Attachment 1

Our role, operations and business context

30 June 2022

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1.1 Introduction

Icon Water protects and supports the community and the environment by providing high quality drinking water and wastewater services to the Australian Capital Territory (ACT) and surrounding region. Our 2023–28 price proposal has been developed in consultation with our customers and stakeholders. It details the outcomes we have delivered to our customers over the past five years, the outcomes we will deliver over the next five years and the prices we will need to charge to cover the efficient cost of delivering these outcomes.

This attachment forms part of the 2023–28 price proposal. It outlines the background and context within which the 2023–28 price proposal has been developed. The subsequent attachments need to be interpreted in light of the matters discussed in this attachment. These matters include:

- the nature of the review of the 2023–28 price investigation being undertaken by the Independent Competition and Regulatory Commission (the Commission)
- the overarching objectives and vision that motivate Icon Water's plans for the 2023–28 regulatory period
- how the services covered by the 2023–28 price proposal fit within the broader set of services delivered by Icon Water
- the legislative and regulatory obligations Icon Water must comply with when delivering water and wastewater services
- the emerging challenges associated with delivering water and wastewater services in the ACT.

Box 1-1: Key points

- The 2023–28 price proposal sets out Icon Water's plans for the next five years and provides input to the Commission's investigation into, and making a price direction for, regulated water and wastewater services provided by Icon Water for the period 1 July 2023 to 30 June 2028.
- Our vision is to be a valued partner in our community. We aim to build a culture that delivers safety, innovation and inclusiveness; deliver sustainable value for our community and shareholders; and enhance customer and community engagement.
- Our proposed prices cover the efficient cost of meeting a range of technical, environmental and workplace obligations.
- Despite extreme drought conditions and the COVID-19 pandemic, we have delivered value to our customers over the 2018–23 regulatory period, with some of the lowest prices in Australia for a typical residential customer, reductions in our carbon emissions, fewer water supply interruptions and quicker responses to wastewater blockages.
- In the 2023–28 regulatory period, we will deliver key initiatives related to reducing our carbon emissions, implementing our digital strategy, implementing our liquid trade waste roadmap and recovering resources from Canberra's wastewater.

Table 1-1: Customer and community engagement feedback

What we heard	Our response
The community agrees with the need to plan for the future, this includes investing in water security and exploring alternative water sources	Our purpose is *to sustain and enhance quality of life*. As part of our *Let's Talk* customer and community engagement program we spoke with the Canberra community about how we can best manage our long and short-term water security, including appetite for demand management, water restrictions and investing in new water supply infrastructure. We will continue this conversation into the 2023–28 regulatory period, to inform our long-term water system strategy and refine our drought response plan. Forecast population growth means we need to make decisions around how our wastewater system can best meet Canberra's future needs. We have identified several pathways, and will initiate stakeholder engagement soon. In the meantime, we are continuing to invest in the Lower Molonglo Water Quality Control Centre (LMWQCC) to improve capacity, condition and performance. It's also important we have the technology to support our efficient service delivery and improve the customer experience. We are currently delivering our Digital Strategy (2021–28) to incrementally uplift, modernise and optimise our technology to maximise our asset performance and set our organisation up for sustainable success.
There is community support for achieving greater environmental sustainability and accelerating net zero while limiting impact on customer prices	We have committed to net zero emissions and have mapped our pathway to achieve net zero by 2045. We have also developed and are part-way through delivery of our Climate Change Adaptation Plan, which outlines the practical action we need to take to adapt and evolve our business to respond to the pressures and demands of a changing climate. To tackle emissions reduction we have delivered renewable energy initiatives, including new solar arrays at various locations. Our biggest challenge will be fugitive emissions at LMWQCC. As an initial step we have installed hoods to measure these emissions onsite to inform future emission reduction strategies.
The community is committed to Icon Water maintaining quality and reliable core services and is willing to pay something towards reducing interruptions or issues for those who experience them more than usual	During the 2018–23 regulatory period, customer satisfaction increased and water and wastewater complaints decreased. The activities in our price proposal outline the investment necessary to maintain this level of service. Further information on our service standards can be found in **Attachment 3: Service standards**.
Affordability should underpin any investment decision. If we need to invest to avoid causing issues in the future, we will consider support for vulnerable customers and other impacted customer segments	We have recently reviewed our sourcing model for a number of corporate and customer services, with a central focus on ensuring we achieve value-for-money outcomes for our customers. We are expecting efficiencies from the new arrangements which will be implemented from 1 July 2023, and our proposed prices for the 2023–28 regulatory period start to pass on these savings to customers. Icon Water bills for typical residential customers are among the lowest in Australia. We have worked hard to achieve this affordability: in June 2020, we froze prices for water and wastewater services at 2019–20 levels, despite an increase being allowed under the Commission's 2018 price direction, to provide some relief for our community from the economic impacts of the COVID-19 pandemic. At the same time, we increased the financial support available under our Staying Connected hardship program and expanded it to include small business customers.
The community considers Icon Water an essential service provider. To be a valued partner in the community customers want us to be more visible – this means being targeted in our partnering initiatives, education and supporting activities, and proactively talking about it with the community.	Our vision is *to be a valued partner in our community.* Some of our customers feel like 'no news is good news' when it comes to hearing about us or from us. These customers think focussing on great water and good service is enough. On the other hand, some customers think that to achieve our vision we need to be more visible. In the 2023–28 regulatory period we will maintain a focus on water literacy and will consider how we can most effectively target our partnering initiatives and education activities to best support the key values of our customers. This will include ongoing engagement with the ACT community and our customers on key topics including water security and projects planned around Canberra.

1.2 The 2023–28 price direction process

1.2.1 Introduction

Icon Water delivers water and wastewater services in the ACT. We own and manage the Canberra region's network of dams, water treatment plants, sewage treatment plants, reservoirs, water and sewage pumping stations, pipes and other related infrastructure.

The prices we charge for these services are reviewed periodically by the Commission. Prices are currently regulated by a price direction made by the Commission in 2018.[1] This price direction expires on 30 June 2023.

On 9 December 2021, the ACT Treasurer signed terms of reference under the *Independent Competition and Regulatory Commission Act 1997* (ICRC Act) for an investigation into, and the making of a price direction for, regulated water and wastewater services provided by Icon Water for the period 1 July 2023 to 30 June 2028.[2]

1.2.2 The terms of reference for this review

The terms of reference states that the Commission must consider:

- "the objectives of the Commission outlined within section 7 of the [ICRC] Act" (to promote effective competition in the interests of consumers, while facilitating an appropriate balance between efficiency, environmental and social considerations);
- "the objective related to price directions outlined in section 19L of the [ICRC] Act" (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);
- "the legislative requirements outlined in section 20 (2) of the [ICRC] Act" (which include protection of consumers from abuses of monopoly power, standards of service, cost efficiency, an appropriate rate of return on investment, the principles of ecologically sustainable development, social impacts, cash flow requirements, and the effect on general price inflation);
- "the policies of the ACT Government as they relate to the supply and use of water and sewerage services, including the ACT Water Strategy – Striking the Balance 2014–2044";
- "the National Water Initiative, Murray-Darling Basin Plan commitments and associated policies and agreements"; and
- "any other matters considered to be directly relevant to the pricing investigation."

The terms of reference state that the Commission should consider:

- minimising the potential for significant price fluctuations during the regulatory period, while ensuring the recovery of the prudent and efficient costs of Icon Water Limited; and

[1] Independent Competition and Regulatory Commission, *Regulated water and sewerage services – 1 July 2018 to 30 June 2023,* 2018.

[2] ACT Government, *Independent Competition and Regulatory Commission (Regulated Water and Sewerage Services) Terms of Reference Determination 2021*. Disallowable instrument DI2021-278 made under the *Independent Competition and Regulatory Commission Act 1997,* 2021.

- "continuing to use the current regulatory model, and, where identified, implement improvements to aspects of the methodology, including improvements identified in reviews undertaken in accordance with the reset principles in [the 2018 price direction]."

These reviews were:

- a review of incentive mechanisms, which concluded with a decision to maintain current approaches to incentive mechanisms, including the form of price control[3]
- a review of methodologies for the weighted-average cost of capital (WACC), which "largely leaves our approach unchanged and improved some aspects of our method"[4]
- a review of demand forecasting methods[5], which recommended "retaining the existing methodology while updating datasets to ensure we are using the latest available data"[6].

The reference asks the Commission to "outline its intended approach to achieving its various regulatory objectives within its decision-making process". It also asks the Commission to identify and report the incremental impact on prices associated with any changes in allowed revenue, water demand forecasts, and changes in tariff structure.

The reference notes that, under the ICRC Act, the Commission must make available a draft report for public inspection within the period of 1 September 2022 to 12 December 2022 and submit its final report to the ACT Treasurer within the period of 1 March 2023 to 1 May 2023.

1.2.3 The Commission's issues paper

The Commission released the *Issues Paper Regulated water and sewerage services price 2023–2028* (the Issues Paper) for the 2023–28 price investigation in March 2022.[7] The issues paper sets out an indicative timeline requiring Icon Water to submit its price proposal (this and other documents) by July 2022. It also advises the Commission will review and seek community and customer views on the proposal, before accepting or amending the outcomes and prices proposed therein. The Commission summarises its role as:

> to scrutinise and challenge Icon Water's pricing proposal to ensure customers pay no more than they need to for safe and reliable water and sewerage services into the future… We may accept or amend Icon Water's proposal in making our assessment of efficient costs.[8]

The issues paper sought customer and community views on four specific issues:

- **Affordability and price stability** over the five-year period and getting the right balance between the amount customers pay in their bills and making sure Icon Water has enough revenue to deliver the services customers want.
- **Service standards:** what level of investments and maintenance are needed to ensure the quality, safety and reliability of water and wastewater services.
- **Water security:** how much Icon Water should invest in improving the resilience of the water supply network, and appropriately sharing the risks from rainfall fluctuations between Icon Water and its customers.

[3] Independent Competition and Regulatory Commission (ICRC), *Water and sewerage services price regulation: Incentive mechanisms.* Final Report, 2020.

[4] ICRC, *Review of methodologies for the weighted average cost of capital.* Final report, April 2021.

[5] ICRC, *Review of water and sewerage services demand forecasting methods.* Final report, December 2021.

[6] ICRC, *Regulated water and sewerage services price 2023–2028.* Issues paper, March 2022, p. 20.

[7] ICRC, *Regulated water and sewerage services price 2023–2028.* Issues paper, March 2022.

[8] ICRC, Regulated water and sewerage services price 2023–2028. Issues paper, March 2022, p. 6.

- How Icon Water is **managing risks from climate change**, such as drought, bushfires and damaging storms, on its ability to deliver safe and reliable services to customers.

The issues paper also outlined the pricing principles the Commission intends to apply when considering regulatory objectives in its decision-making process. These principles have previously been applied by the Commission to decisions about the structure of tariffs for water and wastewater services. The issues paper indicates the principles will be applied more broadly to the 2023–28 price investigation. They include:

- economic efficiency in use
- economic efficiency for investment and operation
- environmental considerations
- community impact – gradual adjustment
- community impact – fair outcomes for low-income households
- regulatory governance – simplicity
- regulatory governance – transparency.

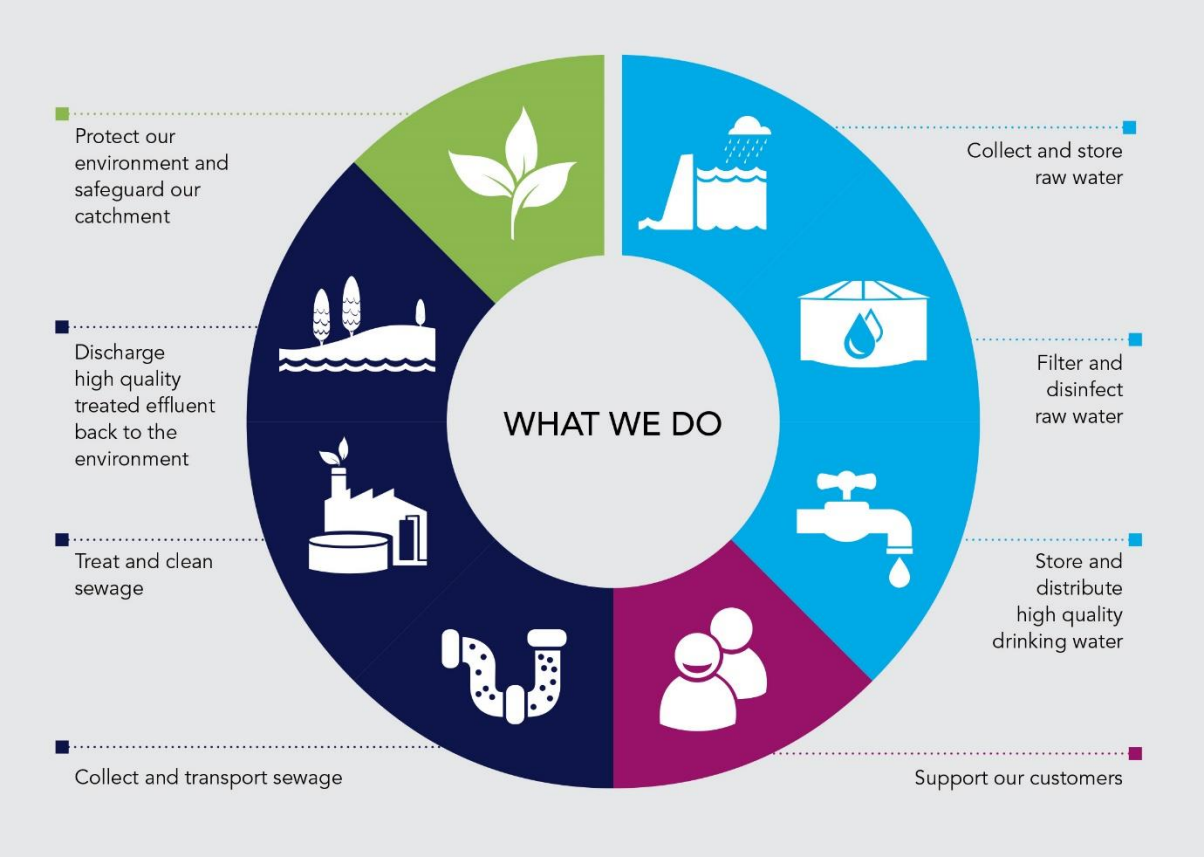
1.3 Icon Water's vision and strategy

1.3.1 What we do

Icon Water is committed to providing a safe, secure and sustainable water supply for the people of the ACT and surrounding region. We are the ACT's supplier of essential water and wastewater services; sourcing, treating and supplying water, and managing Canberra's wastewater services, for over 100 years. We play a fundamental role in the community by providing essential services that contribute to the public health, liveability and prosperity of the region.

We own and manage the Canberra region's network of dams, water treatment plants, sewage treatment plants, reservoirs, water and sewage pumping stations, pipes and other related infrastructure – an asset base valued at around $2.7 billion. We also manage an investment, valued at around $1.5 billion, in the ActewAGL Joint Venture, which operates in the energy sector.

Figure 1-1: What Icon Water does



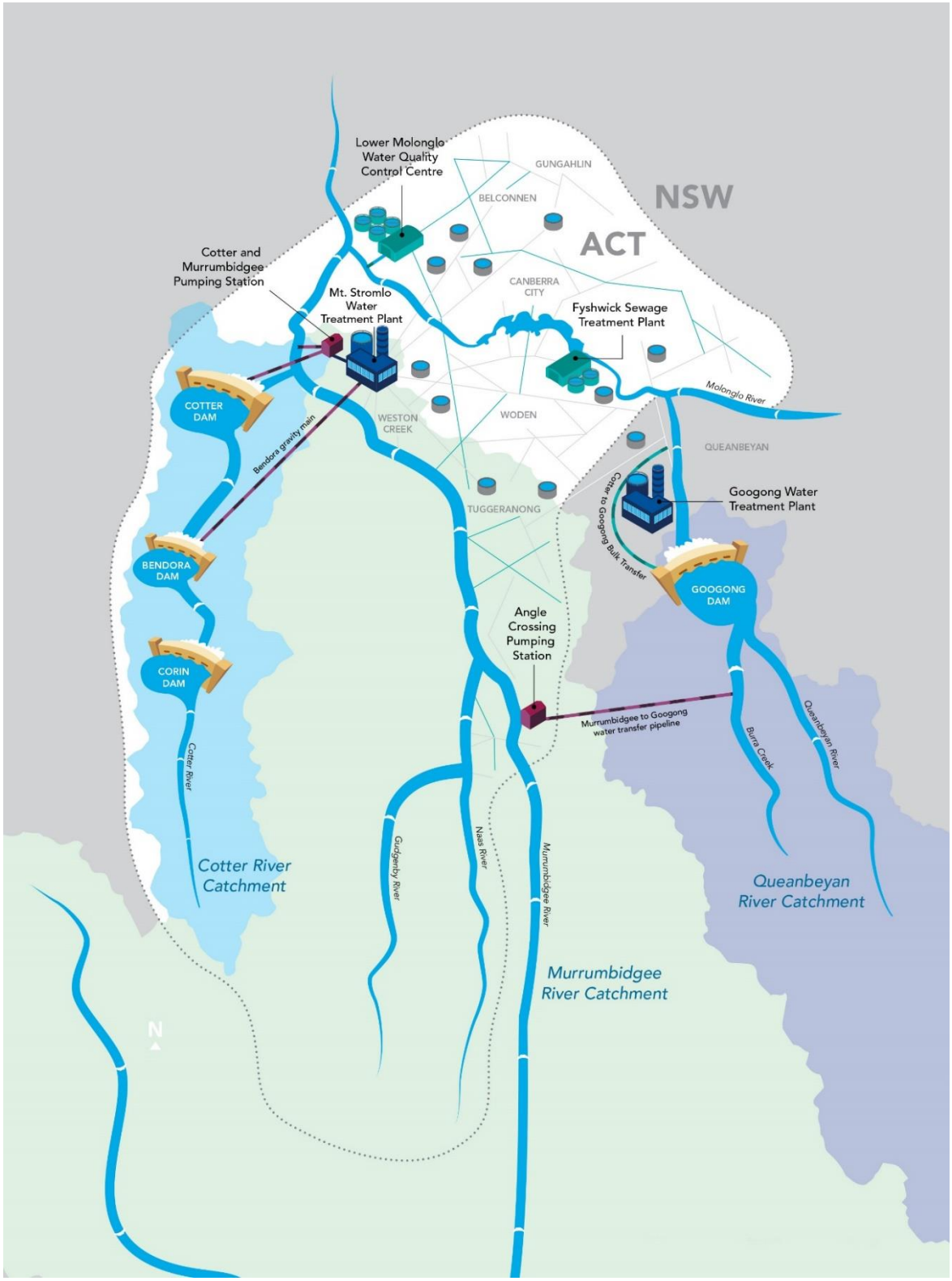
Source: Icon Water

The ACT is supplied with water from four dams; three on the Cotter River (Bendora, Corin and Cotter) and one on the Queanbeyan River (Googong) (see Figure 1-2). The combined storage capacity of the four reservoirs is around 277.8 gigalitres (GL). In addition, Icon Water can extract water from the Murrumbidgee River. All water sourced is treated either at our Mount Stromlo or Googong water treatment plants, depending on where we source it. Water is then transferred via urban water service reservoirs and pipes to residences and businesses across the ACT.

The wastewater network consists of approximately 3,400 kilometres (km) of underground pipes which collect sewage from residential, commercial, government and other properties. Sewage is treated at two locations – the larger plant is the Lower Molonglo Water Quality Control Centre (LMWQCC) located in west Belconnen, as well as the Fyshwick Sewage Treatment Plant (Fyshwick STP). The Fyshwick

STP is primarily used to manage wastewater peak flows and most of the wastewater that goes through Fyshwick STP is returned to the wastewater network and treated at LMWQCC. The water released from LMWQCC contributes to the flow in the Murrumbidgee River and the Murray–Darling Basin, providing water for several purposes including environmental flows and agricultural irrigation.

Figure 1-2: Icon Water's water and wastewater network



Source: Icon Water

1.3.2 Our objectives

Our purpose – *to sustain and enhance quality of life* – is at the heart of what we do in providing a water and wastewater system that is sustainable, safe and secure and that contributes to the wellbeing of our customers and the liveability of our region.

Icon Water has four equally important main objectives under the *Territory-owned Corporations Act 1990* (TOC Act):

- to operate at least as efficiently as any comparable business
- to maximise the sustainable return to the Territory on its investment in Icon Water and ActewAGL, in accordance with the performance targets in the Statement of Corporate Intent
- to show a sense of social responsibility by having regard to the interests of the community in which Icon Water operates, and by trying to accommodate and encourage those interests
- where Icon Water's activities affect the environment, to operate in accordance with the object of ecologically sustainable development.

These four main objectives provide the foundation on which Icon Water conducts strategic planning.

1.3.3 Our vision and business strategy

Our vision is *to be a valued partner in our community*.

We aim to:

- build a culture that values safety, innovation and inclusiveness
- deliver sustainable value for our community and shareholders
- enhance customer and community engagement.

Figure 1-3: Icon Water's business strategy

Source: Icon Water

1.3.4 Corporate structure

Icon Water is an unlisted public company owned by the ACT Government. Icon Water has two voting shareholders: the ACT Chief Minister and the ACT Minister for Water, Energy and Emissions Reduction.

Icon Water's Board currently comprises eight Directors: seven non-Executive Directors and one Executive Director, who are appointed by the Voting Shareholders.

Icon Water's leadership team manage over 400 staff in specialist roles to ensure high quality drinking water comes to the tap and wastewater is safely treated and returned to the environment. The leadership team report to the Board on business operations and activities.

1.3.5 Regulated and unregulated services

Services covered by this price proposal

This 2023–28 price proposal relates to drinking water and wastewater services in the ACT. These services account for most of the services provided by Icon Water and include the provision of miscellaneous services such as standpipe hire, meter relocations, mains connections and disconnection of service. Services provided by Icon Water that are not covered by this pricing proposal include:

- supplying bulk water to Queanbeyan-Palerang Regional Council
- supplying raw water to customers, including to Uriarra Village township
- supplying recycled water to various customers located near our sewage treatment plants
- receiving tankered waste at LMWQCC
- lease of commercial properties.

The cost of delivering these services is included in the calculation of the gross revenue requirement. Icon Water then subtracts forecast income from those services to derive a net revenue requirement for the purpose of setting prices for regulated water and wastewater services. The intention of this approach is to minimise cross subsidisation between services that are subject to the Commission's price direction and services that are not. Further information on these adjustments is included in **Attachment 10: Revenue requirement**.

1.3.6 Corporate services delivery model

Corporate and customer services for Icon Water are currently provided by ActewAGL through two agreements – the Corporate Services Agreement (CSA) and Customer Services and Community Support Agreement (CSCSA). These agreements were established in 2012 and continued a long history of integrated corporate and customer services between water and electricity utilities in the ACT dating back as far as 1988. The agreements will concurrently expire on 30 June 2023.

The Commission's issues paper noted that the 2023–28 price proposal:

> should include evidence that the provision of services has been market tested through a competitive tendering arrangement and that the decision-making process included a robust assessment of various outsourcing and insourcing options to ensure value for money for Icon Water's customers. [9]

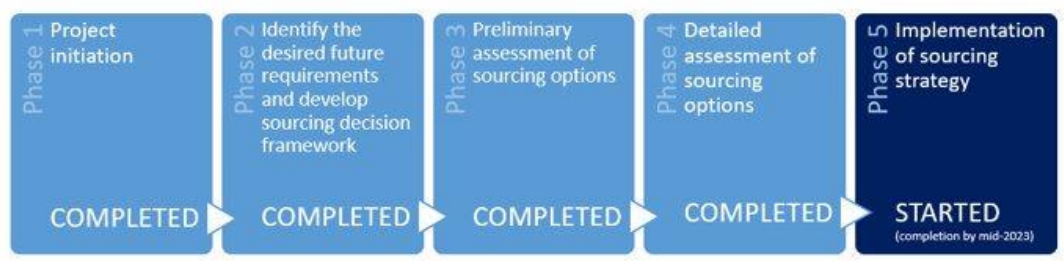
The expiry of the agreements presents the first opportunity since 2012 to review the sourcing arrangements for our corporate and customer services – to significantly modernise the services, undertake an assessment of value and afford us greater strategic control. In recognition of the

[9] ICRC, Regulated water and sewerage services prices 2023–2028. Issues paper, March 2022, p. 19.

significant scope of this work and to ensure continuity for the business and our customers, we initiated planning activities in 2019, well in advance of the agreements' expiry.

An early priority was the establishment of Guiding Principles and a Sourcing Decision Framework. With these governance controls as a foundation, the planning and analysis work evolved in a structured and deliberate manner in the intervening years, with regular and close involvement with the Icon Water Board. Our approach is summarised in Figure 1-4. A key consideration of each phase has been to ensure the decisions taken are prudent, efficient[10] and carefully manage business continuity risk arising from any potential transitioning of services.

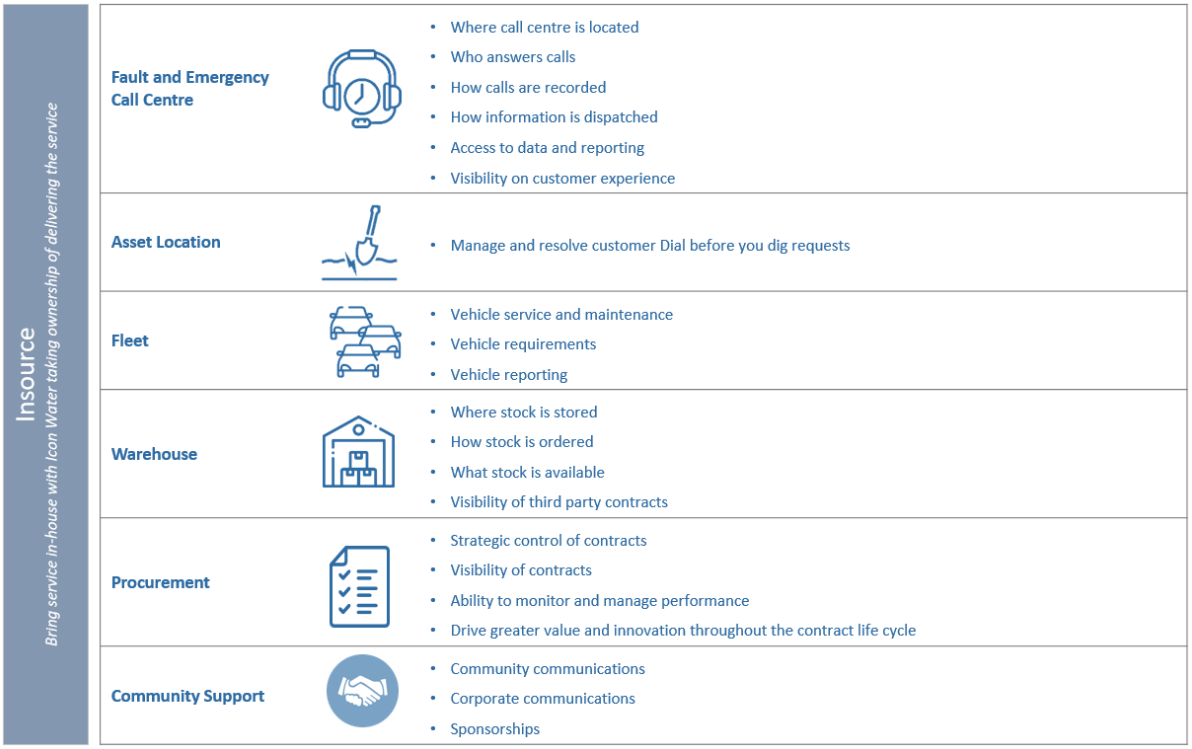
Figure 1-4: Approach to review corporate and customer services arrangements



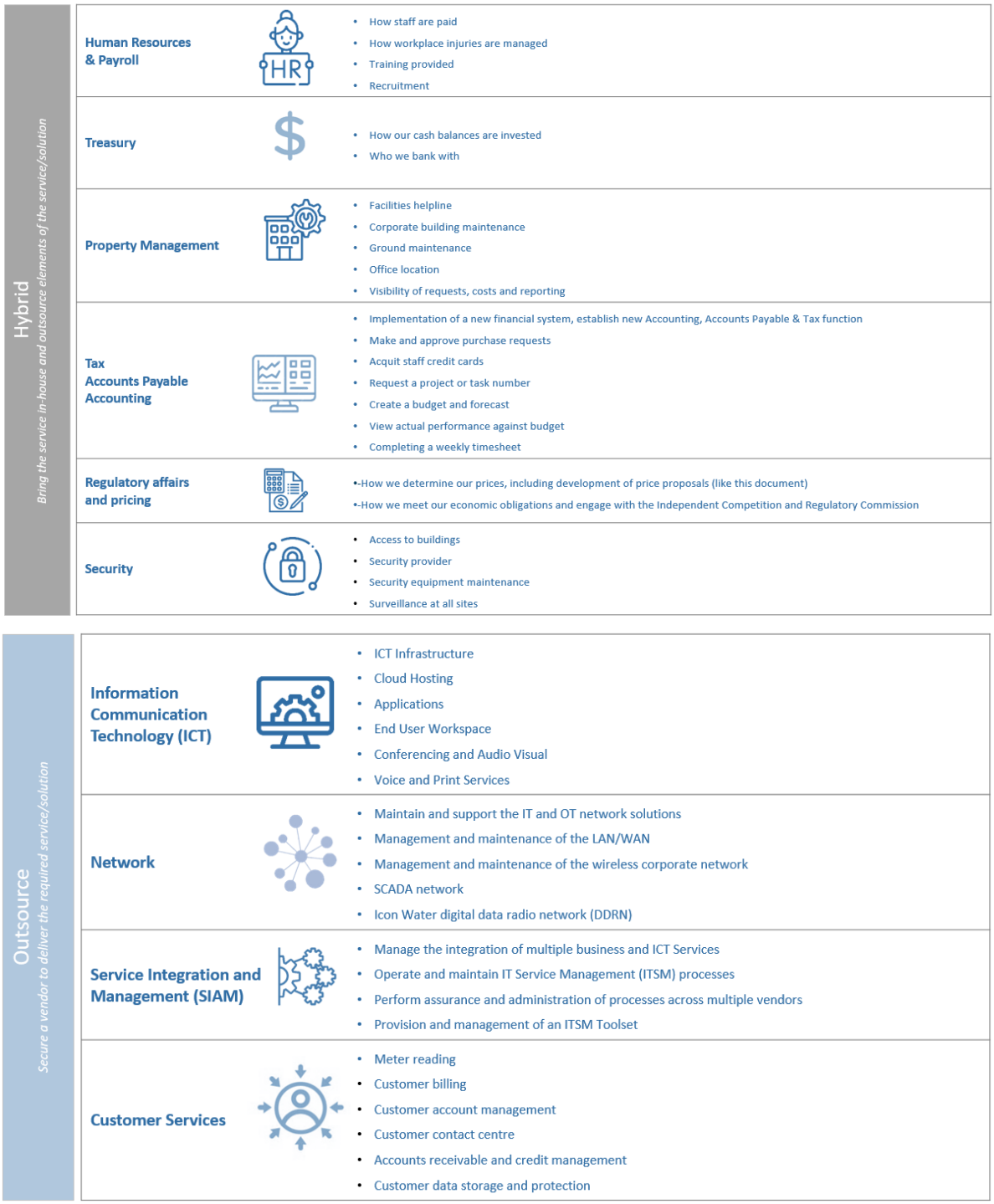
Source: Icon Water

Our sourcing strategy has facilitated maintaining access to the services needed to operate our business efficiently and effectively, to ensure continued high quality, affordable water and wastewater services to our customers. As outlined in Figure 1-5 we are adopting a mix of insourcing, outsourcing and hybrid arrangements.

Figure 1-5: Sourcing strategy overview (examples of activities within each service)



[10] As explained in **Attachment 5: Asset management governance**, we adopt a holistic assessment framework of prudency and efficiency as the concepts are often related.



Source: Icon Water

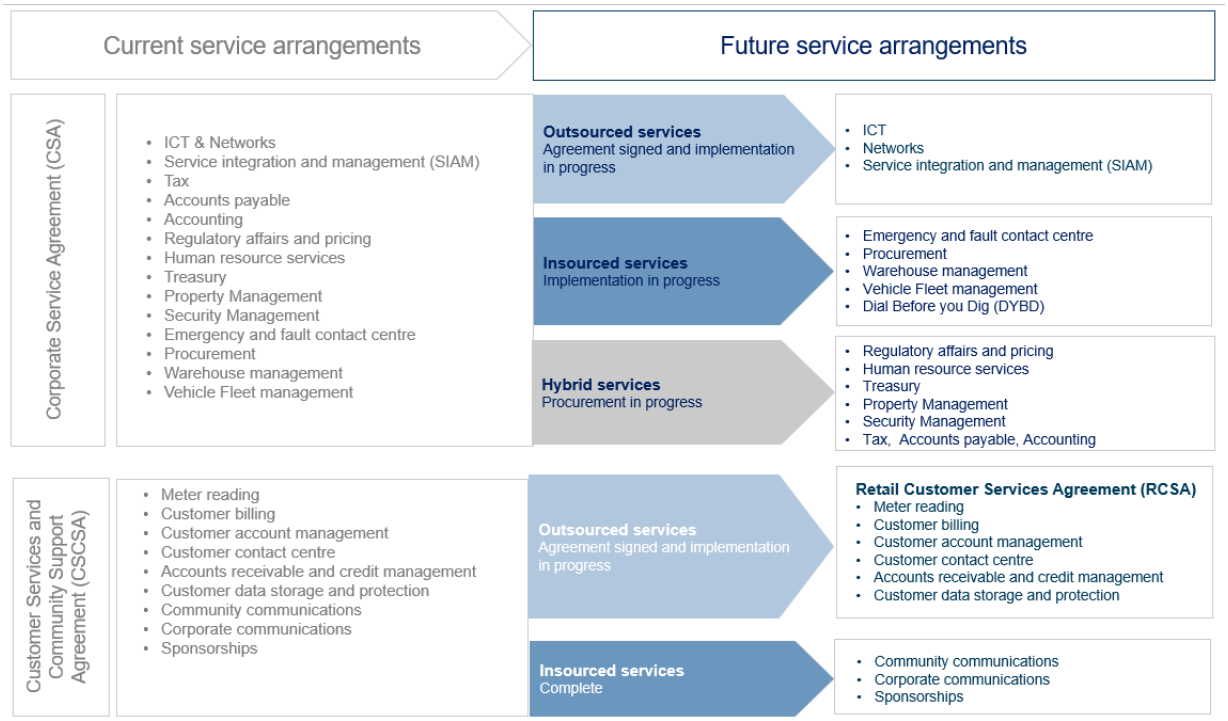
Achieving continuity of service for customers was a key consideration in developing the strategy, as both the corporate and customer services underpin our customer experience. This was reinforced through our recent engagement activities, where customers and the community expressed their expectations around responsive and seamless customer service (see Box 1-2). Refer to **Attachment 2: Customer and community engagement** for further information on customer views.

Box 1-2: Some key customer expectations in our customers words

Source: SECNewgate Australia, *Icon Water Customer and Community Strategic Engagement Project* Report, April 2022.

We have now moved into delivery of the sourcing strategy, with executed contracts for implementation of the highest complexity services, which incorporate public-facing customer services as well as corporate ICT and a financial information management system and associated services. Planning activities for remaining corporate services are also well advanced. Figure 1-6 maps the services and our current status in transitioning.

Figure 1-6: Sourcing strategy status



Source: Icon Water

Corporate services

An open market approach for ICT and financial management services was completed and contracts executed with new third party providers. These services together account for approximately half of the cost of the current CSA.

Services planned to be insourced within Icon Water have been subject to careful consideration of the required resourcing levels with external advice and benchmarking for some services to inform this position.

Hybrid arrangements are being adopted where there is a need for surge capacity, for systems capability and/or specialist expertise.

Customer services and community support

There are a mix of insource and outsource arrangements for customer services. Services will be brought in-house where there are natural synergies with existing Icon Water capability.

In accordance with the approved sourcing strategy, many of the aspects of the existing CSCSA have been retained as a bundle and following an initial market review and benchmarking activity, a request for proposal was sought from the incumbent provider (ActewAGL). A new agreement, re-scoped as the Retail Customer Services Agreement (RCSA) has been successfully negotiated and signed with the incumbent and will commence in July 2023.

The decision to re-contract with ActewAGL for these services followed market research activities in 2020, and an assessment of the broader risks and benefits. Both our billing services and our retail customer services are critical to maintaining service and minimising disruption to our customers. We know from the experience of other utilities that changing a billing system is particularly complex and that the likelihood of a smooth transition is low. Because of this and the scale of other concurrent system changes, we made a decision to recontract with ActewAGL for these particular corporate services. Additionally, continuation with the existing provider enables us and our customers to benefit from service synergies including shared meter reading and billing systems. We can also continue the

collaborative relationship focussed on improving the customer experience which has seen increasing rates of customer satisfaction with billing. For many ACT customers this represents a one-stop shop where they can discuss and make changes to energy, gas and water accounts at the same time. This is particularly important in financial hardship or emotionally difficult conversations where they can talk to the same person, only explaining their situation once. The revised contract is for an initial term of four years with options for one-year extensions.

Key benefits of the new sourcing model include:

Strategic control – our strategic direction is impacted by our limited control over services and capabilities that underpin our business (eg ICT platforms). Our future delivery model will provide us with the ability to plan and drive our strategic direction, through ownership and control of our services.

Service quality – users and customers of existing corporate services will benefit from higher quality services and data in the future. The issues that affect existing services will be resolved through owning the end-to-end service and exercising the controls that address business and customer requirements.

Commercial control – modernised commercial arrangements will provide us with greater control, visibility and accountability over services and costs, enabling services that are consistent, delivered in alignment with industry standards, and with sufficient granularity of cost.

The sourcing strategy is one of the ways we are planning to achieve productivity growth rate for 2023–28. Efficiencies we will achieve in the 2023–28 regulatory period as a result of the new sourcing strategy are factored into our productivity growth rate, so that customers will benefit from these efficiencies in the 2023–28 regulatory period. Refer to **Attachment 6: Operating expenditure** for further information on how our operating expenditure is calculated.

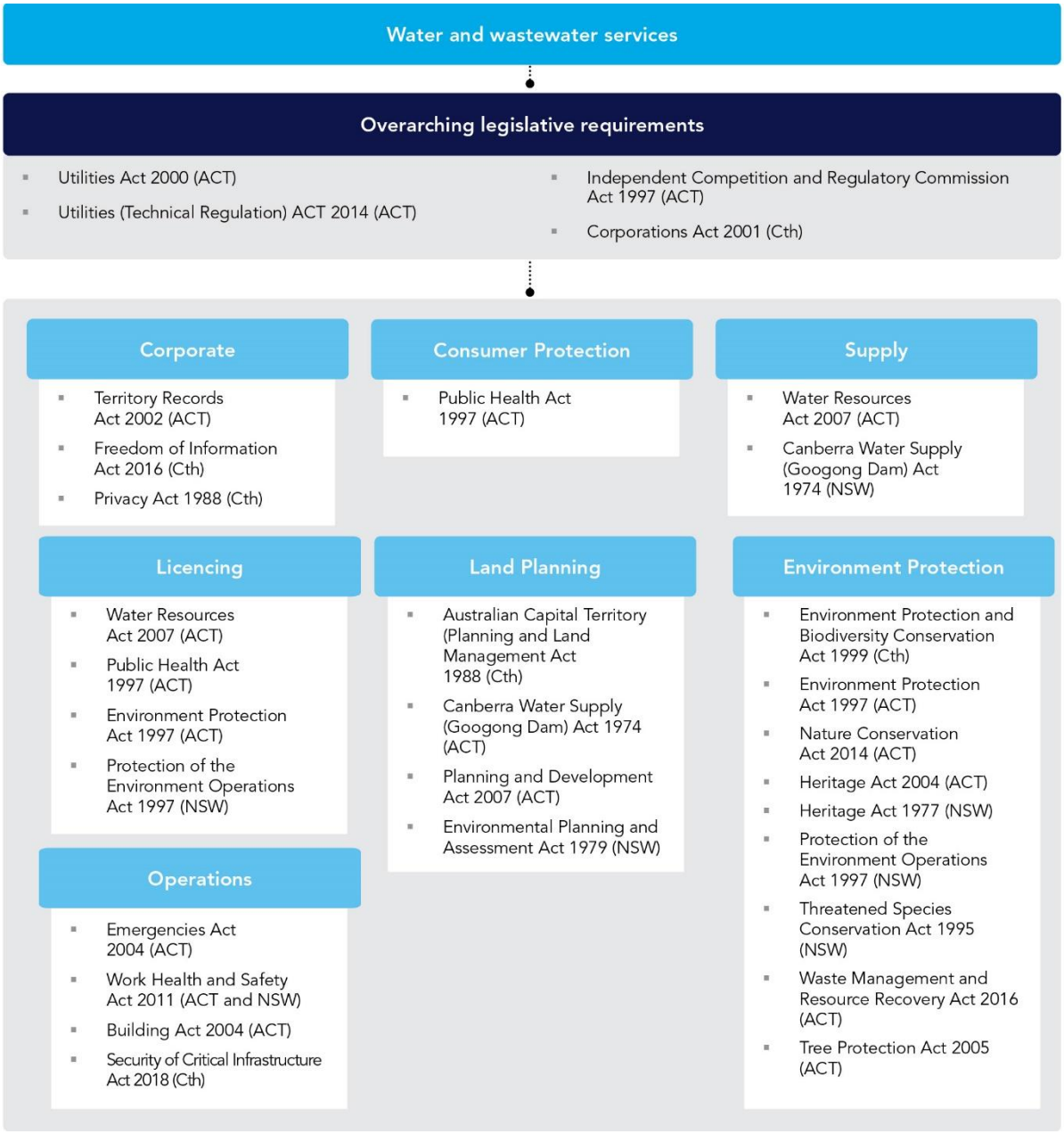
As part of our 2023–28 price proposal we are seeking to add capital expenditure implementation costs incurred in the 2018–23 regulatory period to our regulatory asset base. Refer to **Attachment 7: Capital expenditure**.

1.4 Our regulatory obligations

1.4.1 Legal framework

Icon Water is subject to a number of acts, licenses, regulations and codes that govern the operations of the water and wastewater business. An overview of Icon Water's legislative framework is shown in Figure 1-7. The prices proposed in our 2023–28 price proposal have been set to cover the efficient costs of meeting these requirements. Some of the components of legislation that are most relevant to the 2023–28 price investigation are detailed further below.

Figure 1-7: Icon Water's legislative framework



Source: Icon Water, Strategic Asset Management Plan

1.4.2 Utilities Act 2000

Icon Water is licensed by the Commission under the *Utilities Act 2000* (Utilities Act) to provide water and wastewater services to the ACT community.

This licence requires Icon Water to:

- comply with a range of matters, including any requirement of the Utilities Act and relevant industry and technical codes
- maintain a 24-hour emergency telephone service
- develop and implement a program to cost-effectively minimise unaccounted water from the water network
- agree water quantities and pressures for firefighting purposes with the ACT Fire & Rescue
- report annually to the Commission on obligations under the licence and the Utilities Act.

Icon Water's *Water and Sewerage Services Connection and Supply Standard Customer Contract,* which covers most customers, is approved by the Commission under the Utilities Act.

A key industry code under the Utilities Act that Icon Water is required to comply with is the *Consumer Protection Code*, which:

- outlines the basic rights of customers and consumers in relation to:
  - connection to and disconnection from a utility's network
  - the supply of water and wastewater services
  - access to product and service information.
- sets out when a utility can interrupt, restrict or disconnect supply of a utility service to a customer or consumer
- outlines obligations that a utility must meet in dealing with customers or consumers
- outlines the rebates a utility must pay impacted customers where guaranteed service levels are not met
- sets out the provisions that a utility must give effect to in its customer contracts for the provision of utility services.

Also of relevance under the Utilities Act is the *Water and Sewerage Capital Contribution Code*. The ACT Government's planning strategy aims for 70 per cent of Canberra's population growth to occur in established areas through urban infill and redevelopment. Upgrades to the water and wastewater networks are needed to service this growth. The Capital Contributions Code provides a framework by which 50 per cent of upgrade costs are recovered from new developments (via the 'precinct charge'), with remaining costs recovered through water and wastewater prices. The precinct charge and associated projects are subject to annual review by the Commission. The Capital Contributions Code has now been in place for almost five years, and during this time we have made incremental improvements to the methodology we use to calculate the Precinct Charge. Further information on the Capital Contributions Code can be found in **Attachment 7: Capital expenditure** and the precinct charge in **Attachment 12: Tariff structure and proposed prices**.

1.4.3 Utilities (Technical Regulation) Act 2014

The technical codes that apply to Icon Water are determined under the *Utilities (Technical Regulation) Act 2014*. Technical codes relate to:

- performance standards that Icon Water must achieve, for example related to the quality and reliability of services

- definitions of network boundaries, to identify where the customer's responsibility ends and Icon Water's responsibility starts
- who is authorised to work on connections to the network
- protecting the integrity of Icon Water's water and wastewater networks.

For example, the ACT Dam Safety Code regulates the safety of dams with the potential for a failure which could have a significant adverse effect on the community.[11] A number of applicable technical codes are currently under review, and changes may come into effect during the 2023–28 regulatory period.

1.4.4 Water supply and quality obligations

Icon Water is subject to a number of legislative requirements related to the supply and quality of water.

Icon Water holds a licence to take water under the *Water Resources Act 2007* which permits the abstraction of water from the Cotter, Queanbeyan and Murrumbidgee rivers for the purposes of urban water supply to the residents of the ACT and Queanbeyan. Our water licence also requires Icon Water to comply with the ACT Government's environmental flow requirements and undertake environmental and streamflow monitoring (see section 1.4.6).

Icon Water holds a Drinking Water Utility Licence, issued by the ACT Health Directorate under the *Public Health Act 1997*. Icon Water also complies with the *Public Health (Drinking Water) Code of Practice 2007* which is issued by ACT Health. This code specifies the technical requirements for the supply, quality, monitoring of, and reporting on drinking water in the ACT. It also documents the notification procedures we must follow if an incident occurs that poses an imminent risk to public health.

A preventative risk management approach is used to ensure the risks to water quality are minimised and controlled. We are certified for Hazard Analysis and Critical Control Point (HACCP) and throughout our operations we apply multiple barriers to protect the water supply from contaminants, including pathogenic microorganisms. We publish an *Annual Drinking Water Quality Report* which provides recent data on the physical and chemical composition of Canberra's drinking water.[12]

1.4.5 Wastewater treatment and effluent discharge obligations

The ACT *Environmental Protection Act 1997* (EPA Act), under which Icon Water's wastewater treatment plants operate, sets strict conditions to protect the rivers into which water is discharged. For example, the environmental authorisation for LMWQCC (which permits the discharge of treated effluent to the Molonglo River) requires that:

- we manage the plant to minimise events that lead to the discharge of effluent and/or emissions that exceed the authorised limits
- if an event arises that leads to the discharge of effluent and/or emissions that exceed the authorised limits, that we take all practical steps to ensure the resulting pollution is minimised and restore the operational regime to operate within the prescribed limits.

In complying with these requirements, Icon Water maintains rigorous chemical testing and biological monitoring programs.

[11] ACT Government, *ACT Dam Safety Code*: 1-15. 2018, Available at: legislation.act.gov.au.

[12] Icon Water (2021). *Annual Drinking Water Quality Report 2020-21,* 2021. Available at https://www.iconwater.com.au/sites/default/files/2023-10/Drinking%20Water%20Quality%20Report%202020-21.pdf

1.4.6 Environmental obligations

Environmental management

As noted earlier in this attachment, the TOC Act requires Icon Water to 'operate in accordance with the object of ecologically sustainable development'. Ecologically sustainable development is defined by the TOC Act to mean the effective integration of environmental and economic considerations in decision-making processes achievable through implementation of the following principles:

- the precautionary principle, being the principle that, if there is a threat of serious or irreversible environmental damage, a lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- the inter-generational equity principle, being the principle that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
- conservation of biological diversity and ecological integrity
- improved valuation and pricing of environmental resources.[13]

To achieve organisational objectives and support compliance with legal obligations including the ACT EPA Act and various environmental licence obligations, Icon Water operates under an environmental management system compliant with the international standard AS/NZS 14001:2004.

Environmental flows

Icon Water sources bulk water from the Murrumbidgee River, the Cotter River reservoirs and the Googong Reservoir. At all locations we ensure the needs of the aquatic environment downstream of the dams (or the abstraction points on the Murrumbidgee River at Angle Crossing, and at the Cotter River and Murrumbidgee River confluence) are protected. This is done through the protection of environmental flows.

The protection of environmental flows is governed under Icon Water's licence to take water under the *Water Resources Act 2007* and through Conditions of Approval for the Murrumbidgee-to-Googong Transfer and Enlarged Cotter Dam projects. The volume and timing of required environmental flows are based on extensive research and monitoring of the aquatic ecology in the water supply catchments.

The *Water Resources Act 2007*, through the Environmental Flow Guidelines, recognises the need to effectively distribute water between the environment and Canberra's population.[14] Hence, in dry times, water available for Canberra's population is reduced (through temporary water restrictions) and so are the volumes of environmental flows downstream of the dams and extraction points.

1.4.7 Reporting obligations

Icon Water has several regulatory, compliance and performance reporting obligations, including:

- annual reporting on various service delivery targets (relating to water resources, pricing, environment, finance, asset, health and customer) for the urban water utility national performance reports published by the Bureau of Meteorology (BOM)
- providing water and wastewater information to BOM under part 7 of the *Water Regulations 2008* made under the *Water Resources Act*

[13] Territory-owned Corporations Act 1990 s7(3)

[14] ACT Government, *Water Resources Environmental Flow Guidelines 2019 (No 2).* Disallowable instrument DI2019—190 made under the *Water Resources Act 2007*, s 12 (Environmental flow guidelines), 2019.

- business and financial reporting to the Voting Shareholder and the Australian Securities and Investments Commission (ASIC) through our annual report and financial statements
- reporting on compliance and performance to the Commission and the Utilities Technical Regulator.

1.4.8 Key changes to our obligations in 2018–23

During 2018–23 new obligations came into effect which relate to security of critical infrastructure.

Security of critical infrastructure

The provisions of the *Security of Critical Infrastructure Act 2018* (SOCI Act) commenced shortly after the Commission made its 2018 price direction. It covers a range of security matters for utilities, including Icon Water. To meet the requirements of this Act, Icon Water is upgrading its ICT architecture and security. We are currently assessing the impact of the SOCI Act on our protective security for critical assets to determine the extent of any upgrades required.

Major amendments to the SOCI Act came into effect on 2 April 2022 and the associated *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022* (Cth)[15] was passed in April 2022. The amended SOCI Act includes new Critical Infrastructure Risk Management Program development and reporting obligations; Positive Security Obligations (PSOs) and additional obligations imposed on critical infrastructure assets declared to be a System of National Significance (SoNS).

As part of the regulatory reforms, the Commonwealth Department of Home Affairs has developed a set of all-sector PSO rules through a co-design process with industry. The rules will oblige operators of critical infrastructure assets to manage cyber security, physical security, supply chain security, personnel security and natural hazards. We expect to be required to comply with PSO rules from 1 January 2023. While the costs to the business associated with implementation are still somewhat unclear, compliance with the cyber-security obligations, physical security upgrades and supply chain resilience requirements are likely to incur the highest costs for the next pricing period.

In developing the regulatory impact statement for the amending Act, the Department of Home Affairs estimated that "the average expected costs for responsible entities to implement, and maintain, the risk management program rules is currently an average one-off cost of $9.2 million followed by an average ongoing cost of $3.7 million per annum (p.a.)". Note this estimate does not include a forecast of costs should Icon Water be declared a SoNS, or for rules that may be developed in the future. While Icon Water is not currently in a position to estimate the full compliance cost, these figures indicate the possible magnitude of costs. For the purpose of the 2023–28 price proposal, we have included operating and capital costs relating to cyber obligations. Details of these costs are included in **Attachment 6: Operating expenditure** and **Attachment 7: Capital expenditure**.

[15] Department of Home Affairs Parliamentary Joint Committee on Intelligence and Security, *Department of Home Affairs submission into the Review of the Security Legislation Amendment (Critical Infrastructure Protection) Bill 2022*, February 2022.

1.5 Where we have been and where we are heading

1.5.1 Our achievements in this period

Across the 2018–23 regulatory period Icon Water has maintained delivery of high-quality drinking water and reliable wastewater services through challenges such as drought, bushfires and pandemic. To achieve this we have implemented projects to support the health and safety of our workforce and the community. Additionally, we have increased engagement with our customers and communication with the public, reduced our greenhouse gas emissions and continued the implementation of our Reconciliation Action Plan.

Maintaining high quality service to a growing population

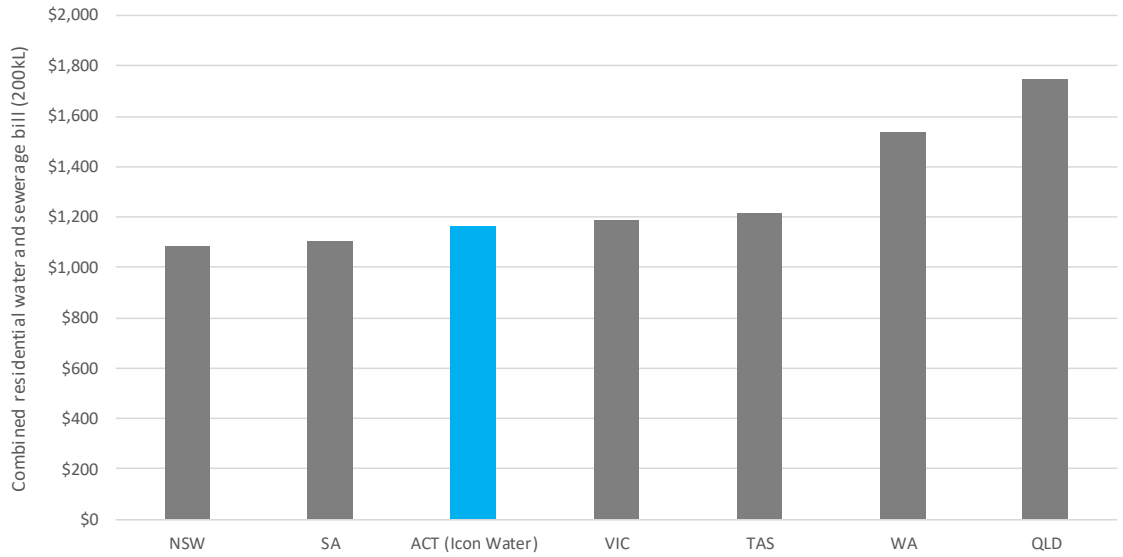
Since 2018 Icon Water has invested between $89 million and $110 million each year on capital projects. Major projects include significant works to replace aged assets at risk of failure or approaching capacity at LMWQCC. We have also continued our program to renew ageing pipes in both the wastewater and water networks.

Over the 2018–23 regulatory period to date, customer satisfaction has increased and water and wastewater complaints have decreased. We have met our targets for the frequency (though not the duration) of unplanned water interruptions. The number of wastewater system blockages has increased due in part to movement of reactive soils during the 2018–2020 drought, however our target for the duration of wastewater interruptions has been met. For further detail on the service outcomes we have delivered for customers, see **Attachment 3: Service standards.**

Keeping bills affordable

Icon Water bills for typical residential customers are among the lowest in Australia, and we have worked hard to keep bills affordable for customers. In June 2020, we froze prices for water and wastewater services at 2019–20 levels, despite an increase being allowed under the Commission's 2018 price direction, to provide some relief for our community from the economic impacts of the COVID-19 pandemic. At the same time, we increased our financial support available under the Staying Connected hardship program and expanded it to include small business customers.

Figure 1-8: Annual residential bill for major Australian water utilities in 2020–21 (based on 200 kL per annum)



Source: Bureau of Meteorology, National Performance Report 2020–21.
Amounts represent the average across all major water urban water utilities in each state/territory.

Greenhouse gas abatement

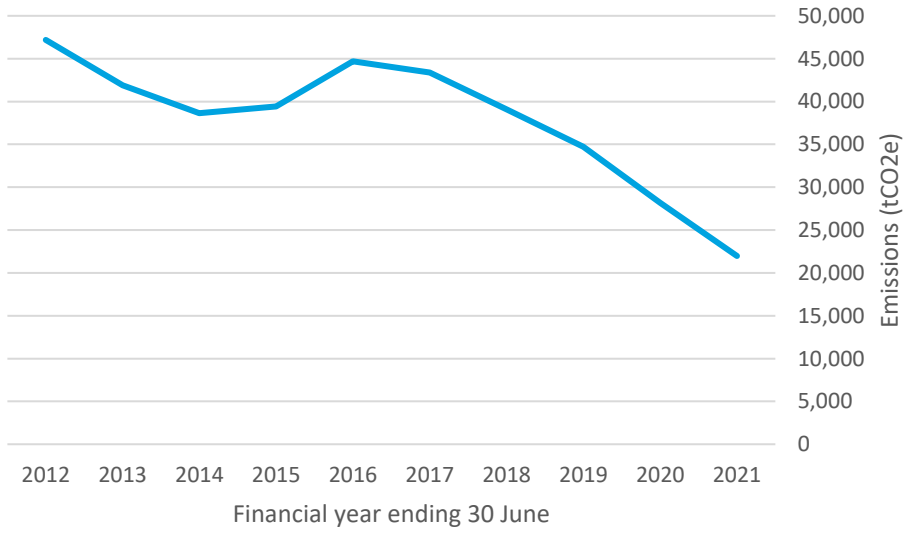
Icon Water has been tackling emissions reduction through actions within our Energy Management Strategy and our Waste Management and Resource Recovery Strategy. During the 2018–23 regulatory period, these strategies have played a part in:

- investigating several abatement opportunities including sequestering carbon through the production of biochar from biosolids
- delivering renewable energy initiatives and adding to our renewable energy portfolio with solar arrays at various locations providing 722kW capacity, with another 700kW coming online soon at LMWQCC (generating large generation certificates (LGCs) and creating electricity onsite)
- considering waste as a resource and recirculating materials where possible to reduce our use of virgin materials and the disposal of used materials to landfill
- installing hoods to measure fugitive emissions at LMWQCC to inform wastewater treatment plant emission reduction strategies
- incorporating emission reduction considerations into our sustainability assessments of capex projects
- developing our energy and emissions reporting system (Envizi).

There has been a strong focus on climate change adaptation since 2019 to manage the risks associated with the inevitable impacts of climate change, together with a strong emphasis on resource recovery since 2017. We are now well-positioned to build on our emission reduction activities and eliminate or offset the emissions we generate.

Our greenhouse gas emissions have reduced significantly over the 2018–23 regulatory period due to the initiatives discussed above and the decarbonisation of the ACT's electricity supply (Figure 1-9).

Figure 1-9: Icon Water's greenhouse gas emissions



Source: Icon Water

Digital strategy

Through the Icon Water Digital Strategy (2021–28), we are incrementally uplifting, modernising and optimising our technology to maximise our asset performance and set our organisation up for sustainable success. Ultimately, the strategy will enable our organisation, empower our workforce in their everyday work, and support a more effective, efficient and seamless service delivery and customer experience.

During the 2018–23 regulatory period we have been implementing key capabilities such as our works and asset management system, new data historian platform, new fleet management system, customer rebate report, and water meter management system upgrades. These capabilities set the foundations to refine and integrate our asset data, enhance our cyber security maturity, maximise asset performance and deliver a more integrated, trusted and productive customer experience.

It has also been critical for us to respond to ICT operational needs. We have expanded mobility, communication and collaboration technology to support ongoing flexible work and business continuity requirements relating to the COVID-19 pandemic, to ensure the pandemic has not adversely impacted the services we provide to the community. Our Digital Strategy is also serving to underpin decisions made as part of the corporate sourcing strategy, reducing risk and maximising opportunities to improve service or limit cost as part of the CSA/CSCSA transition discussed in section 1.3.6.

Drought preparedness

During the first two years of the 2018–23 regulatory period, we experienced some of the most severe drought conditions on record. We developed our drought response plan in response to depleted water storage levels. The plan takes a sophisticated, adaptive approach, with demand management, water restrictions and infrastructure investments, beginning with the lowest-cost options. The mix of surface water, groundwater, purified recycled water, and desalination investment options will adapt over time, based on further technical studies and community feedback around their expectations. Adaption will also occur in response to changes in ACT and NSW water resource policy, sustainable diversion limits, availability of water from the Snowy scheme, as well as climate and economic conditions.

During this time we operated the Murrumbidgee to Googong (M2G) pipeline to transfer water from the Murrumbidgee River into the Googong Reservoir, and increased our engagement with the community about water conservation and efficiency through our care for water campaign. Fortunately, the drought broke without a need to introduce temporary water restrictions or invest in new water supply infrastructure, but we are now better positioned for the next drought and will continue to investigate and refine our drought response plan throughout the 2023–28 regulatory period.

Water and wastewater literacy

We continued our focus on increasing water and wastewater literacy in the Canberra community through a range of programs designed to engage and educate on important topics including water wise behaviours and drain care. Understanding the importance of water conservation and drain care helps the community make positive behaviour changes that can improve water security while supporting us to operate efficiently and safely.

Our Education Program is one of the key tools we use to increase water and wastewater literacy across the region. We engage with the community, particularly youth, to build upon their understanding of our urban water network, water conservation, appropriate activities in our catchments to protect source water and the benefits of drinking tap water. Highlighting the benefits of looking after the wastewater network through drain care and understanding what can and should not be sent to wastewater treatment are also a key focus for this program. Due to COVID-19 restrictions, we have developed new types of tours with a focus on digital sessions, webinars and physically distanced face-to-face sessions. We also maintain additional online education resources for teachers, students, parents, community members and industry.

We launched our Free the Poo campaign aimed at educating Canberrans about drain care impacts and asking them to think carefully about what they put down the drain or flush down the toilet. The first phase of the program focussed on not flushing wet wipes down the toilet. The next phase of activity will incorporate messaging around fats and oils poured down drains and sinks and the associated consequences as well as the impacts of period care products on customer plumbing and the network when flushed down the toilet instead of being placed in bins.

1.5.2 What we will achieve in the coming period

We will continue to provide reliable, safe and high-quality water and wastewater services to our community. Some of the key features of our plans for the 2023–28 regulatory period are outlined below.

Planning towards net zero carbon emissions by 2045

The impacts of climate change pose a very real threat to our community. As a result, Icon Water has been tackling emissions reduction since the late 1990s through greenhouse gas emission and energy reduction strategies. More recently, recognition of the urgency to act and the need to accelerate our emissions reduction has been reflected in Icon Water's Business Strategy 2021–22 to 2023–24 and our Climate Change Adaptation Plan.

We have also recently published our eMission Possible Plan, which maps out our pathway to achieve net zero by 2045. This brings with it significant business, economic and environmental opportunities.

Our net zero target implies having zero carbon impact on the environment due to our activities. This plan is consistent with the:

- ACT Government target to reach net zero by 2045 and interval targets over time
- current climate emergency and goal of limiting global warming to two degrees Celsius by 2100 as outlined in the 2021 Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report
- United Nations Race to Zero campaign.

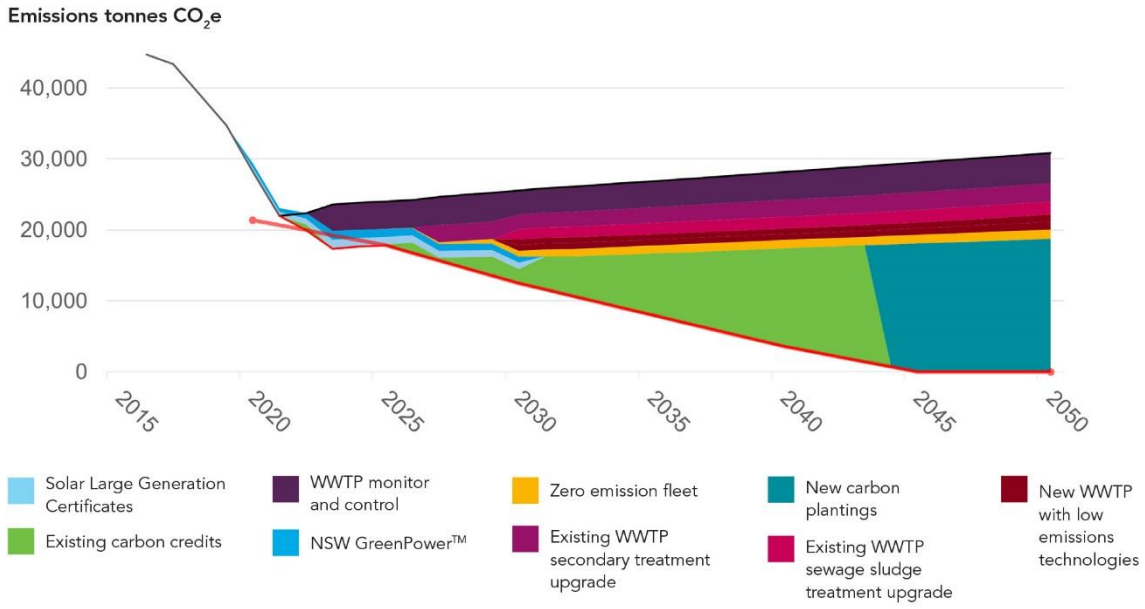
We expect our innovative trials and demonstration projects will encourage co-investment (eg in biochar) with other water utilities, the ACT Government and the business community. Our efforts align with community willingness to pay[16] and the expectation to be a climate-conscious and valued partner in the community.

This plan provides a value-based pathway to net zero considering budget, technical feasibility and operational suitability of abatement options available to Icon Water. It proposes a pathway via a range of decarbonising initiatives in accordance with the carbon hierarchy. This will evolve over time as new information and technologies become available and as we learn the outcomes of our initiatives. In the 2023–28 regulatory period, the key investments involved in maintaining progress towards our net zero target are renewable energy through large-scale generation certificates and NSW GreenPower, shifting to zero-emissions fleet vehicles, introducing advanced monitoring and control equipment at LMWQCC to minimise fugitive emissions through process adjustments, and investigating and retrofitting LMWQCC with emission-reducing technologies such as membrane-aerated biofilm reactor (MABR) technology or similar.

Where possible we have included opportunities that would be needed for other business purposes anyway. For example, the projects at LMWQCC are technologies that serve business needs in terms of planned wastewater treatment plant secondary treatment projects. The contribution of these activities towards achieving net zero emissions is illustrated in Figure 1-10.

[16] CIE, Willingness to pay for carbon abatement and co-benefits. Final report prepared for the Water Services Association of Australia, March 2022.

Figure 1-10: Icon Water's eMission Possible Plan



Source: Icon Water, eMission Possible Plan. 2022, pg. 11.

Digital strategy

In the 2023–28 regulatory period we will seek to further improve efficiency and enhance customer access, information and engagement. Delivery of our Digital Strategy (2021–28) will focus on operationalising and embedding new digital capabilities into the organisation, supported by migration activities and retirement of our legacy portfolio. Our focus will then shift to modernising our digital portfolio, and we will scale-up innovation and accelerate the pace of change.

Through the Digital Strategy we will continue to implement key initiatives including our Cyber Security Strategy and SOCI regulatory requirements, Data Management and Governance Strategy, and Workforce Mobility Strategy. We will also complete major upgrades to our Works and Asset Management System, Water Meter Management System, Geospatial Information System, and Drawing Management and Enterprise Resource Management systems, shifting to cloud capabilities where appropriate.

Achievements during the coming period will support the expected ACT Government Managing Buildings Better reform and compliance with the SOCI Act. It will also be easier for our customers to self-serve and do business with us, and will allow further integration of technology, providing a pathway to Internet of Things technology to support further automation of operations.

Liquid trade waste roadmap

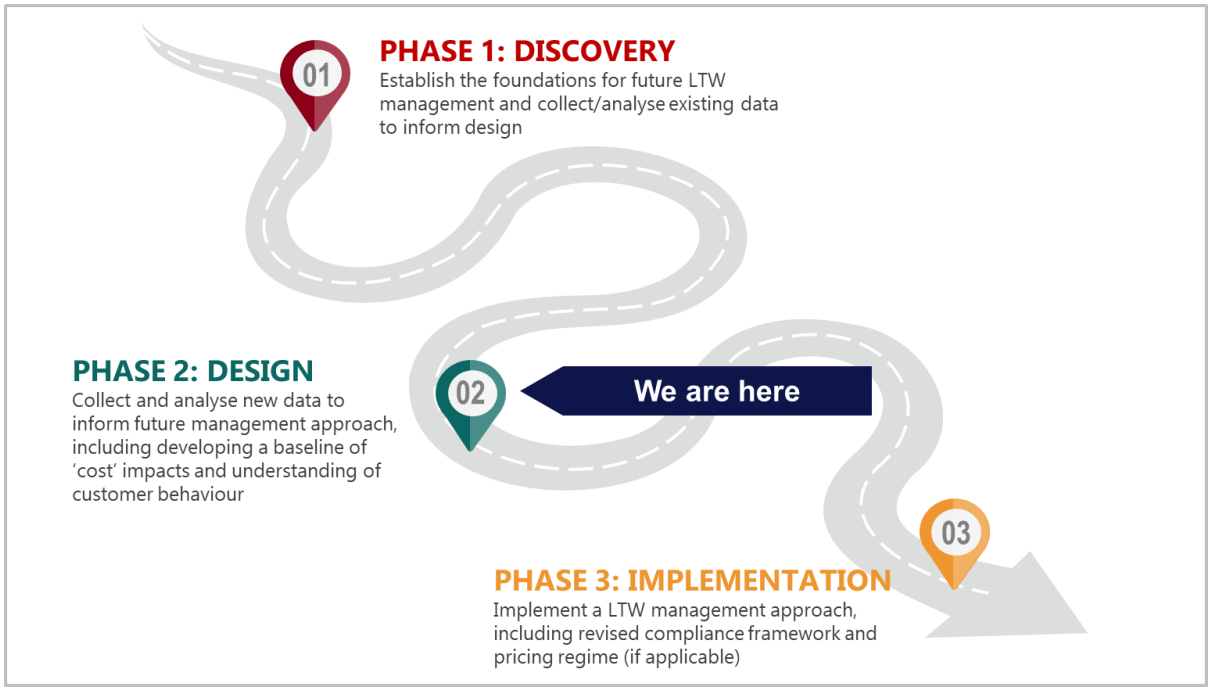
Liquid trade waste (LTW) or non-domestic wastewater can be of significantly greater volume or strength than domestic wastewater. These attributes mean that LTW has greater potential to impact the performance of the wastewater network. For example, LTW can:

- impact the health and safety of sewer workers and the community if toxic or explosive substances are discharged
- be damaging to the biological treatment process at LMWQCC
- damage or block our sewer pipes
- cause us to breach our environmental licence conditions

- If not appropriately managed, can impact our ability to produce quality recycled products at our treatment plant.

In our 2018–23 price proposal, we made a commitment to consider introducing a pricing regime for LTW. To better understand these impacts and the associated costs of LTW and inform how we best manage LTW in the future, including a possible pricing regime, during the 2018–23 regulatory period we developed and commenced implementation of a three-phased roadmap (Figure 1-11).

Figure 1-11: Icon Water's liquid trade waste roadmap



Source: Icon Water

We have recently completed phase 1 which involved analysing data on LTW and identifying data gaps. These data gaps were much more significant than anticipated, so we are currently considering how to best proceed with phase 2. As part of phase 1 we also reviewed our LTW guidelines and acceptance policy for consistency with accepted industry practice and appropriate risk management. These initial steps have laid groundwork that will inform how we best manage LTW in a way that protects our people and assets, while delivering a fair outcome for our customers.

In the 2023–28 regulatory period, our customers can expect to hear more from us on LTW as we progress with phases 2 and 3 of the roadmap. This will include rollout of the revised LTW guidelines and acceptance policy which focus on improvements to our:

- customer risk ranking algorithm
- contaminant acceptance limits
- inspection, audit, and compliance monitoring requirements
- customer contracts
- targeted guidance for customers (18 industry specific guide notes will be replaced with 47 – providing customers more tailored technical LTW support).

Treating and recovering resources from Canberra's wastewater

Icon Water has identified several pathways for ensuring the wastewater system meets the needs of a growing Canberra. Growth could be met by:

- augmenting LMWQCC

- building a new treatment plant in the east of Canberra
- building a new centralised treatment plant
- investing in catchment approaches and offsets
- moving to decentralised local treatment.

We will continue our technical investigations of the options into the 2023–28 regulatory period, to make informed decisions as part of our adaptive planning approach. There are two major projects at LMWQCC occurring in 2023–28; both projects will be needed regardless of the pathway chosen.

The first project is a secondary treatment upgrade at LMWQCC. The population of Canberra has grown to a point where the existing plant is approaching capacity. An upgrade to the secondary treatment process will ensure the plant can meet technical and environmental obligations. Without investment, there are increasing risks the plant will release effluent into the Murrumbidgee River that has not been treated to the required standard. The project will enable the cost-effective future addition of further capacity to avoid closing off a long-term pathway involving major augmentation at LMWQCC.

The second project is the replacement of the biosolids process at LMWQCC. The current furnaces are reaching the end of their service lives. Without investment, there is increasing risk of asset failure and environmental impacts from alternative disposal of solids, and increasing risk of odour for communities nearby. We are considering a range of options for new treatment, including heat treatment systems that produce biochar — a specialised potting mix for the horticultural industry, created by combining our biosolids with forest residue — and cold treatment systems that produce methane, which can be used for energy generation. Community and stakeholder consultation and opportunities to reduce Icon Water's net greenhouse gas emissions are important considerations in the evaluation of these options.

Water security activities and responding to drought

We have set objectives for our water system to be safe, secure and smart in supplying water to support the sustainability and liveability of our community.

- Our water system is safe for the environment, customers, our workforce and the community.
- Our water system ensures long-term water supply and security to support our growing population.
- Our system is supported by appropriate information, technology, knowledge and understanding.

The main drivers of volatility and uncertainty impacting on our water system are the extent of climate change impacts and the nature of demand growth. Our main areas of focus for the water system are to ensure we have sufficient security for our water supply and capability to treat water of variable source quality to high quality safe drinking water. We are actively planning for a future where climate change has impacted our system, and will routinely reassess our water security and water catchment quality to inform our operating and investment decisions. We will also be taking opportunities to improve and consolidate our existing system as key parts of the network become eligible for renewal. For example, we are considering decommissioning some of our water reservoirs when they reach end of life if other enhancements to the system will maintain water quality and reliability while enabling the water system to operate more efficiently.

Our Drought Management Plan outlines our drought responses with a combination of system performance levers: source water management, demand and supply. A selection of drought response portfolios have been identified, and an adaptive roadmap has been developed to show how we will shift between the various portfolios based on circumstances at the time of making a decision. Activities to support the portfolios will be progressed, and we will continually re-evaluate our options as we learn more, enhancing our preparedness for future droughts.

Provide input to and adopt changes in government policy and regulations

We proactively engage with stakeholders, including various ACT Government agencies in order to support positive outcomes in areas of mutual interest. We are a member of several forums that provide opportunities for partnership and deliberative discussion about long term planning and service delivery.

We have a keen interest in supporting our growing population by ensuring considered, sustainable and collaborative planning and development. Our active involvement in this space also supports certainty of supply, efficient and safe maintenance, repair and renewal of existing water and wastewater assets. We are supportive of various ACT Government strategies (specifically the ACT Planning Strategy 2018 and the Climate Change Strategy) which provide vision and guidance for how our city will develop, grow and build resilience to climate change.

Whilst we actively participate in engagement activities relating to the development of Government policy, there are inherent risks that changes can have unintended impacts for us as a service provider. For example, the proposed Urban Forest Bill will result in greater protection of urban trees, which will have several benefits to the community, including enhancing liveability. However, increased protection of trees may also create potential inefficiencies in expediting network maintenance activities, upgrades or replacement. Servicing costs will increase due to further encroachment pressure on existing assets and difficulty in appropriately locating new assets which are further constrained. We have provided feedback on the proposed Bill and will explore mechanisms to mitigate risks (including working closely with the ACT Government), although it is challenging for us to quantify the impact that the additional constraints will have in terms of impacting overall efficiency – in terms of cost, risk and performance. The Urban Forest Bill is just one example of a change to policy or regulation that could impact the way we deliver services in the future.

In the 2023–28 regulatory period we will continue to engage with ACT Government agencies on emerging changes to policy and regulations, to ensure that the impact on water and wastewater services, water security, our efficiency and ultimately our customers is understood and considered in their decision making.

1.6 Our resilience

1.6.1 Climate change adaptation

Climate change and variability present significant challenges to our business and the Canberra region due to the broad scale, and short and long-term nature of the problem. We are likely to experience incremental changes with warming temperatures and changing rainfall patterns as well as more frequent extreme events including heatwaves, sustained drought, severe storm events, extreme fire weather and extension of the fire season. We have been observing impacts of these changes on our catchment. Dam inflows have been lower than expected, suggesting that rainfall is not converting to inflows at the same rates observed historically. Icon Water has updated its Water Resource Model to take into account the change in catchment yields, more accurately model droughts and align climate change assumptions to NSW and ACT Regional Climate Modelling (NARCliM) outputs.

In May 2019 the ACT Government declared a climate emergency and announced its intention that the ACT lead the nation's efforts to address climate change. At the same time, Icon Water recognised the need to become increasingly resilient to climate change, with climate change adaptation identified as a significant business risk and strategic imperative within our 2019–20 to 2022–23 Business Strategy.

Climate change is not new to Icon Water. Our operations rely on weather and the water cycle and climate change has been a factor in our planning for many years. As a result, we have a wide range of business programs and controls already in place that improve our resilience to climate change (shown in Figure 1-12).

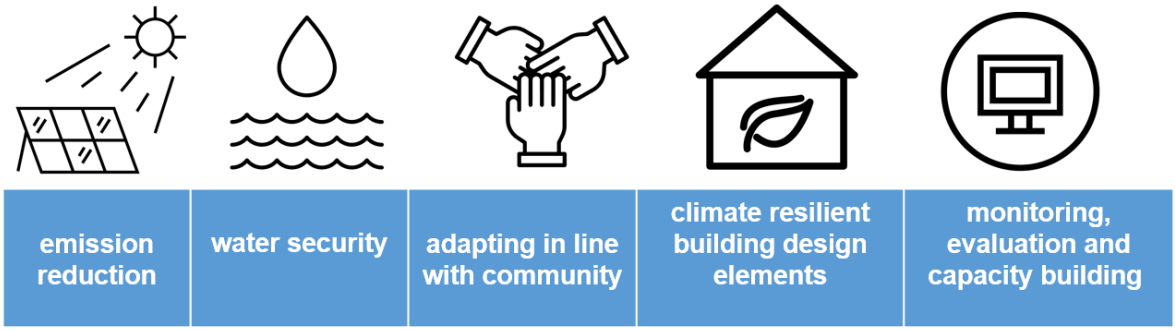
Figure 1-12: Actions Icon Water has taken to adapt to climate change

Source: Icon Water

However, with local climate changes being realised earlier than anticipated, we need further practical action that supports our business and community resilience. Our Climate Change Adaptation Plan brings together and builds on existing action, business capability and processes, and highlights where we must focus to retain resilient services for the community. It is the culmination of research, internal consultation and a sound climate change adaptation methodology based on industry standards. It provides a key component to understanding our exposure to climate change and developing sound climate risk management.

Through the plan, we have committed to 56 adaptation actions over the three-year period (mid-2020 to mid-2023) to address key climate change risks identified through a series of impact and risk management workshops with key stakeholders in 2019. Figure 1-13 shows key action themes identified for immediate attention.

Figure 1-13 Icon Water's adaptation action themes



Source: Icon Water

Examples of actions within this plan are highlighted in Table 1-2.

Table 1-2: Examples of Icon Water adaptation actions

Emission reduction  We will continue to eliminate greenhouse gas emissions and improve energy efficiency through our emission reduction programs, including solar photovoltaic generation and mitigation of nitrous oxide from our wastewater treatment processes. We have a target to achieve net zero greenhouse gas emissions by 2045, consistent with the ACT Government's commitment.
Water security  We will continue to collaborate with partners and our community through education and water conservation programs, to value and respect our local catchments. We will deliver our drought management plan and water conservation program so we can maintain our high standards of service to the Canberra community, as well as supporting our regional neighbours.
Adapting in line with community  It is essential we prioritise adaptation actions that will best sustain and enhance quality of life for people in the ACT and region. We will work with the community and our supply chain to help prepare for and adapt to changes. We will work with the ACT Government and community to ensure our adaptation actions align with community values and aspirations and the ACT Climate Change Strategy 2019–25.
Climate-resilient building design elements  With extreme events likely to increase over time, we must ensure our facilities can remain resilient in emergencies. We will update the climate change projections in our design and construction standards, ensure we have sufficient fire protection, backup energy and critical supplies at sites, use sustainable and climate resilient materials and ensure our assets have the capacity to address and withstand climate changes now and in the future.
Monitoring, evaluation and capacity building  Climate change is a fast-moving field of research and some challenges may not yet have viable solutions. As such, we need to continue to monitor relevant research and changes to ensure our adaptation program keeps up with best practice. We will collaborate and share experience with industry bodies and climate change researchers to aid our adaptation efforts.

In the last three years alone we have seen extreme events of drought, fire, flood, hail and pandemic. The forecast of cascading climate change impacts exposing human system vulnerabilities (as recently highlighted in the IPCC Assessment Report Number 6[17]) is being increasingly observed with natural events leading to disruption of chemical supply chains, energy systems and human resources critical for business resilience. Development of Version 2 of our Climate Change Adaptation Plan in the next regulatory period is essential; we will incorporate new climate modelling and cascading impact scenarios to identify the next wave of risk-based controls for continuity of essential services for the community.

[17] IPCC, *Sixth Assessment Report,* 2021, available at https://www.ipcc.ch/assessment-report/ar6/

Abbreviations and acronyms

ACT	Australian Capital Territory
ACCU	Australian carbon credit unit
ASIC	Australian Securities and Investments Commission
BOM	Bureau of Meteorology
Commission	Independent Competition and Regulatory Commission
CSA	Corporate services agreement
CSCSA	Customer services and community support agreement
EPA Act	*Environmental Protection Act 1997*
FIMS	Financial information management systems
GL	Gigalitre
HACCP	Hazard Analysis and Critical Control Point
ICRC	Independent Competition and Regulatory Commission
ICRC Act	*Independent Competition and Regulatory Commission Act 1997*
ICT	Information communications technology
IPCC	Intergovernmental Panel on Climate Change
km	Kilometre
LGC	Large-scale generation certificate
LTW	Liquid trade waste
LMWQCC	Lower Molonglo Water Quality Control Centre
MABR	Membrane-aerated biofilm reactor
M2G	Murrumbidgee to Googong
NARCliM	NSW and ACT Regional Climate Modelling
PSO	Positive Security Obligations
RCSA	Retail Customer Services Agreement
SOCI Act	*Security of Critical Infrastructure Act 2018*
SoNS	System of National Significance
STP	Sewage treatment plant

TOC Act	Territory-owned Corporations Act
Utilities Act	*Utilities Act 2000*
WACC	Weighted-average cost of capital