejection of widely-accepted principles and practices within the relevant fields of applied economics is, or should be, part of the ICRC's agenda in regulating Icon Water.[9]

- MJA's claim that the effects of economies of scale and other drivers were not accounted for in the Quantonomics productivity forecast is incorrect. As a result, MJA's outlook on productivity growth does not have a sound basis.
- MJA suggested that the Quantonomics study was complex but did not attempt to examine the underlying model.[10] As suggested by Quantonomics in Appendix 1.2, it is unclear why MJA considered the modelling is complex, given it has not reviewed the analysis. Quantonomics also argues that contrary to MJA's assertions, the study is not unduly complex compared to benchmarking analysis used by the Australian Energy Regulator (AER) for electricity network pricing, and changes in the National Performance Report will not mean the study is not replicable. Icon Water considers this criticism to be invalid.

[9] Cunningham, M., Hirschberg, J and Giovani, A. (Quantonomics), *Memorandum*, November 2022, p. 38-39

[10] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022, p. 37

MJA's recommended revisions to the use of econometric modelling results, on which the Commission relied, are based on erroneous assumptions and therefore have no sound basis

MJA used selected results from Quantonomics' econometric modelling to derive its recommended productivity growth rates. The Commission accepted these recommendations in its Draft Decision. The assumptions made by MJA in arriving at its recommendations were based on erroneous assumptions. MJA's recommendations described below and the Draft Decision relying on those recommendations, therefore, have no sound basis.

Continuing efficiency

MJA recommended a forecast continuing (industry-wide) rate of productivity growth of 0.3 per cent per year. This recommendation relied on MJA's claim that there has been a change in the trend of opex productivity during the sample period. Quantonomics use a model with a generalised index of technical change, with a different rate each year, to show that this claim is not borne out by empirical analysis. Quantonomics show that:

> On the contrary, the rate of technical change over recent years has closely tracked the long-term average for the whole sample period.[11]

Quantonomics' survey of a range of other analyses of productivity trends relevant to the water industry, including by the Australian Bureau of Statistics (ABS), the Productivity Commission (PC), the Essential Services Commission (ESC) and the Independent Pricing and Regulatory Tribunal (IPART), supports its opinion in its original report that:

> … a forecast industry productivity trend of zero per cent would be optimistic, whilst a continued decline at –0.9 per cent per year is quite possible.[11]

Catch-up efficiency

MJA recommended a minimum forecast rate of catch-up productivity growth of 1.1 per cent per year. This recommendation relied on MJA's claim that the AER uses the 75th percentile as the frontier in electricity network regulation. This claim is incorrect. The AER uses a 0.75 comparator score, corresponding to a percentile less than the 67th percentile. Additionally, the AER's comparator efficiency score is adjusted for unique operating environment factors to capture material differences between regulated networks. This strongly supports Quantonomics' proposed use of the 67th percentile.

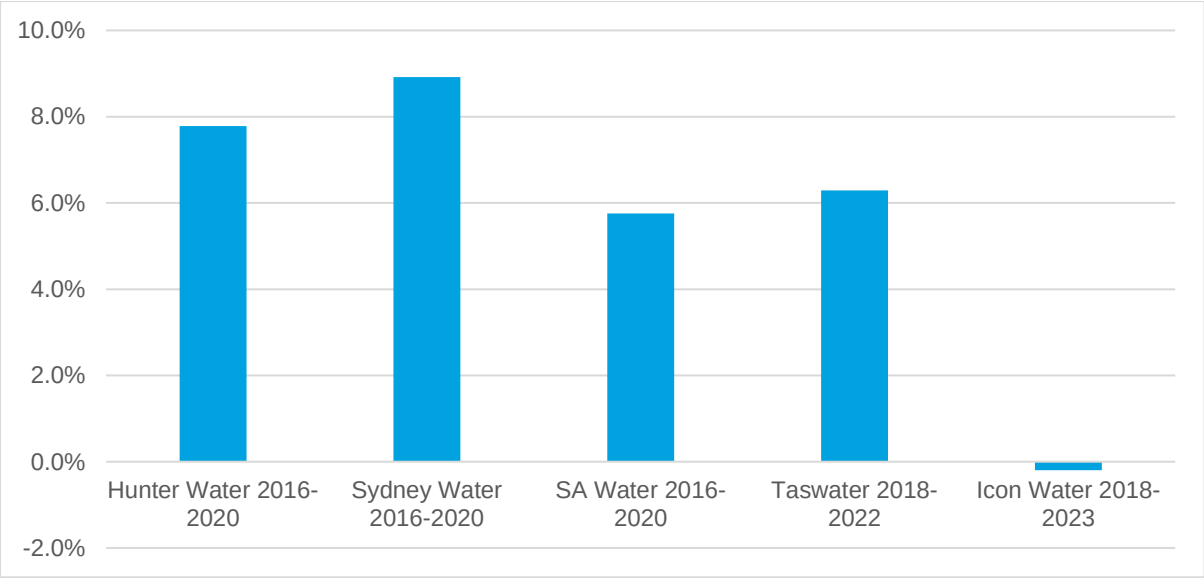
The Commission's decision to use Quantonomics' recommended catch-up period of 10 years is further supported by Quantonomics' discussion of feasibility in the context of long-lived assets in the water industry.

A more comprehensive view of regulatory context shows Icon Water's proposed productivity growth is within the range of what utilities in other jurisdictions have been asked to achieve

The productivity decisions made by regulators in other jurisdictions have not been translated into actual productivity growth. Many utilities spent well above the regulatory forecast in the year prior to the most recent regulatory decision (see Figure 1-5). As a result, most of the productivity growth required by regulators in recent decisions is simply having a second attempt at making productivity gains that were expected but not achieved in the previous period. Given tighter economic conditions, it is yet to be seen whether the efficiency targets will again not be achieved.

[11] Cunningham, M., Lawrence, D. and Hirschberg, J. (Quantonomics), *Final report: Icon Water expenditure benchmarking*, August 2022

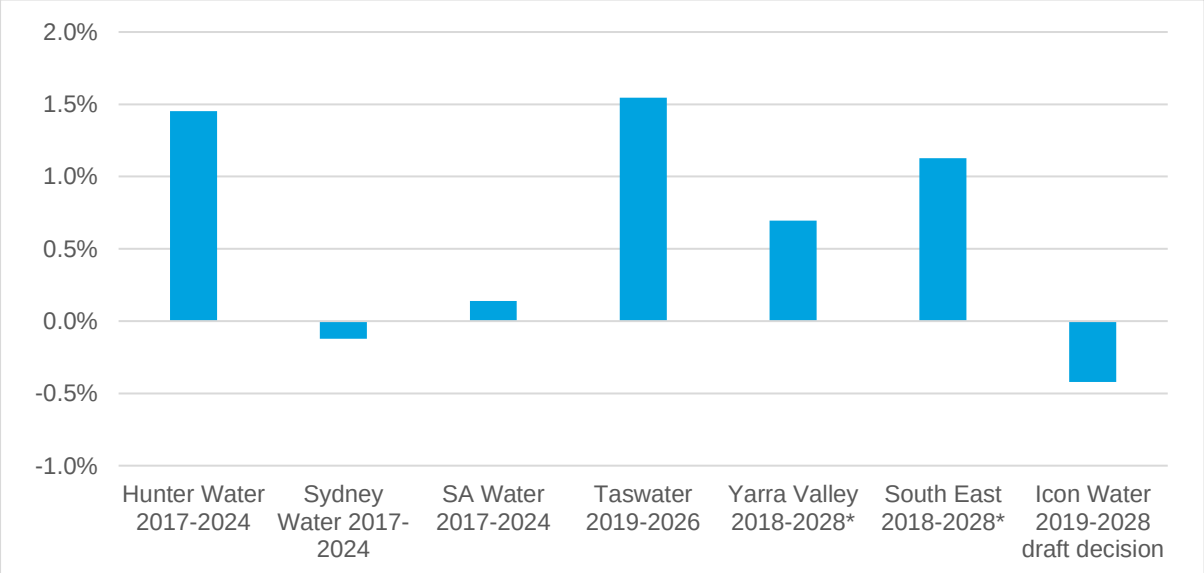
Figure 1-5: Operating expenditure overspend in penultimate year of previous regulatory period



Source: IPART 2020 final report review of prices for Hunter Water from 1 July 2020. IPART 2020 final report review of prices for Sydney Water from 1 July 2020. ESCOSA 2020 SA WATER RD20 final determination statement of reasons. OTTER 2018 Chapter 5 Operating Expenditure. (Note: Icon Water observation uses controllable operating expenditure).

Most utilities have seen a real increase in allowed operating expenditure over two regulatory periods (see Figure 1-6 below). Icon Water, in contrast, achieved significant productivity growth during the 2018–23 period, spending within the forecast productivity growth of 1.75 per cent per year or over 10 per cent cumulatively, despite absorbing additional insurance costs. Therefore, the Commission's Draft Decision requires a significant real decrease in total opex over two periods, which other regulatory decisions have not required.

Figure 1-6: Average annual real change in operating expenditure determined by regulators since the first year of the previous regulatory period



Source: IPART 2020 final report review of prices for Hunter Water from 1 July 2020. IPART 2020 final report review of prices for Sydney Water from 1 July 2020. ESCOSA 2020 SA WATER RD20 final determination statement of reasons. OTTER 2018 Chapter 5 Operating Expenditure. Yarra Valley Water and South East Water price review models submitted to ESC September 2022. * Proposed controllable operating costs.

Comparisons with the metropolitan Victorian utilities need to account for the fact that these utilities are vertically separated from Melbourne Water, and controllable opex forms only around 20 per cent of their total opex. This is compared to Icon Water being a vertically integrated business, providing bulk water supply, distribution, and retailing services whereby controllable opex forms around 80 per cent of our total opex. Quantonomics notes that the 1.4 per cent productivity growth rate noted in recent guidance by the ESC, once adjusted for the productivity growth rate incorporated in Melbourne Water's pricing decision, translates to a productivity growth rate on total opex of around 0.5 per cent.[12] Furthermore, the Victorian businesses proposing 1.4 per cent productivity growth on controllable opex to achieve a 'Standard' rating under the PREMO framework are compensated with a 0.4 percentage point increase in the return on equity relative to a proposal rated 'Basic'.[13] The Commission provides no such compensation in their Draft Decision.

In light of a more-comprehensive regulatory contextual review, Icon Water's pricing proposal is within the range of what utilities in other jurisdictions have been asked to achieve.

1.4.3 Icon Water's revised proposal

In setting the productivity growth rate, Icon Water considers that regulatory decision making should be evidence-based, assessing the approach and reasonableness of the underpinning modelling rather than applying arbitrary assumptions to achieve a particular pricing outcome. This will ensure that efficient and prudent operating costs can be recovered, and financial viability maintained within a volatile economic environment.

For the reasons outlined in the preceding section, Icon Water remains of the view that the evidence points to a productivity growth factor in the range of -0.1 to 0.8.[14] To strive for the best customer outcomes, Icon Water's revised forecast includes a productivity growth factor towards the top end of this range at 0.7. This represents an ambitious efficiency challenge over the 0.5 factor included in our original pricing proposal, which is a stretch goal for Icon Water to achieve in light of the investment needed to improve the resilience of ACT's water security (as outlined in section 1.1.1) and in the context of current economic conditions. Icon Water considers that challenging ourselves to achieve productivity growth outside the range recommended by Quantonomics would result in Icon Water having no choice but to reduce service levels to achieve unsustainable opex savings.[15]

[12] Cunningham, M., Hirschberg, J and Giovani, A. (Quantonomics), *Memorandum*, November 2022, p. 34

[13] ESC, *2023 water price review – Guidance paper, August amendment*, 2022, p. 43

[14] Quantonomics revised its recommended range to -0.1 to 0.8 per cent per year in its final report, which was considered by the Commission when developing its Draft Decision.

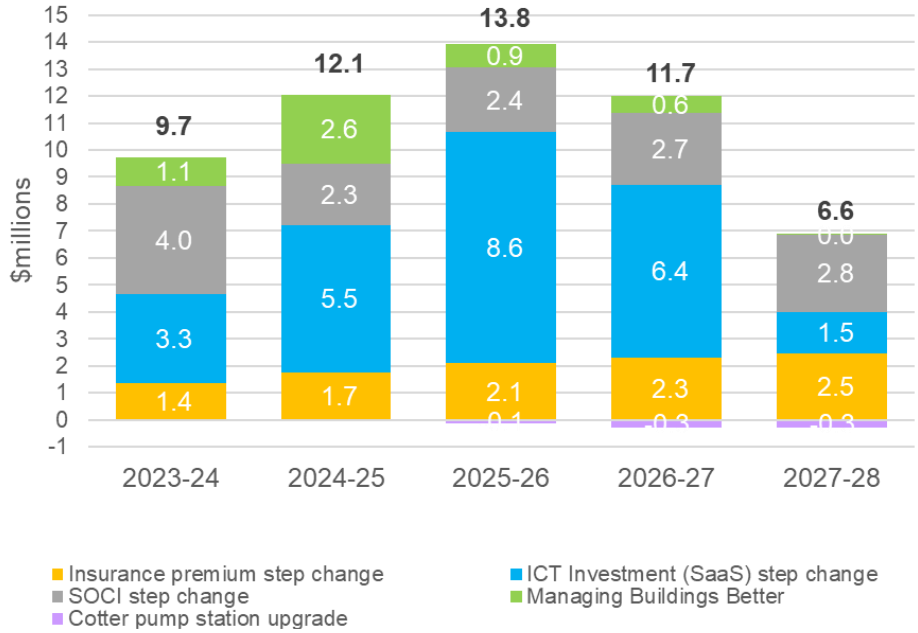
[15] Multifactor productivity growth has been 0.1 on average over the past five years. (PC Insights 2022)

1.5 Step changes

Icon Water is proposing several step changes, including for rising insurance premiums outside of our control; Managing Building Better to reflect the ACT Government policies; meeting our regulatory obligations based on amendments to SoCI legislation; SaaS solutions involving substituting costs from capex to opex; and Cotter Pump Station upgrade efficiencies. Most of our uplift in expenditure for opex is driven by the ICT Investment (SaaS) step change, which affects the opex profile and recurrent nature of costs. In its Draft Decision, the Commission considered a substantial proportion of these costs prudent and efficient capex. Some costs included as capex in our initial proposal are included in our updated opex forecast due to a better understanding and evaluation of current ICT market offerings and how these are treated based on clarification of accounting standards.

Overall, we propose to include $51.8 million of step changes in our revised forecast, detailed in the following sections. The total cost of our proposed step changes by category and year are shown in Figure 1-7.

Figure 1-7: Icon Water step changes ($millions, 2022–23)



Source: Icon Water.

1.5.1 Insurance premiums

Insurance premiums have increased in recent years at very high rates, and Icon Water expects that premiums will continue to increase over the 2023–28 regulatory period.

The Commission's Draft Decision includes an annual insurance premium step change of $0.41 million, based on MJA recommendations, and shown in Table 1-8. MJA suggested that Icon Water's insurance premium step changes were based on revenue and asset growth already captured in the trend and that inadequate information was provided to develop the forecasts for each insurance category.[16] MJA also note that Marsh expects a softening of the insurance market over the forthcoming regulatory period.

[16] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022, p. 59

Table 1-8: Insurance premium step change ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026–27	2027–28	Total
Icon Water submission	1.23	1.66	2.06	2.33	2.52	**9.80**
Commission Draft Decision	0.41	0.41	0.41	0.41	0.41	**2.03**
Icon Water revised submission	1.35	1.75	2.10	2.32	2.46	**9.98**

Source: Icon Water, ICRC. Totals may not sum due to rounding

Icon Water does not accept the Draft Decision, and we consider that the insurance premium step change included in the Draft Decision is unreasonable and does not reflect the prudent and efficient costs that we expect to incur for several reasons, including:

- Available evidence has been disregarded, including independent information provided by insurance specialists

  The Commission and MJA have disregarded evidence provided by Icon Water suggesting that insurance premiums will continue to increase at a rate different from CPI and the opex trend. MJA suggest that insurance premiums will increase by the same amount each year and are yet to consider that there are several different drivers of each insurance policy, including global events affecting the profitability of insurers, which results in reduced capacity to procure coverage at historical rates. Icon Water considers that the Commission has not assessed the prudency and efficiency of the proposed insurance premium step change, including the available information that describes market conditions outside our control. Box 1-2 provides a summary of publicly available information and Marsh's independent market analysis included in the regulatory proposal, demonstrating insurance market conditions.

  MJA note that Marsh expects a softening of insurance markets over the forthcoming regulatory period, reflected in lower premium increases in the outer years.[17] Icon Water considers that this does not translate to an immediate softening of insurance markets. Interestingly, the Draft Decision has adopted a flat step change without any regard to actual market expectations, including the forecast trend with higher increases at the start of the upcoming regulatory period and lower increases in the outer years. These lower increases will signal a transition toward a softer insurance market which will require sustained profitability of insurers' property portfolios over the next couple of years before they have the confidence to push for growth and market share. However, the persistent occurrences of significant natural catastrophe events in Australia create substantial volatility and make profitable underwriting challenging for insurers and reinsurers.

- There are several differing drivers for each insurance policy

  The Commission's Draft Decision for the insurance premium step change is based on the premise that Icon Water should manage further movements in premium costs over the regulatory period within growth-adjusted baseline opex.[18] MJA have incorrectly concluded that a single factor, such as revenue or asset growth, drives insurance premiums. Instead, several factors influence premium projections, which differ between insurance policies, including Icon Water's risk profile, claims history, insurance policy structure concerning coverage and limits, and the expected global market outlook. For example, Property or Industrial Special Risk (ISR) insurance premiums are heavily dependent on the global insurance market, which is influenced by several

[17] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022, p. 60

[18] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022, p. 60

critical factors outside of Icon Water's control, such as the size of the premium pool, claims paid and/or provisioned, major loss events, cost of reinsurance, and investment returns and flow of additional funds into the sector from the Insurance Linked Securities. Significant weather and natural disasters like bushfires, floods, and hailstorms have also negatively affected insurers' profitability, which has led to 16 consecutive quarters of premium increases.

By its very nature, insurance markets soften and harden over time to reflect global factors. The claims performance of a utility can further compound any premium increase but has limited ability to offset premium increases. Icon Water's claims history is exemplary compared to industry peers, and Icon Water's risk profile is highly attractive for insurers. In particular, due to Icon Water's inland location having no flood-mitigation-dams and having mature risk management practices. Despite this, Icon Water has faced and continues to face significant increases in insurance premiums.

Icon Water considers that it is an oversimplification to suggest that a key reason for adjusting the proposed step change is due to double counting costs included in output growth. Each insurance policy has multiple drivers independent of increases in network scale. Moreover, Icon Water's fleet was not increased for motor vehicles but held constant in the forecasting period. Also, Icon Water's directors' and officers' liability insurance is not driven by changes in the asset base or projected revenue. Therefore, it is an oversimplification to suggest that insurance is double counted in the output growth component of the opex trend as it misrepresents how premiums are derived in markets.

Icon Water has worked with Marsh to update forecasts to hold revenue and asset growth constant to ensure there is no speculative or theoretical overlap or double counting costs between the trend and the insurance premium step change. We have adjusted the insurance premium step change to isolate any potential output growth component for each relevant policy.[19] Our revised forecast does not double count costs in the step change with the trend component of the opex forecast.

- The methodology adopted to calculate the step change is inconsistent with information provided and the base-step-trend forecasting approach.

  The Commission's Draft Decision accepted MJA's recommended revised insurance premium step change, calculated as the difference between 2021–22 actual costs and 2022–23 estimated costs. Icon Water has several concerns with this approach, including:

  1. The adopted approach fails to recognise that the financial years for opex and premiums are different and includes an unexplained adjustment to property premiums.[20] Icon Water's financial year is from 1 July to 30 June, and the insurance premium financial year is from 31 May to 31 May each year.[21] Therefore, taking a difference without an appropriate adjustment does not reflect an efficient and prudent uplift in expected costs.
  2. The opex step change for insurance premiums included in the Draft Decision is based on the difference between the actual costs included in the base year and expected costs in the final year of the current regulatory period, held constant over the 2023–28 period. This is inconsistent with the base-step-trend approach, where opex is forecasted from the nominated base year and trended to account for changes in real

[19] This includes for industrial special risk and general liability coverage. As there was not assumed increase in Icon Water's vehicle fleet, no changes have been made to the forecast costs for the policy.

[20] The unexplained adjustment is not material, reflecting $615 difference between MJA calculations and information provided by Icon Water in OP013.

[21] Marsh, *Price Proposal Appendix 6.4: ICRC Report 2023-2028 Premium Projections and insurance Market Update CONFIDENTIAL*, April 2022, p. 4

costs of inputs. The Commission's Draft Decision does not capture premium increases between the base year and the forecast year of expenditure.

3. The methodology adopted in the Draft Decision does not account for expectations of international insurance markets, including a continuing hard market that is expected to soften in the outer years of the forthcoming regulatory period. Therefore, based on the evidence, Icon Water would not expect a flatlined projection of the incremental change in premiums over a five-year forecasting horizon.
4. The differential between Marsh's original projected total insurance costs for 2022–23 and actual/estimated costs is $0.18 million ($2022–23). The small difference supports the accuracy of premium projections.

Icon Water's regulatory submission pointed to how "recent reviews have found that similar studies from different insurance brokers produced reasonably consistent expectations of future premiums."[22] More specifically, this refers to the AER's 2021–26 Powercor Determination, where the regulator sought to understand the certainty of insurance premium forecasts. While Powercor's opex step change included forecast premiums from Marsh, the AER independently engaged Taylor Fry to assist in the assessment of the efficiency and prudency of insurance premium forecast, finding "that the forecasts provided by Marsh are directionally consistent with Taylor Fry's expectations of future premiums, given its understanding of the prevailing market conditions, and can be considered reasonable."[23] We encourage the Commission to independently assess the evidence supporting the step change to ensure and validate that Icon Water can recover its efficient and prudent insurance premiums in the context of managing risk.

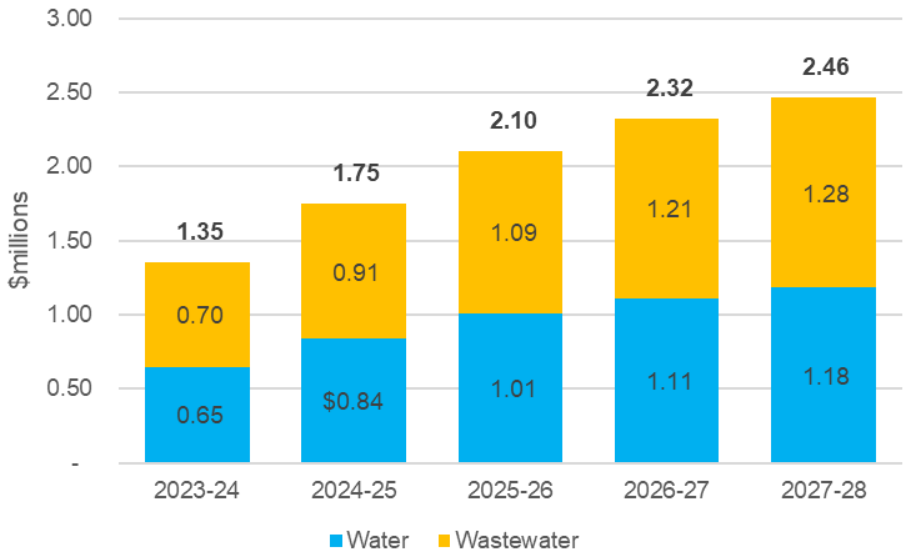
It is Icon Water's view that the Commission should consider available evidence in determining efficient and prudent operating costs for the forthcoming regulatory period. As many relevant factors and variables influence insurance policies, including global events and international markets, premiums are driven by factors outside our control and not captured in output growth.

Icon Water has included an insurance premium step change in the revised opex forecast, reflecting expected market conditions. The proposed step change captures projected prudent and efficient costs for the 2023–28 regulatory period, updated for inflation and wage growth, excluding elements that could speculatively double count costs included in output growth. The insurance premium step change is shown in Figure 1-8.

[22] Icon Water, *Price Proposal Appendix 6.3: Insurance premium step change CONFIDENTIAL*, 30 June 2022, p. 6

[23] AER, *Final Decision Powercor Distribution Determination 2021 to 2026 Attachment 6 Operating expenditure*, April 2021, p. 37

Figure 1-8: Revised forecast of insurance premium step change ($millions, 2022-23)



Source: Icon Water.

Box 1-2: Information on current insurance market conditions

The current insurance market is characterised by increasing premiums, selective underwriting, and shrinking capacity, known as a 'hard insurance market'. In addition to the cost implications of premium increases, insurers are also cutting back on coverage enhancements and generous sub limits. This hard market is in response to major weather and natural disaster events like bushfires, floods, and hailstorms, causing widespread property damage and business interruption losses. Summer bushfires in Australia had a negative effect on insurers' profitability. A recent COVID-19 Australian business interruption insurance test case ruling where the NSW Court of Appeal rejected insurers' argument that policies do not cover COVID-19 losses has further added to market stress.

The hard market impacts are evidenced on:

- The Reserve Bank of Australia noted that:

> General insurers have experienced an increase in both the cost and frequency of claims. Higher inflation and labour shortages have increased the cost of claims that are paid, particularly for building repairs. At the same time, the number of insurance claims have increased following several natural disasters along the east coast of Australia. Insurers use reinsurance to mitigate the impact of rising claims on profits, along with increasing premiums.[24]

[24] RBA, *Financial Stability Review*, October 2022, p. 53

- ACT Government directorates and statutory authorities:

  The hard market has impacted the costs of insurance premiums for the ACT Insurance Authority. The Authority provides insurance, claims, and risk management services to ACT Government directorates and statutory authorities.

ACT Insurance Authority	2021–22	2022–23
Premium change %	44.0%	12.4%

- There is consensus among insurance specialists projecting continued increases in insurance premiums. Taylor Fry, an independent insurance expert, noted that for Commercial Property insurance:

  > Premiums increased by an average of 16% over FY22 and were particularly high in areas impacted by natural perils.[25]

- Regulated utilities:

  As a result of factors impacting global insurance markets, regulated utilities across Australia have sought to recover the substantial premium rises. The 2021–26 Powercor Distribution Determination insurance step change ($2020-21) was $67.7 million, noting that the AER engaged Taylor Fry, who independently assessed the insurance premium costs of Powercor.

Powercor	2021–22	2022–23	2023–24	2024–25	2025–26
Premium change %	8.50%	14.10%	7.80%	2.90%	3.40%

Source: Icon Water analysis of AER 2021–26 Powercor Distribution Determination[26]

1.5.2 Security of Critical Infrastructure

The Commission's Draft Decision accepted the prudency of our step change to comply with the *Security of Critical Infrastructure (SoCI) Act*. The Draft Decision also largely accepted our cost estimate, with a minor adjustment.

Our regulatory submission in June noted our estimate of opex costs to comply with the SoCI legislation was preliminary. Our submission included costs of $3.55 million to comply with the cyber-security element of the SoCI Act's proposed Positive Security Obligation (PSO) rules.[27] The amendments to the SoCI Act in April 2022 oblige Icon Water to develop a Risk Management Program and mitigate specific hazards. Since then, we have undertaken further analysis to estimate the costs of complying with the PSO rules under SoCI legislation and estimated costs across the operational, environment, procurement, and security aspects of the business.

Under the SoCI Act's draft PSO rules, Icon Water must take a holistic and proactive approach to identify and reasonably mitigate hazards that pose material risks to the availability, integrity, reliability, or confidentiality of Icon Water as an owner and operator of critical water assets. In addition, the PSO

[25] Source: Taylor Fry, *RADAR FY2022*, 2022

[26] AER, *Final Decision Powercor Distribution Determination 2021-26 Opex Model*, 20 April 2021

[27] Icon Water, *Price Proposal - Attachment 6, Operating Expenditure*, 30 June 2022, p. 33

rules require Icon Water to mitigate risks arising from cyber and information security, personnel, supply-chain, and physical and natural hazards.

While Icon Water has implemented a range of controls to partially mitigate these hazards, they may not deliver the Federal Government's desired policy outcome of an uplift in national critical infrastructure security within the SoCI timelines. Consequently, we engaged consultants KPMG and Excellium to assist us in identifying and costing additional activities (including expanding the scope of current risk mitigation activities) necessary to comply with the PSO rules. The costs for cyber-security hazard mitigation were identified in Icon Water's original submission, except those associated with the obligations should Icon Water be declared a System of National Significance (SoNS). Additional costs related to supply-chain security, physical security and natural hazard mitigations are also included in the step change.

Icon Water has comprehensively reviewed the estimated costs of complying with amended SoCI legislation and the relevant rules. All costings have been either independently developed or verified to ensure that they are prudent and efficient. Our revised costs are outlined in Table 1-9. A further breakdown of costs is included in our confidential Appendix 1.5.

Table 1-9: Security of critical infrastructure step change ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026–27	2027–28	Total
SoCI step change	4.03	2.27	2.39	2.67	2.84	**14.20**

Source: Icon Water.

1.5.3 Cotter Pump Station upgrade

The Commission's Draft Decision was to accept MJA's recommendation to apply an additional step change to reflect opex efficiency savings identified in our business case for the upgrade to Cotter Pump Station. The proposed opex adjustment for the Cotter Pump Station upgrade is outlined in Table 1-10.

Table 1-10: Cotter pump station upgrade step change ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026–27	2027–28	Total
Cotter pump station upgrade	-	-	- 0.14	- 0.28	- 0.28	**- 0.70**

Source: Marsden Jacobs Associates.

MJA's recommendation quantifies unrealised but contemplated efficiency savings from the upgrade. Works at Cotter Pump Station are expected to result in efficiency savings relative to the assumptions outlined in the business case. This is due to the upgrade being a more efficient solution that will reduce water pumping costs compared to retaining existing infrastructure.

The size of the efficiency savings in any given year included in the business case are sensitive to electricity prices, the water sourcing strategy and the actual rainfall experienced. A wetter season has reduced savings as less water is abstracted from Cotter Dam, while a drier season will have greater efficiency savings as more water is used from Cotter Dam. At an aggregate level, this may be masked by higher total water abstraction and, therefore costs, than in a standard weather year. Further, Cotter Dam is our most expensive dam to source from due to the requirement to pump to the water treatment plant, leading to increased electricity consumption.

We also note that the assumptions underpinning the business case have changed, whereby we are increasing supply from Cotter Dam to operate the system more securely, which, as outlined in section 1.1.1, will incur additional operating costs. Despite this, we accept the efficiency adjustment.

1.5.4 ACT Government Managing Buildings Better reforms

This revised forecast includes a new step change of $5.17 million related to the Managing Buildings Better reforms.

In 2020, the ACT Government commenced a series of Managing Buildings Better reforms to improve the management of apartments, townhouses, mixed-use developments, and commercial units. One objective of the reforms is to allow "*a more equitable distribution of building costs, such as water, maintenance and insurance*"[28].

The initial package of reforms has been introduced, with no implication for Icon Water. As part of the second stage of reforms, Icon Water understands that the ACT Government is amending legislation related to unit titles to improve the management of apartments, townhouses, mixed-use developments and commercial units. The ACT Utilities Technical Regulator (UTR) is also considering changes to its technical codes as part of the reforms.

Icon Water has included a step change to account for the additional costs we will incur to comply with the second stage of reforms, shown in Table 1-11. Activities that the step change covers include:

1. updating processes, policies, and standards to implement the regulatory change
2. consulting with industry on the standards that require revision as part of the reforms, and communicating the revised standards to developers and customers
3. upgrading Icon Water systems to deliver the increased capability and capacity required by the reforms
4. implementing the updated processes, policies and standards, and ongoing activities required to support the reforms.

Table 1-11: ACT Government Managing Buildings Better reforms step change ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026–27	2027–28	Total
Managing Buildings Better reforms step change	1.06	2.58	0.86	0.62	0.04	**5.17**

Source: Icon Water.

The inclusion of a step change for Managing Buildings Better reforms is a change in approach from our price proposal as outlined below.

Our price proposal had included the cost of the required system upgrades as part of the capital expenditure forecast

In our price proposal, upgrades to systems (point 3 above) had been included in our 2023–28 capital forecast (as part of *CX11367 Water Meter Management System (WMMS) Stage 3*). In the Commission's Draft Decision, this expenditure was captured in the overall level of capital expenditure, which was determined to be prudent and efficient and "*sufficient to operate the business and to maintain or improve services over the regulatory period*"[29].

Icon Water's WMMS is currently an on-premises solution, and past investment has been capitalised consistently with accounting standards. However, the WMMS is soon transitioning to a cloud system (as part of *CX11247 WMMS Stage 2).* Like the ICT projects included in section 1.5.5, investment occurring as part of both WMMS Stage 2 (in the current regulatory period) and WMMS Stage 3 (in the next regulatory period) will be opex rather than capex. The forecast expenditure for WMMS Stage 3

[28] ACT Government, *Managing Buildings Better - Build, buy or renovate (act.gov.au),* accessed 5 December 2022

[29] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 56

has been removed from the capital investment plan and is included in the step change outlined in Table 1-11.

Our price proposal had proposed a new pass-through event for operating costs associated with the reforms

In our price proposal, we had proposed a new pass-through event[30] for additional operating costs Icon Water will incur related to the Managing Buildings Better reforms. The Commission declined the request for a pass-through event without a materiality threshold on the basis that:

> The pass-through materiality threshold provides a balance between:
>
> - minimising the degree of price variability in the regulatory period by limiting the number of occasions that the cost pass-through provisions are likely to be triggered beyond that provided for changes in the WAC, UNFT and subvention payments
> - allowing Icon Water to remain financially viable and meet its service obligations
> - providing Icon Water with incentives to pursue efficiency gains
> - minimising regulatory costs.
>
> In our review, Icon Water's proposal to seek an exception from the materiality threshold for a new pass-through event would affect the balance of risk allocation inherent in the existing arrangement.[31]

Changing the risk allocation was certainly not our intention. Rather, we were wanting to recognise that the reforms have a long implementation timeframe, and therefore the additional costs are incurred across the regulatory period, as observed in Table 1-11, and not in a single financial year.

Given the most recently available information, we have included the additional forecast opex as part of the Managing Buildings Better step change. Alternatively, Icon Water also welcomes the Commission to revisit our original proposal to enable the costs associated with the Managing Buildings Better reforms through a pass-through event with no materiality threshold that recognises the spread of costs across multiple financial years.

Further information on WMMS Stage 3 and other implementation activities is included in Confidential Appendix 1.6.

1.5.5 ICT Investment (Software as a Service)

This submission includes a new step change of $25.2 million for ICT (SaaS) investment. The step change captures expenditure for eight projects forecast for the 2023–28 regulatory period that is shifting from capex to opex. Table 1-12 outlines the forecast step change.

[30] Icon Water, *Price Proposal - Attachment 4, Regulatory Controls*, 30 June 2022, p. 10

[31] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 12

Table 1-12: Software as a service step change ($millions, 2022–23)

	2023–24	2024–25	2025–26	2026–27	2027–28	Total
Project costs (non-recurrent)	$3.30	$5.45	$8.26	$5.91	$1.07	**$23.99**[32]
Recurrent	$0.00	$0.01	$0.29	$0.46	$0.47	**$1.23**
Total	**$3.30**	**$5.45**	**$8.55**	**$6.37**	**$1.54**	**$25.22**

Source: Icon Water.

In our price proposal, the 2023–28 capital investment plan included $49.5 million in forecast capital expenditure for information and communication technology (ICT) projects.[33]

On 8 September 2022, we wrote to the Commission to advise that in line with industry trends:

Over the last few months, a number of our ICT vendors advised they are moving to 'cloud based' models, under a subscription service or Software as a Service (SaaS), and will no longer support our existing systems under perpetual licences. For the 2023–28 regulatory period, we are not expecting this change will increase our total expenditure requirement (in fact, it may reduce our expenditure requirement) but we will see a shift in our forecast costs from capital to operating expenditure. As accounting standards dictate how costs are treated under the building block methodology used to calculate Icon Water's total revenue requirement, this shift may cause a short-term impact on customer prices for the 2023–28 regulatory period as we transition from capital to operating expenditure.[34]

Since then, we have reviewed each ICT project scheduled for the 2023–28 regulatory to ensure we applied the relevant accounting standards. The Commission's Draft Decision acknowledged that the AER had recently considered similar shifts from capex to opex and suggested that the AER's assessment approach provides useful guidance to Icon Water. The Commission stated that as part of this approach:

We consider the AER's assessment approach provide useful guidance. Icon Water should demonstrate that the proposed costs are prudent and efficient. That is, the proposed cloud-based service is needed to provide water and sewerage services and the associated expenditure program provides the least cost option over the life of the project, compared to other potential alternatives. Icon Water should demonstrate that there is no double counting with other expenditure activities, and any cost shift to operating expenditure is accompanied by an appropriate decrease in capital expenditure. Icon Water should also demonstrate that the affected cost categories fall within the relevant categories impacted by the IFRS guidance. If Icon Water expects to incur recurrent and non-recurrent (one-off) costs in transitioning ICT projects to a SaaS delivery model, it should identify them separately. This separation will ensure that one-off expenses are excluded from the consideration of base year operating expenditure in future price investigations.[35]

As suggested by the Commission, we considered the AER's assessment approach, and an overview of each component is included below.

[32] In Icon Water's initial price proposal, $21.3m was included in the forecast capital investment plan for 2023–28 and the balance in the capital investment plan for 2018–23

[33] Icon Water, *Price Proposal - Attachment 7, Capital Expenditure*, 30 June 2022, p. 52

[34] Icon Water, letter to the Commission "*Regulated Water and Sewerage Services 2023–28: Revisions to Capital Investment Plan*", 8 September 2022. Available at: https://www.icrc.act.gov.au/

[35] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 36

Proposed costs are prudent and efficient

All projects within the step change are being managed as part of our Investment Planning and Design (IPaD) framework. In relation to this framework, the Commission concluded:

> The IPAD process is designed to achieve consistent decision-making, identify and manage risks, ensure efficient project delivery and control the progressive release of funding based on stage-by-stage justification. This process aligns with good industry practice.[36]

Additionally, eight projects were included in our original regulatory submission as part of the capital investment plan. For the purpose of the Commission's Draft Decision, the projects included in the SaaS step change are therefore already captured in the overall level of capital expenditure the Commission had determined to be prudent and efficient and "sufficient to operate the business and to maintain or improve services over the regulatory period"[37].

One of the projects included in the step change was reviewed in detail as part of MJA's assessment of prudency and efficiency of the top 10 forecast projects. The Asset Management Information System (AIMS)[38] project comprises over half of the value of the proposed ICT investment (SaaS) step change, meaning that MJA has already conducted a detailed review of project documentation for $13.2 million of the $25.2 million step change. In its report, MJA concluded that:

> We deem the project prudent. There is very little supporting information to deem the project efficient, but it is clearly more efficient than replacing the current Oracle solution. We therefore recommend the original proposed sum of $12.3 million [$13.2m in $2022–23] be allowed for Icon Water to deliver the uplift in Oracle capability it requires to create a cohesive and beneficial asset management information landscape with mobility functionality that is stable and supported into the future.[39]

Further information to support the prudency and efficiency of the step change is provided at Appendix 1.4.

No double counting with other expenditure activities

In our original price proposal, seven of the eight projects in the SaaS step change were included in the capital investment plan for 2023–28. The eighth project had been included in the 2018–23 capital investment plan, but as delivery has since been delayed, a portion of the project has been pushed into the 2023–28 regulatory period. The step change only captures the expenditure forecast for the 2023–28 regulatory period. For all eight projects, the capital investment plan has been adjusted to remove the portion of expenditure shifting from capex to opex. Additionally, the step change only includes the incremental cost (on top of the base year). Further information on this adjustment is outlined in Attachment 2.

Affected cost categories fall within the relevant categories impacted by the IFRS guidance

Historically, Icon Water's ICT environment has largely consisted of on-premises hardware and systems using perpetual software licences. As outlined in Table 1-13, expenditure of this nature is generally capex and the assets recorded on Icon Water's fixed asset register.

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[36] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 55

[37] ICRC, *Draft Report, Regulated water and sewerage services 2023–28*, October 2022, p. 56

[38] The Asset Management Information System project reference is CX11366

[39] MJA, *Icon Water 2023–28 expenditure review – Final Report*, 12 October 2022, p. 162

Under the new International Financial Reporting Standards (IFRS) guidance published in April 2021, the accounting treatment for ICT has been clarified. Around half of our investment in ICT systems (captured in the capex forecast in our regulatory proposal) is now included in an opex step change based on SaaS services offerings as the industry shifts to subscription models and cloud-based hardware.

Table 1-13: Summary of IFRS application to ICT investments

Capital expenditure	Operating expenditure
• System solutions using perpetual software licences • On-premise hardware • Physical ICT devices	• Software as a Service • System solutions using subscription-based software licences • Cloud based hardware

Source: Icon Water.

Summary of key assumptions related to the updated ICT capital investments:

- Costs associated with on-premise hardware and physical devices have continued to be classified as capital expenditure.
- Costs associated with perpetual license software (including design, build and implement) have continued to be classified as capital expenditure.

Recurrent and non-recurrent (one-off) costs should be identified separately

For each project we have identified the incremental costs that are:

- Recurrent costs: includes a regular amount incurred annually (for example, licences).
- Project costs: relate to system upgrades, with the frequency and quantum of costs varying based on the system's requirements. For example, some systems require minor upgrading every three years, others require more significant upgrades every five years. Systems that require continued investment are therefore project costs and not 'one-off' costs, but forecasts are lumpier compared to recurrent costs.

This step change does not impact Icon Water's overall forecast costs for the 2023–28 regulatory period, but it does change the timing of when we pass the cost to customers. We anticipate the step change will put upward, but temporary, pressure on prices as some ICT services are no longer available as an on-premise solution given the evolving nature of the industry.

An alternative to treating ICT investment (SaaS) costs as an opex step change is to include the eight ICT projects as capex for the 2023–28 regulatory period resulting in a misalignment between the economic and accounting treatment. This is not Icon Water's preferred option.

Another option would be to allow Icon Water to continue to treat expenditure for the eight ICT projects as capital investment for the 2023–28 regulatory period with the view of addressing the accounting issue as part of the 2028–33 price investigation. This would result in a misalignment between economic and accounting treatment for the current regulatory period and therefore is not our preferred solution.

Additional information on the SaaS step change is provided in confidential Appendix 1.4.

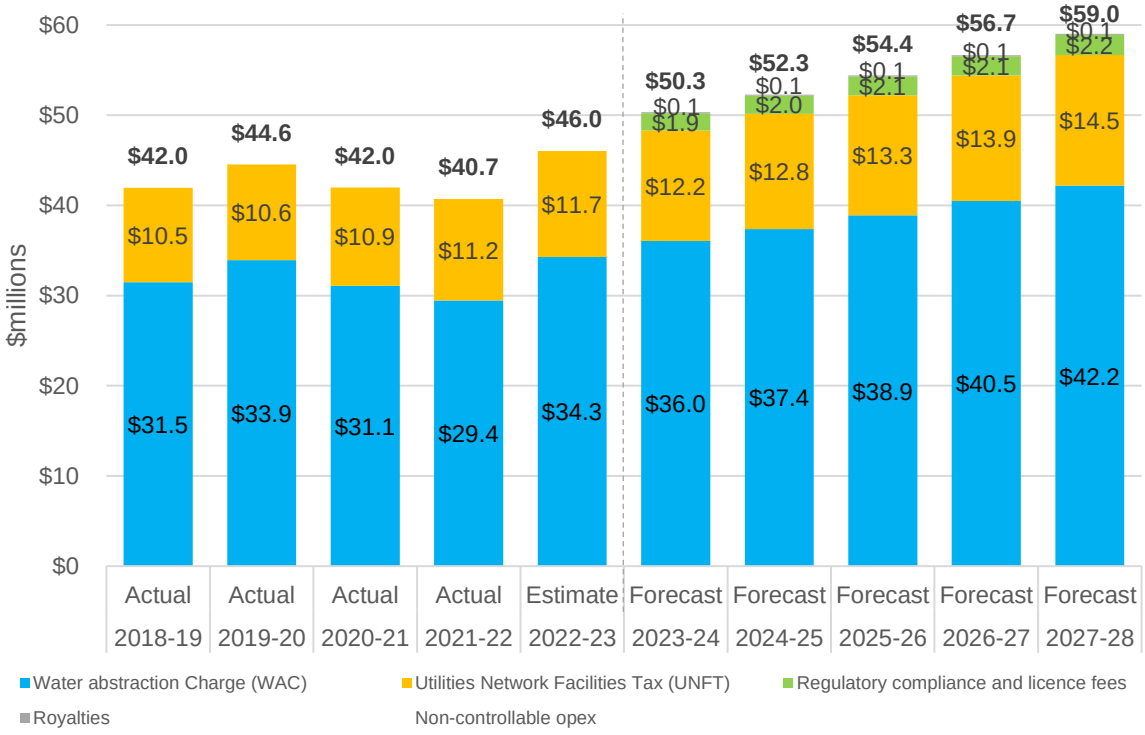
1.6 Non-controllable opex

Non-controllable opex captures costs outside our control and are trued-up annually through a pass-through provision. Non-controllable opex includes the Water Abstraction Charge (WAC) and the Utilities Network Facilities Tax (UNFT), which reflects ACT Government fees and charges.

Icon Water has revised the non-controllable opex forecast to reflect more updated data and information, including actual 2021–22 costs. We have also accepted the Commission's Draft Decision to include regulatory compliance costs, licence fees, and royalties, along with an annual true-up for either an under or over recovery of the forecast non-controllable costs.

Historical and forecast nominal non-controllable opex is shown by component in Figure 1-9. The split of forecast non-controllable costs between water and wastewater services in real inflation-adjusted terms is shown in Table 1-14.

Figure 1-9: Forecast non-controllable opex ($millions, nominal)



Source: Icon Water.

Table 1-14: Forecast non-controllable opex ($millions, 2022–23)

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Utitlies Network Facilities Tax (UNFT)						
Water	$6.57	$6.63	$6.69	$6.75	$6.82	**$33.46**
Wastewater	$5.28	$5.33	$5.38	$5.43	$5.48	**$26.91**
Total UNFT	**$11.85**	**$11.96**	**$12.07**	**$12.18**	**$12.30**	**$60.36**
Regulatory compliance and licence fees						
Water	$0.76	$0.76	$0.76	$0.76	$0.76	**$3.80**
Wastewater	$1.07	$1.07	$1.07	$1.07	$1.07	**$5.36**
Total fees	**$1.83**	**$1.83**	**$1.83**	**$1.83**	**$1.83**	**$9.16**

	2023-24	2024-25	2025-26	2026-27	2027-28	Total
Royalties						
Water	$0.05	$0.05	$0.05	$0.05	$0.05	**$0.23**
Wastewater	$0.05	$0.05	$0.05	$0.05	$0.05	**$0.25**
Total royalties	**$0.10**	**$0.10**	**$0.10**	**$0.10**	**$0.10**	**$0.49**
ICRC price review						**$0.00**
Water	$0.00	$0.00	$0.00	$0.15	$0.48	**$0.63**
Wastewater	$0.00	$0.00	$0.00	$0.16	$0.52	**$0.68**
Total costs	**$0.00**	**$0.00**	**$0.00**	**$0.31**	**$1.00**	**$1.31**
Water abstraction Charge (WAC)						
Water	$34.88	$35.00	$35.23	$35.50	$35.78	**$176.39**
Total non-controllable opex	**$48.65**	**$48.89**	**$49.23**	**$49.93**	**$51.01**	**$247.71**

Source: Icon Water. Totals may not sum due to rounding.

Appendices

Reference number	Appendix title	Author
1.1	Opex Model (confidential)	Icon Water
1.2	Quantonomics Memorandum	Quantonomics
1.3	Cost escalators	BIS Oxford Economics
1.4	ICT Investment (SaaS) step change paper (confidential)	Icon Water
1.4.1	ICT Investment (SaaS) step change model (confidential)	Icon Water
1.4.2	ICT Investment (SaaS) step change project documents (confidential)	Icon Water
1.5	SoCI step change paper (confidential)	Icon Water
1.5.1	Estimated costs for Icon Water's pathway to compliance under SOCI reforms – NaturalHazards & Supply Chain (confidential)	KPMG
1.5.2	Security of Critical Infrastructure Act 2018 Physical Security Remediation Cost Validation (confidential)	Excellium
1.5.3	KPMG costings (confidential) i. Natural Hazards ii. Supply Chain	KPMG
1.5.4	Cyber for SOCI costings with reconciliation (confidential)	Icon Water
1.5.5	Estimated costs for Icon Water to Prepare for Enhanced Cyber Security Obligations (confidential)	KPMG
1.6	Managing Buildings Better Reform design and implementation – Activities (confidential)	Icon Water
1.6.1	Managing Buildings Better Reform design and implementation – Costings (confidential)	Icon Water
1.6.2	Managing Buildings Better Reform WMMS Stage 3 Initiative Summary (confidential)	Icon Water
1.6.3	Managing Buildings Better Reform WMMS Stage 3 Costings (confidential)	Icon Water

Abbreviations and acronyms

ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
AIMS	Asset Management Information System
BISOE	BIS Oxford Economics
CAM	cost allocation methodology
capex	capital expenditure
Commission	Independent Competition and Regulatory Commission
ESC	Essential Services Commission
ICT	information and communication technology
IFRS	International Financial Reporting Standards
IPaD	Investment Planning and Design
IPART	Independent Pricing and Regulatory Tribunal
ISR	Industrial Special Risk
IWMP	Integrated Water Management Program
MJA	Marsden Jacobs Associates
opex	operating expenditure
PC	Productivity Commission
PSO	Positive Security Obligation
PWCM	Permanent Water Conservations Measures
RAB	regulatory asset base
SaaS	Software as a Service
SoCI	Security of Critical Infrastructure
SoNS	System of National Significance
TWRs	temporary water restrictions
UNFT	Utilities Network Facilities Tax
UTR	Utilities Technical Regulator
WAC	Water Abstraction Charge
WACC	Weighted Average Cost of Capital