SECNewgate Australia

Icon Water Customer and Community Strategic Engagement Project Report

Prepared for Icon Water | April 2022

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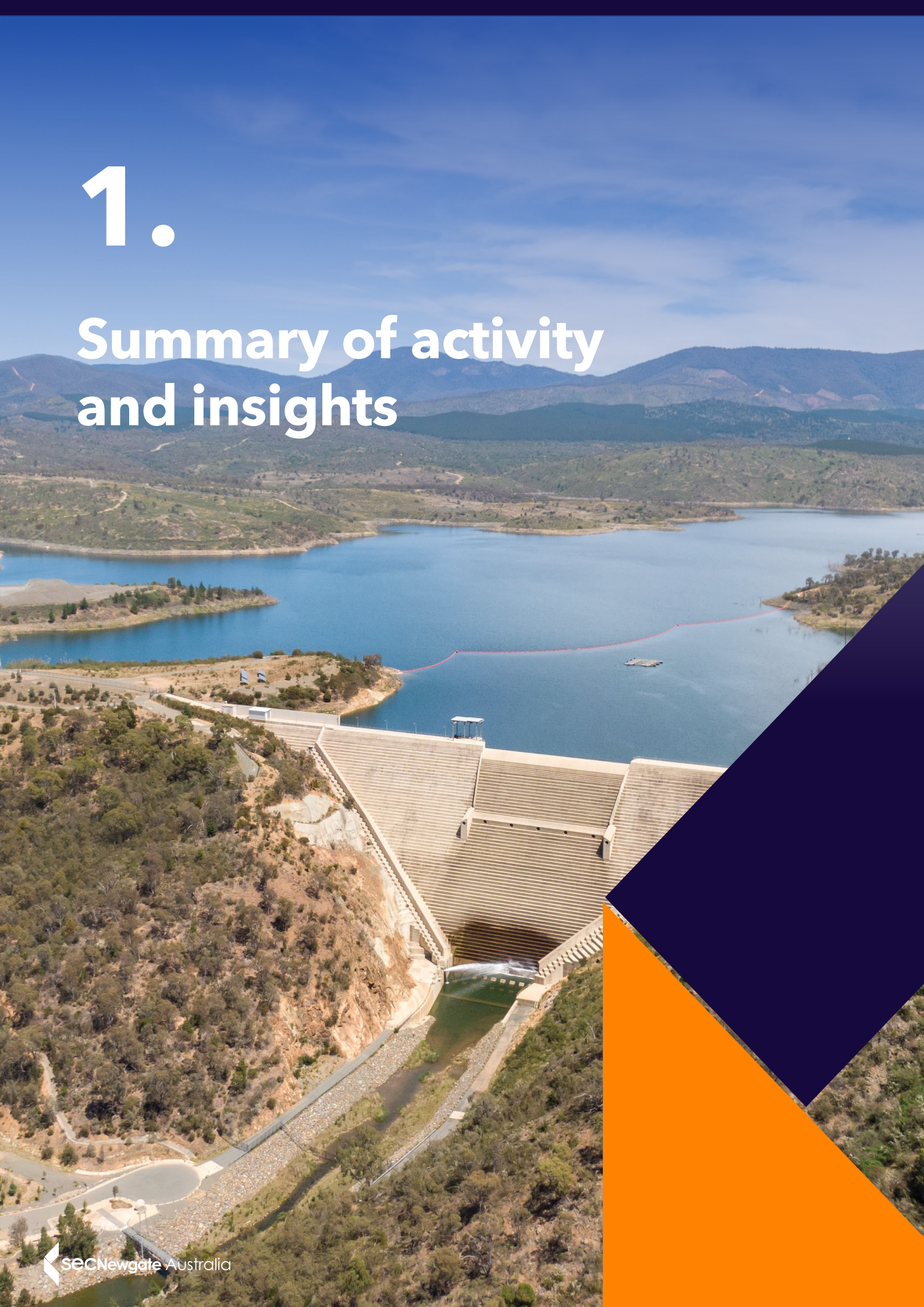

1.

Summary of activity and insights

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1.1 Engagement project purpose

Let's Talk Water and Wastewater

Icon Water is the ACT's supplier of essential water and wastewater (sewerage) services and has served the ACT community for over 100 years.

Icon Water's vision is to be a valued partner in the community. They strive for ongoing dialogue with their customers and for these conversations to translate into meaningful outcomes for the ACT community.

To help achieve this vision, in 2021 Icon Water launched its customer engagement initiative, Let's Talk Water and Wastewater – a program of face-to-face and online community discussion where people can provide feedback on a range of Icon Water projects.

The 2021/22 Customer and Community Strategic Engagement Project was the first project to be delivered under the Let's Talk Water and Wastewater initiative. It was designed to help guide Icon Water's strategic planning and to directly inform the 2023-2028 price proposal.

Water and wastewater planning requires community input and feedback across a broad range of concepts and initiatives. Some of these early strategic plans may become specific proposals to take back to the community as part of the next price review.

The 2021/22 Customer and Community Strategic Engagement Project

The Independent Competition and Regulatory Commission (ICRC) is the independent body responsible for licensing Icon Water's services and regulating their prices, which requires a review every five years. As Icon Water is the monopoly provider of essential water and wastewater services in the ACT, the ICRC's role is therefore to ensure the provision of safe and reliable services at a fair and efficient cost that is in the interest of ACT customers.

The 2021/2022 Engagement Project sought feedback and insights from multiple perspectives within the ACT community and Icon Water's customer groups. This report reflects the range of perspectives and opinions shared and, as a result, presents a clear description of community and customer investment priorities for Icon Water to use in shaping its forthcoming price proposal.

Icon Water conducts an annual customer survey which provides insights into the issues of its key customer groups (residents, standard businesses and high-volume businesses). Issues identified in the most recent survey, combined with whole of organisation thinking about customer priorities, contributed to the foundation for the topic areas and the questions posed to the community as part of the 2021/2022 Engagement Project.

Icon Water elected to use a wide range of engagement tools to provide a thorough understanding of ideas, issues and sentiment, on both immediate investment decisions and longer-term strategy planning for the organisation.

There were a number of community and customer stakeholders whose involvement was crucial to the success of this program. These stakeholders included:

- Members of the Customer Advocacy Forum
- Several of the ACT Community Councils
- Environment organisations, such as the Conservation Council ACT Region
- Key account customers, community groups and industry bodies
- The Icon Water Expert Panel of recognised academics from various ACT based universities and federal government departments.

Using the findings presented in this report, Icon Water is committed to the Let's Talk program and is developing a forward plan of engagement for future projects to build upon the foundational discussions from the 2021/2022 Engagement Project.

1.2 Snapshot of engagement tools

A variety of engagement tools were used as part of the 2021/2022 Engagement Project that built upon existing tools used by Icon Water. The tools selected aimed to capture feedback and insights from Icon Water's customers, stakeholders and the ACT community.

Existing Icon Water engagement tools

- Annual satisfaction surveys
- Quarterly omnibus 'pulse' surveys
- Water Services Association of Australia's National Perception Survey

Social media posts
Facebook; 2,077 followers
Twitter; 2,537 followers
LinkedIn; 2,697 followers
Reach : 16 posts | 7,311 reach

4 focus group sessions
Reach : 25 participants

Three-stage deliberative deep-dive process
Reach : 51 participants

7 presentations to community groups
Reach : approx. 56 participants

1 pop-up at a community market
Reach : 43 people engaged

Due to the COVID-19 lockdown, this style of engagement activity had to cease shortly after this one event.

Open community survey
Reach : 487 participants

2 presentations to environment and expert water groups
Reach : 9 participants

Key customer interviews
Reach : 8 participants

6 Customer Advocacy Forum meetings
Reach : approx. 10 participants

Quantitative survey (residential customers)
Reach : 2,645 participants

1.3 Summary of insights for Icon Water

Icon Water has been testing annually customer sentiment and issues through their Customer Survey since 2015. These insights, and the insights from the 2021/2022 Engagement Project are described below. They reflect community input to both strategic thinking and decisions, and financial investment questions for the 2023 – 2028 Price Period.

Broadly, the 2021 Icon Water Customer Survey of 500 customers (300 residents, 150 businesses, 50 high-volume businesses) found that:

- Positive sentiment towards Icon Water had declined from the overall 2020 results but was largely in line with results from years prior to 2020. Overall satisfaction with Icon Water remained high among residential (91%) and business customers (92%), however high-volume business customers recorded a decrease in overall satisfaction from previous years (86%).
- Results from testing the perceived ease of conducting business with Icon Water showed a decline from previous years among all customer groups. When asked how Icon Water could better meet their needs, improved customer service and responsiveness was a common response.
- All customer groups felt affordable pricing was an important matter and saw it as an area of improvement for Icon Water.

These issues helped design the engagement questions for the 2021/2022 Engagement Project. Further detail on findings from the 2021 Icon Water Customer Survey can be found in Section 2.1.

Listed below are the key insights across all engagement activities for Icon Water to consider as part of its forward planning and development of financial investments for the 2023 – 2028 price proposal.

All of the following insights relate to specific price proposals and detailed analysis that are described in this report.

Insight 1: The community agrees with the need for Icon Water to plan for the future. This includes water security and exploring alternative water sources.

Across all discussions, water security and the preservation of water as a finite resource was top of mind for participants. Water security was seen as an important area of focus for Icon Water as population growth and climate change continues.

Overall, participants were open in principle to Icon Water exploring future alternative water sources. It was felt in many discussions that Canberrans are environmentally conscious people who would be willing to consider new ways to conserve and re-use water.

Participants had mixed reactions to the concept of introducing earlier water restrictions. Some felt they were already doing enough to conserve water. In particular, large water users were less in favour of this concept. ACT asset managers expressed concern about the cost to repair irrigated grounds and sport fields once restrictions end.

Insight 2: There is community support for accelerating to net zero greenhouse gas (GHG) emissions and achieving greater environmental sustainability while limiting impacts on customer prices.

Participants felt positively towards Icon Water projects that promoted sustainable outcomes for the ACT. Icon Water's forward planning and effort in this space was often appreciated and praised by participants.

Achieving the net zero GHG emissions target ahead of 2045 was widely supported across discussions. This support was given with and without information about possible increases to customer charges. It was felt that if Icon Water has the capability to reach this target sooner, then they should implement the tools to do so. A similar sense of corporate responsibility was applied to resource recovery and waste management, where a targeted investment accompanied by community education was supported, with and without information about possible increases to customer charges

In regard to an investment in innovation, many participants took pride in the idea of Canberra as an innovator and therefore thought Icon Water's current investment in innovation was too low. However, innovation was viewed with caveats - it was felt that Icon Water could examine how to achieve synergies from innovation achievements in other jurisdictions, and that investment/s by Icon Water needed to result in positive environmental outcomes and provide customers with greater efficiencies and lower bill amounts.

Insight 3: The community is committed to Icon Water maintaining quality and reliable core services and is willing to pay something towards improving network control and performance equity.

Managing water and wastewater outages

Overall, participants were satisfied with Icon Water's current level of service in managing water and wastewater outages. This sentiment was felt across customer groups, including key customers.

Maintaining the current, good levels of service was widely supported. Some participants noted that a reduction in service levels should be avoided, as it could produce long-term network consequences despite short-term cost savings for customers.

Qualitative discussions indicated an overall reluctance for a greater investment to improve service levels in managing outages, given the broad levels of customer satisfaction with the current service. Similarly, the broader community who were not experiencing outages were reluctant to invest to ensure service equity in managing outages across the network.

Willingness-to-Pay studies determined the 50% median, and 60% and 70% quartile amounts that community members were willing to pay to ensure that water and wastewater outages are experienced more equitably across the network. Findings from this study showed that those customers who were at a higher risk of water and wastewater service interruptions were willing to pay more to improve that service.

Digital meters

The accelerated implementation of digital meters at customer premises as a way of maintaining quality and reliable services, and bill control, was generally supported. Participants understood the potential benefits in increased water use efficiency and cost savings through the ability to accurately measure consumption and identify leaks early.

Those who expressed lower levels of support were discouraged by an ongoing monetary charge, and questioned how far reaching the benefits would be, particularly for older citizens who may have trouble using the technology. For this reason, it was felt ease of use should be a consideration when implementing this technology.

Willingness-to-Pay studies determined the 50% median, and 60% and 70% quartile amounts community members were willing to pay to have a digital meter installed at their property. Findings from this study confirmed that customers were willing to pay similar amounts for this initiative.

Investments in liveability outcomes as part of infrastructure delivery

Participants had mixed views on whether Icon Water should be investing in liveability initiatives as part of their upgrades to or delivery of new infrastructure. Enhanced community outcomes were supported however, some participants were concerned about Icon Water investing in initiatives that have outcomes not related to its core role (water and wastewater) at the expense of customers. It was preferred that investments in these outcomes, over and above the cost of the infrastructure, should be funded internally or potentially in partnership with other ACT government agencies.

Customer service

Icon Water's current customer service and experience offering was praised, particularly their responsiveness to customer enquiries and managing issues such as outages. An investment in improving customer service was viewed positively, in particular for key account holders. However, most thought this should be part of the standard service and not something customers should additionally fund. If an investment is required to maintain or improve customer service, it was felt this should be funded internally.

Insight 4: Affordability should underpin any investment decision. If an investment is needed to avoid causing issues in the future, support for vulnerable customers and other impacted customer segments should be considered.

Overall, Icon Water's current charges were considered to be about right. Opinion was most divided around the affordability of water and wastewater services for vulnerable customers and on the cost of water for large water users (both commercial and non-commercial). The concept of rebates for not-for-profits was raised, considering how to support this activity whilst not impacting vulnerable customers with charge increases. Offering financial relief to a small, select group was seen as achievable.

Support in principle was expressed for a non-residential tariff for large non-commercial, not-for-profit organisations (such as community-based sport clubs) that could lower their operating costs.

Participants were asked to consider strategic and investment decisions in three ways:

- Invest or do more
- Maintain the current investment and ensure consistent quality and service
- Do not treat as a priority investment, or fund internally.

Across the decisions, there were participants who supported further investment as per Insight 1. For other investments, participants who supported a maintained investment or a low priority investment generally felt that Icon Water should focus where possible on increasing efficiencies internally before investing in initiatives that would increase charges, resulting in a cost burden to customers and particularly to financially vulnerable customers.

As the undercurrent to all strategic and investment discussions, participants consistently felt that the financial impact of each decision should be considered, including the equity of impact across customer groups and socio-economic vulnerability.

Insight 5: The community considers Icon Water as an essential service provider. To be a valued partner in the community Icon Water should strive to be more visible through their partnering initiatives, educating and supporting activities, and openly promoting their initiatives within the community.

Overall, participants felt very positively towards Icon Water, and they expressed a desire for the business to be more visible in the community. When some topics were explored the consistent response was, *I didn't know* and *we should know more about this*.

Icon Water's current community and school education initiatives were a surprise to many participants and these activities were well received.

Regarding the recent 'Free the Poo' communication campaign, participants praised it for its memorability and how much it resonated. Cut -through, bold messaging and wide promotion is important for a campaign to be effective.

The vision statement 'Icon Water to be a valued partner in the community' received mixed views. Most participants did not see a pressing need for more to be done, as Icon Water's role is an essential service provider thus a valued partner. The term 'partner' was debated at times as it means different things to different people.

1.4 Summary of findings and engagement tools

Awareness and knowledge of Icon Water, Icon Water as a valued partner in the community

Open community survey | **Focus groups** | **Deliberative process** | **Customer Advocacy Forum** | **Quantitative customer survey**

People living and working in the ACT value the natural environment and the strong community feel. Qualitative discussions revealed environmental sustainability was top of mind for these people.

While the name Icon Water is familiar to most people, little is known about what Icon Water does beyond water supply and wastewater management. In the quantitative customer survey* only one-in-three participants (33%) rated their knowledge of Icon Water as good (7 or higher out of 10).

However, very few people feel negatively towards Icon Water, most people are neutral or positive. In the quantitative customer survey*, open community survey** and deliberative deep-dive process only 4% of participants rated themselves as feeling negative towards Icon Water.

There was a low level of awareness of both Icon Water's community education and school education initiatives and their sponsorship of local organisations. In the quantitative customer survey* fewer than one-in-four participants had a reasonable awareness of Icon Water's role in these activities (rating their awareness as 7 or higher out of 10). Once aware of these activities, participants were positive with many valuing Icon Water's role as an educator, particularly in relation to water conservation and environmental sustainability.

Participants would like to see Icon Water more visible in the community and at community events, but not to stray too far from its role as educator and provider of water and wastewater-related activities, such as water recycling initiatives, improvement of water quality in waterways etc.

*=Online survey with n=2,645 residential customers of Icon Water
**=Online survey with n=487 community participants

Summary of Icon Water strategic decisions

The table below summarises the key findings in relation to a range of strategic planning and investment decisions Icon Water is considering. The decisions comprise a broad cross-section of topics that were explored and are not ordered by level of support.

Table 1.4.1 Summary of decisions about Icon Water strategy

Decision	Findings
	 **Key customer interviews**  **Open community survey**  **Focus groups**  **Presentations to environment groups**  **Deliberative process**  **Customer Advocacy Forum**  **Presentations to community groups**  **Quantitative customer survey**
Water security How open are people to Icon Water exploring future water options?	Participants considered water security an important area of focus for Icon Water as population growth and climate change continues. This was raised by participants unprompted as an area that Icon Water should invest in. There was a poor level of participant understanding of the different future alternative water options. When listed in discussions, there were concerns raised about: • the risk of contamination with the use of recycled water and stormwater – particularly for drinking; • the potential cost of desalination options; and • the environmental impacts of groundwater extraction. The majority of participants were open to exploration of all future water options presented. For example, two-thirds of participants in the quantitative customer survey would support greater investment to explore future alternative water options. Similarly, the majority of key customers supported in principle investment in this area. Other participants such as members of the Customer Advocacy Forum were in favour of this investment due to its potential to reduce water use and costs. There are 384 hectares maintained by the ACT Government that require large volumes of water and further sports grounds managed by not-for-profit community organisations. The use of alternative water sources on ACT sports ovals is complex to plan and engineer.
Water security How open are people to the earlier use of temporary water restrictions?	There were mixed levels of participant support for the earlier enforcement of temporary water restrictions. In the quantitative customer survey, just one-third of participants were supportive of Icon Water spending more on earlier temporary restrictions. There was soft resistance expressed by participants who felt they were already 'doing the right thing'. It is recommended that Icon Water would need to educate, support and potentially incentivise customers to facilitate this change. Concerns were raised by large water users, who noted the large impact water restrictions have on irrigated grounds such as sports ovals. Restrictions mean these grounds can deteriorate and require significant time, effort and funds to recover to a standard accepted by the community for playing on.

Decision	Findings
	 **Deliberative process**  **Key customer interviews**  **Customer Advocacy Forum**  **Presentations to community groups**
Tariffs and affordability Is the balance of Icon Water's water charges considered to be appropriate?	When the current tariff structure was explored across the different audiences, there was reasonable support expressed for Icon Water's two-tier usage charge model and most considered the charges to be about right. The two-tier charging model was seen as a way to encourage water saving. Large non-residential water user participants (for which fixed charges proportionally make up much less of their water costs) considered the current structure to be less fair. This view was reflected in key customer interviews, with the majority feeling the current structure does not cater adequately for large water users and does not incentivise water conservation efforts. Participants in the deliberative deep-dive process and the Customer Advocacy Forum were shown three tariff structure options for the 2023-28 period: • Option A the current price path ($20 annual supply charge increase), • Option B a middle road price path (that changes the annual supply charge increase to $10), or • Option C a price path option with a higher usage charge (and a lesser increase in annual supply charge increase to $6). Participants were asked for their preference. Opinions were mixed as to a tariff structure that is the most acceptable. A $6 annual supply charge increase was more supported by residential customers, equating to a similar % increase in charges for all and minimising the financial burden on vulnerable customers. However, larger households and businesses were more supportive of a higher annual supply charge increase in order to minimise their usage charges. Discussion among forum members expressed mixed views, with members understanding the positive and negative impacts of each option. Equity across customers groups was a priority for the forum, noting different water needs and water saving abilities should be considered.
Tariffs and affordability How open are people to a non-residential water tariff?	There was unprompted discussion in some forums about the need for a different tariff structure for large water users who use water to provide essential community activities. When participants were asked specifically about this concept, there was support in principle for a non-residential tariff for not-for-profit organisations, however not for commercial organisations. Members of the Customer Advocacy Forum that run large sporting grounds noted they do not have the ability to greatly reduce their water consumption. The concept of a non-residential tariff was supported for its potential to reduce costs, and reward or support those organisations that provide community value.

Decision	Key findings
 **Open community survey**  **Focus groups**  **Key customer interviews**  **Customer Advocacy Forum**  **Quantitative customer survey**	
Should Icon Water increase their investment in **customer service tools?**	Few issues were expressed in relation to the level of existing customer service and support provided by Icon Water. As a result, participants generally did not see the need to improve these tools. Just one-quarter of customer survey participants supported Icon Water spending more on customer service and website upgrades. Discussion about Icon Water's responsiveness identified the following: • Nine-in-ten customer survey participants would want to be able to log an emergency via direct 'hotline'. Qualitative exploration revealed that most people need to speak to someone knowledgeable to understand the plan for resolving the issue and to ask advice on what they need to do. • How quickly Icon Water could commence resolution, for example how fast a team could be dispatched to the site (most wanted assistance to arrive within an hour for an emergency). • A need to be kept in the loop by SMS or email in relation to Icon Water's arrival on site, the anticipated time until the issue can be resolved, and notification of completion.
	Channel preferences: a 24/7 manned phone hotline was preferred for reporting emergencies and to seek advice on next steps. For less urgent matters, telephone, online webforms and/or email were preferred channels – with half of customer survey participants stating each. Almost half of customer survey participants aged under 44 years of age would also value the option to webchat (to enable multitasking while waiting for problem resolution). **One-view and application status tracking:** Large customers preferred to be able to have a single view of their account. Most customers expected to be able to easily track the status of their enquiries and applications. **Website tools:** There were unprompted mentions of a desire to use the website to find out about water and wastewater outages in the ACT. Support for this idea was based on avoiding potential customer service delays caused by large numbers of customers contacting Icon Water at the same time to ask about the same outage/overflow, as well as to be informed about anticipated time until resolution of the issue in their area by real-time updates.
 **Focus groups**  **Deliberative process** **What are current community levels of knowledge of campaign messages?**	**Care for Water :** Low awareness (9% when tested in the deliberative deep-dive), but most can infer that it promotes water as a valuable resource not to be wasted, which resonates. However, the call to action could be improved to build cut-through and encourage further exploration of information. **Free the Poo campaign:** One-third of participants recognised the campaign when it was explored in the deliberative deep-dive, and it scores well on standout, memorability and comprehension. **Refill in Canberra campaign:** This campaign message was only tested in the online focus groups. Several participants recognised it and had seen it advertised on the water fountains and taps around Canberra. The message strongly resonated due to pride in the water quality in Canberra and the willingness to drink tap water as a result.

Summary of Icon Water's investment decisions

Key customer interviews | **Open community survey** | **Focus groups** | **Presentations to environment groups** | **Deliberative process** | **Customer Advocacy Forum** | **Presentations to community groups** | **Quantitative customer survey**

The table below summarises the key findings in relation to each of the investment decisions Icon Water is looking to make for the 2023-28 Price Proposal. The investment decisions are listed in decreasing order of overall level of support from the audiences engaged with.

Table 1.4.2 Summary of financial investment decisions and engagement findings.

Investment decision	Findings
Should Icon Water invest more, now, to reach net zero GHG emissions ahead of the 2045 Target?	This was seen by customers and community members as topical and a highly important subject. • There was strong participant support for bringing the timing forward to achieve net zero. Six in ten participants in the deliberative deep-dive process supported a high investment in this area (I.e. a transition to net zero by 2030), and a further one-in-three supported a medium investment (I.e. a transition to net zero between 2030 and 2045). • In the quantitative customer survey almost two-in-three participants supported more spend to achieve net zero ahead of 2045.
Should Icon Water invest in expanding its efforts to recover resources?	A targeted investment in resource recovery was supported. • 40% of participants in the final online community of the deliberative deep dive supported high investment and a similar proportion supported a medium level of investment. • Almost 75% of quantitative customer survey participants supported a greater investment by Icon Water in this area. Discussions raised that targeted investment means projects that don't reinvent what is happening elsewhere and that could provide returns to customers through greater efficiencies, operational cost savings and commercialisation opportunities being realised.
Should Icon Water invest in order to innovate?	There is a sense of community pride in Canberra being an 'innovator'. Many participants saw Icon Water's current level of investment in innovation as being too low. • Six-in-ten participants in the deliberative deep-dive process supported Icon Water shifting from 'Supporting' to 'Driving' innovation, as long as investment is carefully targeted to build on what already exists in other jurisdictions and ultimately provides returns to customers through lower bills. • Good levels of support were seen in the quantitative customer survey, with two-thirds supporting more spend in this area.

Investment decision	Findings
Should Icon Water reduce the timeframe for its digital meter program and do customers want to pay for this?	The future use of digital meter technology was supported by participants. The objectives of this technology to minimise water use, to identify hidden leaks and minimise water loss across the network and to help avoid bill shock from Tier 2 water charges were understood. • Half of participants in the deep-dive deliberative process supported investment in a digital meter rollout. However, upon further discussion several expressed confusion about why an ongoing charge would be applied to all properties from the start of the rollout. This confusion about why a charge would need to be paid in advance for something that many felt would increase automation –thus increasing efficiency and reducing manpower - reduced the appeal somewhat. • When presented with a very short description, almost two-thirds of participants in the quantitative residential customer survey support more spend in this area. • Modelling of customer willingness to pay revealed that, after seeing a detailed explanation about digital meters and the benefits of properties having one, customers stated they would pay a median yearly amount for five years of $53.09 at the 50th percentile, $27.01 at the 60th percentile and $12.93 at the 70th percentile to have a digital meter installed at their property. Members of the Customer Advocacy Forum questioned how far reaching the benefits would be. It was asked whether landlords of rental properties would see enough benefit to opt in, as rental tenants, being non water bill payers, would not be motivated to monitor a meter. It was recommended the accessibility of the technology be a consideration in the rollout, particularly for older citizens.
What role should Icon Water have in contributing to liveability in Canberra?	Differing levels of support were expressed by participants in different forums for Icon Water to contribute to liveability. Support for this investment had the caveat that it primarily focuses on water-related liveability improvements, for example greening public spaces with recycled water or improving water quality in lakes and rivers and did not impact customer bills. There was some support for the aesthetic improvement of assets – particularly if it includes community involvement - and creating community access to the land around assets, as long as the costs could be absorbed by Icon Water. However other participants considered this to be a 'nice to have' activity and would not support an increase in charges for Icon Water to invest in this area, noting the impact to vulnerable customers. The deliberative deep dive provided a scenario of an additional $3.73 per customer per year which received majority support. The quantitative customer survey did not provide a charge amount and only 25% of participants supported more investment in this area.
Should Icon Water improve its level of service for water supply disruptions and outages?	Current water supply disruptions were not an issue for the majority of customers. • The Customer Advocacy Forum agreed that the current levels of service were satisfactory and that any reduction in service could result in long-term consequences for the network, despite some short-term cost savings. They were not in favour of a high investment due to the impact on vulnerable customers. • After being informed of the current levels of service and the incidence of 'customers at risk' of issues, there was limited support in the deep-dive deliberative process for a $10 increase in charges to bring all customers up to a similar level of service. Most were satisfied with the current level of service. • In the quantitative residential customer survey, when participants were asked to rate their support for maintenance upgrades in principle, without knowing the incidence of impacted properties or potential charges, support for more spend was mixed. • Modelling of customer willingness to pay revealed that, after seeing a detailed explanation about the incidence of properties experiencing water supply disruptions/being told they were in an area at higher risk of a disruption, customers stated they would pay a median yearly amount for five years of $24 at the 50th percentile, $11.99 at the 60th percentile and $5.63 at the 70th percentile for all properties to have a more similar level of service for water supply.

Investment decision	Findings
Should Icon Water improve its level of service for wastewater disruptions and overflows?	Wastewater disruptions were not an issue for the majority of customers. • The Customer Advocacy Forum focused on the issues of existing inequity to customers and the high cost to achieve greater equity in avoiding outages. • In the quantitative residential customer survey, almost two-in-three supported maintenance upgrades in principle, prior to knowing the scale of impacted properties or potential charges. • However, there was very limited support in the deep-dive deliberative process for a $100 increase in charges to bring all customers to a similar level of wastewater service. Most were satisfied with the current level of service. • Modelling of customer willingness to pay revealed that, after seeing a detailed explanation about the incidence of properties experiencing wastewater overflows/being told they were in an area at higher risk of an overflow, customers stated they would pay a median yearly amount for five years of $29.13 at the 50th percentile, $16.09 at the 60th percentile and $8.43 at the 70th percentile for all properties to have a more similar level of service for wastewater.

2.

Preparing to engage

2.1 Background

Icon Water sought to engage with its customers, stakeholders, and the wider ACT community to inform its Price Proposal submission for the 2023-28 period. The feedback gained from engagement and research activities will inform decision-making for financial investment and strategic initiatives for the next review period.

The engagement project provides essential information to the 2023 – 28 Price Proposal due for submission to the Independent Competition and Regulatory Commission (ICRC) in mid - 2022.

Strategy testing was in relation to Icon Water's Drought Management Plan, Sewer System Strategy, Water System Strategy, Customer Strategy, Education Strategy and ICT Strategy.

Engagement objectives

Icon Water's objectives for this project were to:

- Engage in a meaningful way
- Have informed, timely and transparent conversations
- Use insights to inform decisions.

Previous Icon Water research

Icon Water has a foundational understanding of customer values gained through their ongoing customer sentiment research on various existing projects. This acted as the springboard for thinking on the Engagement Project. Previous engagement has included:

- Annual satisfaction surveys with customers to determine customer values, experiences and whether Icon Water is meeting expectations;
- Quarterly omnibus 'pulse' surveys with general community sentiment around brand recognition and perceptions;
- Engaging with the Water Services Association of Australia's (WSAA) biennial National Industry Association Perception Survey;
- Establishment of a Customer and Community Advocacy Panel; and
- Research and engagement for specific projects such as infrastructure delivery.

These past research and engagement projects overall found that while sentiment towards Icon Water was generally positive, there was room to increase customer satisfaction and perception levels.

Findings from Icon Water research

2021 Icon Water Customer Survey

Overall perceptions:

Overall positive sentiment towards Icon Water and respondents' willingness to speak positively about the company had declined slightly from the 2020 survey results. However, both still recorded high ratings – overall satisfaction had an average positivity rating of 90% across customers segments and 82% said they were willing speak positively about Icon Water. The largest declines were seen among high-volume businesses.

The survey found that awareness of Icon Water among respondents had remained relatively high (97% average) across customer groups.

Icon Water's essential offering as a water and wastewater service provider was viewed positively. Satisfaction with the quality of water provided in the ACT by Icon water was also high (over 90% of respondents found Icon Water's quality to be good).

Customer service:

The survey of residential, standard business, and high-volume business customer segments received feedback noting there is room to improve the quality and efficiency of Icon Water's customer service.

Survey results recorded a decline in the perceived ease of conducting business with Icon Water. When asked how Icon Water can better meet their needs, improved customer service was a common response among customer groups.

Community involvement:

- Icon Water's customers expect higher community involvement.
- The survey recorded a slight decline from 2020 results in the perception that the community is a focus for Icon Water – residential customers recorded 82% from 93%, standard businesses recorded 85% from 95%, high-volume businesses recorded 90% from 94%.
- Suggestions offered by respondents on how Icon Water could improve included increased environmental and community initiatives.

Customer priorities:

When asked how Icon Water could better meet their needs, affordable pricing was a common response across customer groups and was seen as being of high importance. Other areas of improvement suggested by respondents are listed by customer group below:

- **Residential customers** felt Icon Water could improve communication on immediate or upcoming issues (planned and unplanned disruptions), implement better meter reading processes (less estimations), and increase the number of environmental and community initiatives.
- **Business customers** felt Icon Water could improve billing and meter reading processes, improve communication and responsiveness on urgent matters, and work to minimise their environmental impact.
- **High-volume customers** similarly felt Icon Water could improve communication and responsiveness on urgent matters and suggested more frequent billing be implemented.

Reputation and Satisfaction Pulse Survey (Icon Water, 2021)

Results found that:

- 63% had unprompted awareness of Icon Water as a water and sewerage provider
- 67% felt that Icon Water was a valued partner in the community
- 74% said they trusted Icon Water
- 71% felt Icon Water had a positive reputation in the community
- 63% felt Icon Water was customer focused
- 74% felt Icon Water's services provided value for money

National Customer Perceptions Study (WSAA, 2019)

Results testing customer perceptions found that:

- Positive perceptions of Icon Water were largely driven by respondents feeling Icon Water was open and transparent. Being caring, being reliable, keeping customers informed and undertaking network maintenance were also important to respondents.
- Drivers of trust and community reputation varied based on whether respondents had
    - noticed Icon Water in the community or
    - had experienced a service interruption in the last 12 months.

The 2021/22 Engagement Project built on the findings and context of this past research to help identify the key topics and issues for exploration.

2.2 A best practice engagement framework

Community and stakeholder expectations around engagement in the planning of water and wastewater service delivery are high. To meet these expectations, this project worked according to the framework of the International Association for Public Participation (IAP2).

The Public Participation spectrum shown below is designed to assist with the selection of the level of participation that defines the public's role in any community engagement program. The spectrum is used internationally and is found in public engagement plans around the world.

Different levels of participation depend on the goals, timeframes, resources and levels of concern in the decisions to be made. Most importantly, the spectrum sets out the promise being made to the public at each level of participation. Engagement for this project sought to inform, consult, involve, and collaborate with stakeholders and the local community, with the work to consider customer and community values, responses to Icon Water strategies and input to Icon Water's financial decision making.

An evaluation of the 2021/22 Engagement Project against this framework can be found in Section 6.

Table 2.2.1 IAP2 Spectrum of Public Participation

INCREASING IMPACT ON THE DECISION →

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Engaging during COVID-19 lockdowns

The ACT went into a lockdown early in the 2021/22 Engagement Project . As such, the project shifted to digital platforms. All teams worked flexibly to accommodate the needs of the community and stakeholders, ensuring engagement was successful in obtaining the perspectives and inputs needed.

2.3 Establishing the strategic and financial investment decisions to be made for the 2023 – 2028 Price Review

SEC Newgate conducted a program of detailed discussions with Icon Water staff across the business to explore and understand the investment decisions to be made. This internal engagement process is outlined below.

Figure 2.3.1 Process to arrive at the investment and strategy decisions needed by Icon Water for the next 5 years

Tariff Strategy Future Questions

(25 May 2021)

To confirm current issues regarding the structure of water tariffs and questions for exploration in the engagement program

2021/2022 Strategic Engagement Program Insights workshop

(26 August 2021)

Workshop with all Icon Water streams to consider preliminary results across each topic and to determine the projects that required a significant investment in the near future and those that required insights to inform potential investments in the longer term.

This included a discussion on whether Icon Water required a willingness to pay analysis of customer preferences.

Icon Water Executive meeting and review

(11 February 2022)

Meeting to present top line findings from the Engagement Project and to provide the executive team with the opportunity to review, ask questions, or seek clarification.

The table below lists the investment and strategy decisions raised by Icon Water teams in the process described in Figure 2.3.1.

Table 2.3.2 : Results of Icon Water staff planning workshops

Topic	Questions to be answered
Understanding customer and community values	**STRATEGIC DECISIONS** • What do people expect from Icon water as a valued community partner? • What is the community level of awareness of Icon Water campaigns and water knowledge generally?
Customer service channels and website	**STRATEGIC DECISIONS** • How do customers expect to be able to reach and interact with Icon Water? How does this compare to current experiences? • What level of customer interest is there in being able to track the status of enquiries and applications, and to have a single account view? • What is the level of interest in new website functionality that maps faults and outages in real-time? • How supportive would developers be of a 24/7 self-service option for plan submission and compliance assessment?
Investment in wider liveability outcomes	**INVESTMENT DECISION** • What role should Icon Water have in contributing to liveability in Canberra?
Levels of service during water or wastewater outages	**STRATEGIC DECISIONS** • What do customers currently do when they have a fault or emergency? • How should Icon Water respond to faults and emergencies? • How satisfied are customers with current planned maintenance levels? • How well is Icon Water supporting large customers in achieving their water efficiency goals? **INVESTMENT DECISIONS** • What levels of service do customers expect during water supply disruptions and wastewater pipe blockages and overflows? • Do customers desire a level of service equity across different geographic areas with a potential increase in fees to achieve this?
Future water security measures	**STRATEGIC DECISIONS** • How open are people to Icon Water exploring future alternative water options? • How open are people to having temporary water restrictions introduced earlier?
Use of technology	**INVESTMENT DECISIONS** • How open would people be to digital meters being implemented to all customers? • How much should Icon Water invest in water supply, wastewater treatment, resource recovery or greenhouse gas reduction through research and development?
Sustainability	**INVESTMENT DECISIONS** • How open would people be to Icon Water investing more now to reach net zero greenhouse gas emissions ahead of the ACT government's 2045 target? • How open would people be to Icon Water investing in expanding its resource recovery efforts?
Tariffs and the affordability of investments	**STRATEGIC DECISIONS** • Is the balance between fixed and variable components in water tariffs appropriate? How open are people to Icon Water continuing to rebalance its tariffs towards a higher fixed service charge and reducing the usage charge? • Is there a desire for a non-residential tariff to replace the two tier charge for some high water use customers?

2.4 Engagement audiences

Workshops with the Icon Water team identified a range of questions to ask during the engagement program (listed on the previous page). It was therefore important to identify which stakeholder and community groups were relevant to these questions. These groups are represented in the below.

Figure 2.4.1 Stakeholder segments

Residential Customers
The biggest, most diverse cohort of around 176,000 householders who are water bill payers.

Broader community
People who live in the Icon Water supply area but may not necessarily pay the water bill for their household.

Characteristics include:
- Individual householders, couples and families (with children).
- Tenants and homeowners.
- A range of ages, a mix of gender.
- People who speak a language other than English.
- Different levels of water use (higher, lower or the same as than the average 200kL household use a year).
- Vulnerable people.

Non-residential Customers
Close to 10,000 water bill payers who own/manage organisations within the Icon Water catchment, diverse in terms of water needs, water use and wastewater discharge.

80%
Small-to-medium organisations

SME business customers
(<$5m turnover) –decision-makers representing business with high and lower water use profiles.

20%
The largest water users (and potentially the largest dischargers) with the most complex needs:
- Major manufacturers
- Government agencies, e.g. Defence
- ACT Government
- Irrigators
- Large landowners, e.g. farming, forestry and sporting facilities
- Large institutions, e.g. education, hospitals, government department

These would form key accounts for Icon Water

Stakeholders
Groups and individuals whose opinions are important to Icon Water due to their specific needs or expertise.

Critical Customers
The individuals and organisations who rely on water and wastewater services as a critical resource.

Developers
Includes large land managers that would oversee any development on their sites and organisations that are responsible for creating masterplans for new developments within the Icon Water service area and with whom a collaborative relationship and early seat at the table in planning discussions is needed with Icon Water.

Stakeholders
- Environment groups
- Community groups and industry associations
- Aboriginal community leaders
- Technical experts
- The Independent Competition and Regulatory Commission

2.4.1 How we engaged with our audiences

A range of activities to engage each audience was developed. Engagement tools were designed to gauge people's openness, sentiment, and level of support for each topic area.

Table 2.4.1.1 Engagement tools and audiences

Engagement tools	Description	Audiences the tool is specifically designed for			
Open community survey	5-minute online survey open to all participants *	Broader community	Residential Customers	Stakeholder groups	Vulnerable groups
Pop up displays and intercept surveys	Short discussions and 5-minute survey *	Broader community	Residential Customers	Stakeholder groups	Vulnerable groups
Stakeholder Interviews	Short discussions and consistent questions/ survey	Key account customers (large) and developers			
Focus groups	Broad exploration of topics over two hours with a recruited mix of people broadly representative of the ACT demographic	Broader community	Small medium business customers		Vulnerable groups
Deliberative deep dive process	Detailed discussions over three stages (nine hours total time commitment) with a recruited mix of people broadly representative of the ACT demographic	Broader community	Small medium business customers	Stakeholder groups	Vulnerable groups
Quantitative survey and willingness-to-pay analysis	20-minute survey with a recruited mix of people broadly representative of the ACT demographic	Residential customers			Vulnerable groups
Presentations to interested groups, for example, to Aboriginal leaders and environment groups	Discussions on select topics of interest to the group	Stakeholder groups			
Customer Advocacy Forum	Discussions on each topic over five, two-hour sessions with people from a range of ACT peak groups	Stakeholder groups	Vulnerable groups	The Independent Competition and Regulatory Commission	
Icon Water Expert Panel	Very detailed discussions with academics (water experts)	Stakeholder groups			

* The data cannot be extrapolated by group however

2.4.2 The project

Figure 2.4.2.1 Our engagement journey

3.

Engagement tools and activities

3.1 Customer and community outreach

A range of tools were used to reach out to the community, customers and stakeholders to inform them of the engagement project and how to participate.

Icon Water let's Talk webpage

The Let's Talk Water and Wastewater webpage on Icon Water's provided engagement updates, a link to the survey and the team's contact information.

Contact points

The program developed a direct number and email for the program to streamline community and stakeholder enquiries:

- 02 6248 3111 (option 4)
- LetsTalkWater.Wastewater@iconwater.com.au

Flyer

A flyer was developed as a takeaway tool for in-person events such as community pop-ups and stakeholder meetings.

It's purpose was to link to the survey via the website and a QR code and provide the team's contacts details.

A copy of the flyer can be found in Appendix A.

Email correspondence

Icon Water's Stakeholder Manager provided updates to organisational stakeholders, including government agencies and members. These updates were provided to the following:

- The Environment, Planning and Sustainable Development Directorate of the ACT Government
- NoWaste
- Utilities Technical Regulator
- ACT Environmental Protection Agency
- The Chief Minister, Treasury and Economic Development Directorate
- Various members of the ACT Legislative Assembly.

An EDM promoting the survey was sent in October 2021 to 88 community stakeholders, including the organisations already included in the program.

A copy of this EDM can be found in Appendix B.

Community publications

The program was featured in a number of ACT community publications as a result of outreach through existing engagements such as the Customer Advocacy Forum or meetings with the ACT Community Councils. Others were a result of proactive outreach from Icon Water's communication team.

Features were included in the following publication:

- ACT Council of Social Service's eNotice
- Smoke Signals (magazine published by Gunghalin Community Council)

Social media

The program posted weekly across Icon Water's Facebook, Twitter and LinkedIn accounts.

Sixteen posts were published across the above accounts with 2,077, 2,537 and 2,697 followers respectively. Each post directed people to the program website and encouraged them to take the community survey.

Posts included posing probing questions to the community to start people thinking and prompt them to share their thoughts.

Figure 3.1.1 Examples of social media posts

3.2 Stakeholder engagement activities

3.2.1 Customer Advocacy Forum

A Customer Advocacy Forum was established to provide ideas and feedback to inform the development of Icon Water's 2023-28 Price Proposal and the engagement project. The forum met six times throughout the project.

Six meetings held

Forum members included representatives from:

- Transport Canberra and City Services (ACT Government)
- ACT Master Plumbers Association
- Master Builders Association
- ACT Council on the Ageing
- Clubs ACT
- Property Council of Australia, ACT
- Conservation Council ACT Region
- Housing ACT
- ACT Council of Social Services
- Canberra Business Chamber

The meetings were an opportunity for the group to provide feedback on the process, to listen to presentations from Icon Water about the potential strategy and investment areas and to provide input into how they think Icon Water should proceed in the future.

Members of The Independent Competition and Regulatory Commission attended meetings one, three, four, and five.

3.2.2 Stakeholder interviews

One-one-one interviews resulted in detailed discussions with some of Icon Water's key customers, some of which were also classified as developer stakeholders.
These stakeholders were selected given their unique water needs. A one-on-one interview was determined as the most effective way to capture their views.
Interviews were conducted online and ran for about 30 minutes. The questions asked were a mix of open-ended questions gauging sentiment or perceptions of Icon Water and targeted questions to capture their openness to the investment areas being considered.
The organisations interviewed included large-scale businesses and government agencies.

Eight interviews conducted

3.2.3 Briefings

Briefings and presentations assisted stakeholders and community groups who may not have had the availability or interest to participate in the other activities. They were an effective mechanism to continue discussions with those groups who had specific interest or further feedback to give.
Presentations provided an overview of the price review process, the engagement program, and the potential strategy and investment areas. In addition to these discussions, stakeholders were encouraged to complete the community survey and share this with their networks.

Three meetings held

Briefings were held with the following:

- A Ngunnawal elder and member of a local Landcare group
- Clubs ACT members including the organisation's CEO and select members who manage large sporting grounds
- The ACT Multicultural Advisory Council

3.2.4 Environment forum

There is a relatively high number of environment groups in the ACT and these groups have an interest in the water and wastewater services provided by Icon Water and the overall environmental contribution the business could have.
A dedicated forum was arranged and a range of organisations were invited to attend. Icon Water's presentation focused on presenting on the investment areas: sustainability and water security.
The organisations in attendance were:

- Conservation Council ACT Region
- Ginninderra Catchment Group
- Canberra Ornithologists Group

One forum held

3.2.5 Water Expert Panel

Icon Water had established an expert Water Expert Panel in 2020 to discuss and debate how the organisation could implement long-term solutions for water security in the region. This group was invited to reconvene to hear presentations from Icon Water on their potential investment questions in Water Security and Sustainability.
The Panel experts provided technical, scientific and economic insights into each investment area. Panel members included:

- **Professor Charles Lemckert:** University of Canberra
- **Dr Fiona Dyer:** University of Canberra
- **Janice Green:** Bureau of Meteorology, Hydrological Society of Canberra
- **Professor Jamie Pittock:** Australian National University
- **Quentin Grafton:** Australian National University.

Associate Professor Jacki Schirmer from the University of Canberra was an apology.

One meeting held

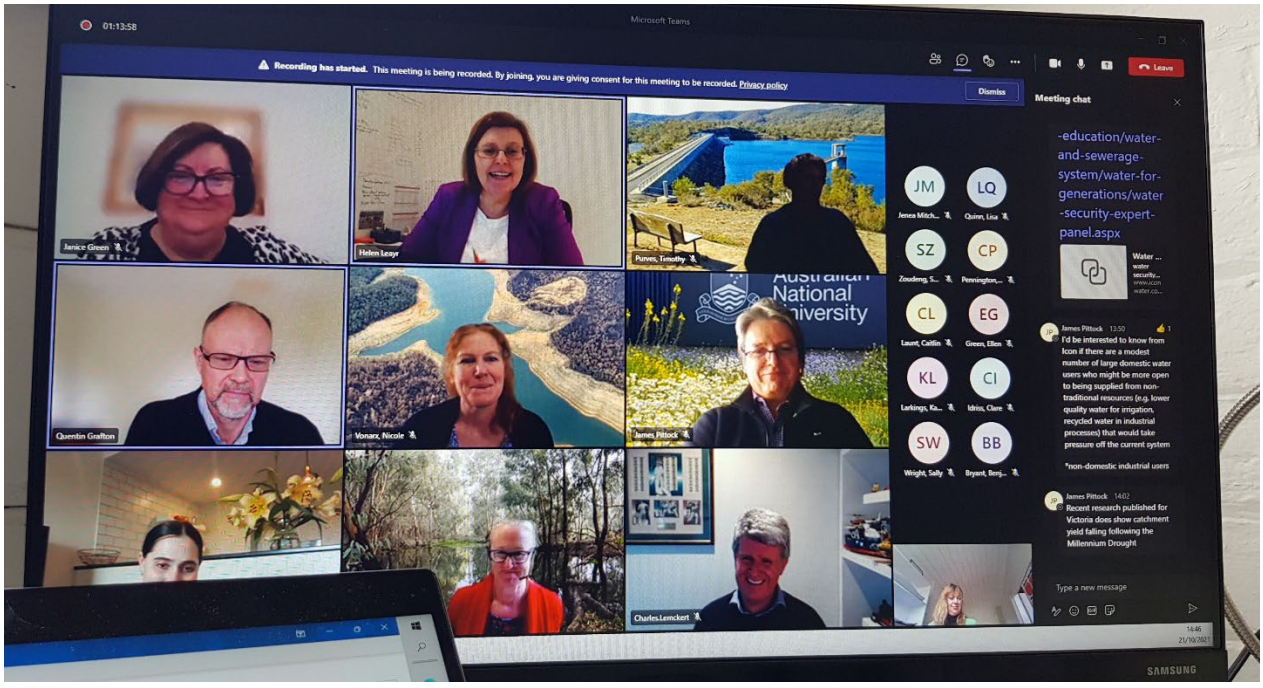


Figure 3.2.5.1 – Online meeting with the Water Expert Panel

3.3 Community engagement activities

3.3.1 Engagement with Aboriginal community

The following organisations, groups, and individuals were approached to introduce the project and offer opportunities for engagement. This list was prepared with guidance from Icon Water using existing knowledge, connections, or business relationships with the ACT Aboriginal community.

- **Aboriginal organisations:**
    - The United Ngunnawal Elders Council
    - Winnunga Nimmityhah Aboriginal Health and Community Services
    - Caring for Country Committee
    - Traditional Owners Aboriginal Corporation
    - Aboriginal and Torres Strait Islander Elected Body
- **Eight Ngunnawal elders**

- A one-on-one briefing was held with one Ngunnawal elder to discuss the engagement program and seek their input, primarily on water security. They passed on information to members of an ACT landcare group of which they are a member on behalf of the program.
- A representative from the Aboriginal and Torres Strait Islander Elected Body participated in the deep-dive deliberative process (see page 33).
- Icon Water sent information on the engagement program to Mr Bradley Bell, the newly appointed ACT Government Ngunnawal water policy officer.

Briefings, Deep dive deliberations

3.3.2 ACT Community Councils

The eight ACT Community Councils were approached with requests to have the Icon Water team present at a Council meeting. As each Community Council represents a different locale in the ACT, meetings with these groups could engage with a cross section of the ACT. These groups have extensive networks to be able to share and promote the program and the open community survey.
Icon Water was invited to present to:

- **Belconnen Community Council:** presentations were given at their committee meeting and Annual General Meeting
- **Gungahlin Community Council:** presentations were given to the council group as well as a one-on-one with one of their members
- **Tuggeranong Community Council:** one presentation was given to council members

Five meetings held with **three** councils

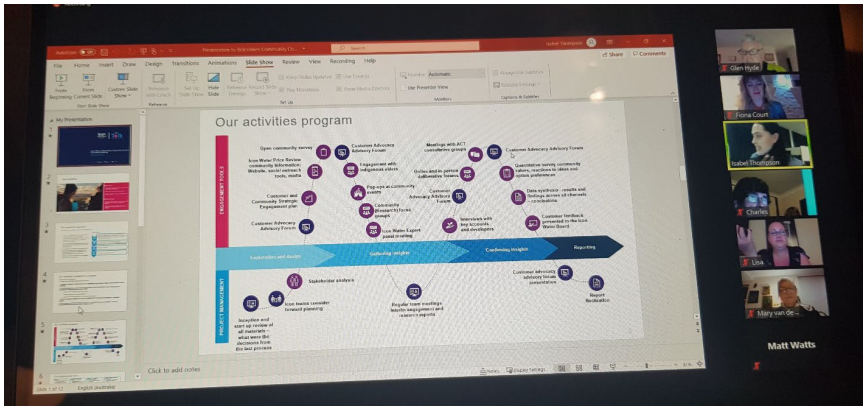


Figure 3.3.2.1 – Online meetings with ACT Community Council members

3.3.3 Open community survey

A community survey was developed to be one of the primary data capturing tools for residential water users. It opened at the launch of the program in July 2021 and closed 25 October 2021.
The survey asked five questions regarding people's understanding and perceptions of Icon Water, and how open they are to a range of broad investment areas.
There were 487 surveys completed.

A copy of the survey is in Appendix C.

487 responses

3.3.4 Pop-ups

Pop-ups were planned for the engagement team to distribute the community survey. Engagement team members would attend various markets or existing community events around the ACT.
A factsheet was also developed with a direct QR code to the survey for people to take with them and complete at home.
One pop-up was held at the Gungahlin Markets where 43 people were engaged with. Due to the COVID-19 lockdown, this style of engagement activity then ceased.

One pop-up held, **43** people engaged

Figure 3.3.4.1– Pop up stands at Gunghalin

3.3.5 Online focus groups

Four 90-minute focus groups were conducted online with 25 recruited participants on 20 and 27 July 2021. Participants comprised of the following segments:

- **Residential customers** (Central Canberra metro area)
- **Residential customers** (Outer Canberra suburbs)
- **Community members** (Non-bill paying adults)
- **Non-residential customers** (Small to medium business owners and bill-payers)

The sessions broadly explored customer and community attitudes, perceptions, and experiences of Icon Water as well as people's openness towards topics and investment areas of interest to Icon Water.

Four focus groups, **twenty-five** participants

3.3.6 Deliberative deep-dive process

The deliberative deep-dive process was a multi-phase immersive process used to explore the attitudes and views of customers and community members, as well as test and discuss the detail of a range of investment scenarios developed from previous phases of research and engagement.

A mix of residential customers, community members and small-medium business stakeholders were recruited and invited to participate in a three-phase process over a number of weeks. Within the participant sample, we recruited a mix of gender, age, location of residency within the ACT, cultural and linguistic diversity, and financial vulnerability to enable good representation of different customer types.

Fifty-one participants were recruited

The three phases were as follows:

1. **Stage 1: Exploring and informing**
   A two-day online community that focused on:
   - Upskilling participants
   - Providing participants with a baseline understanding of Icon Water and the services it provides
   - Providing background to the investment decision areas.
2. **Stage 2: Deep discussion and debate**
   The group was split into two workshops, each of three hours duration to:
   - Present specific investment decisions
   - Identify investment priorities from a customer and community perspective.
3. **Stage 3: Feedback and refinement**
   A final two-day online community to:
   - Explore thoughts following the workshops
   - Review and refine a selection of priority investment decisions.
   - Provide feedback on the process itself.

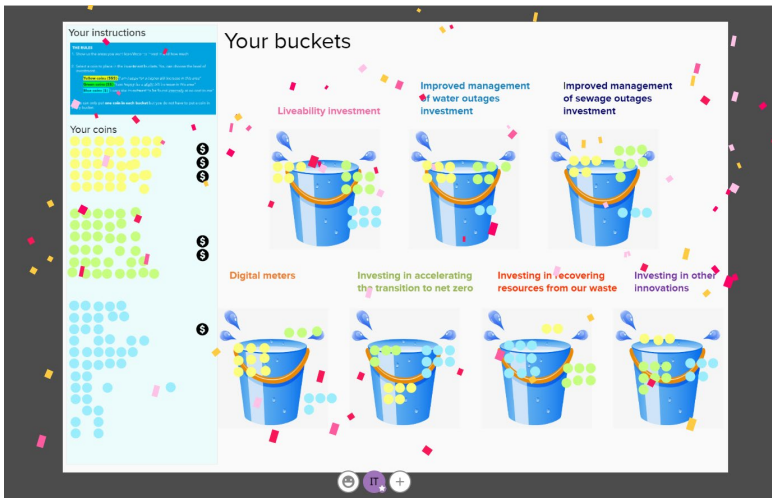


Figure 3.3.6.1– Interactive digital exercise from Stage 2 of the deliberative deep-dive process

3.3.7 Quantitative customer survey

A robust, 20-minute online survey of residential customers invited to participate by email. All participants were current residential customers of Icon Water, residing in the ACT for at least 6 months of the year and had sole or joint responsibility for paying the water bill. A response rate of 8.6% was obtained and overall findings were able to be reported at an accuracy of +/- 1.89%.

The survey measured awareness, knowledge of and sentiment towards Icon Water, support for spend (more, less or same) on each of the investment decisions when presented at a broad (statement) level, reasons for perceptions held and Willingness To Pay (WTP) for three specific investment decisions, tested through the Contingent Valuation Modelling process (see overleaf).

The survey collected a range of demographic criteria to ensure the final sample represented a cross-section of opinion and enabled analysis of findings by sample sub-groups. The sample comprised:

- a mix of customers living in suburbs across the ACT, representing those at a higher and a lower risk of water supply outages and/or wastewater system overflows.
- a mix of age and gender in line with population statistics for the ACT.
- a mix of household size, type and financial vulnerability (participants asked to rate the extent to which they found it hard to make ends meet).

The research data was weighted at the analysis stage to optimise alignment of age, gender and location with population statistics for the ACT, enabling representative reporting of customer opinion at an overall sample level.

A copy of the survey is in Appendix D.

Online 20-minute survey with **2,645** residential customers

3.3.8 Contingent valuation modelling

A section within the quantitative customer survey focused on establishing customer Willingness To Pay (WTP) for specific service propositions across three areas.

The technique used to establish WTP was contingent valuation. This technique was selected because of its role in the valuation of non-market resources (i.e. constructs that do not have a market price).

This willingness to pay modelling was delivered through a partnership between SEC Newgate, Frontier Economics and Gillespie Consulting.

The three scenarios that were modelled:

1. ***Willingness to pay for an increased investment in the level of water supply network maintenance:***
    - Among those at a lower risk of water supply disruption to bring all properties on the network up to the same broad level of service (i.e. reduce outages for severely impacted properties from once every 5 years to once every 10 years).
    - Among those at a high risk of water supply disruption to have issues with their water supply pipes happen less often (from once every 5 years, to once every 10 years).
2. ***Willingness to pay for an increased investment in the level of wastewater network maintenance:***
    - Among those at a lower risk of wastewater overflows to bring all properties on the network up to the same broad level of service (i.e. reduce faults/overflows for severely impacted properties from once every 5 years to once every 10 years).
    - Among those at a high risk of wastewater overflows to have issues with their wastewater pipes happen less often (from once every 5 years, to once every 10 years).
3. ***Willingness to pay for everyone across the Icon Water supply network to receive a digital meter***
    - Installed by 2035, a digital meter would enable closer monitoring of water use to identify overuse and hidden leaks.

The key findings from this exercise are reported in Section 4.6.3 and the full report can be found in Appendix E.

Three willingness to pay scenarios were created and tested among residential customers of Icon Water

3.3.9 Addressing vulnerability

To understand the views of customers in financially vulnerable circumstances, recruitment sought to capture a portion of participants who rated themselves as experiencing at least some difficulty in making ends meet, or having a lot of difficulty covering basic household expenses.

Financial vulnerability was established for residential customers and community members who we recruited to specific research activities, not for business customers, key customers, those completing the community survey or for any other stakeholder groups engaged.

Across activities, financially vulnerable customers and community members comprised:

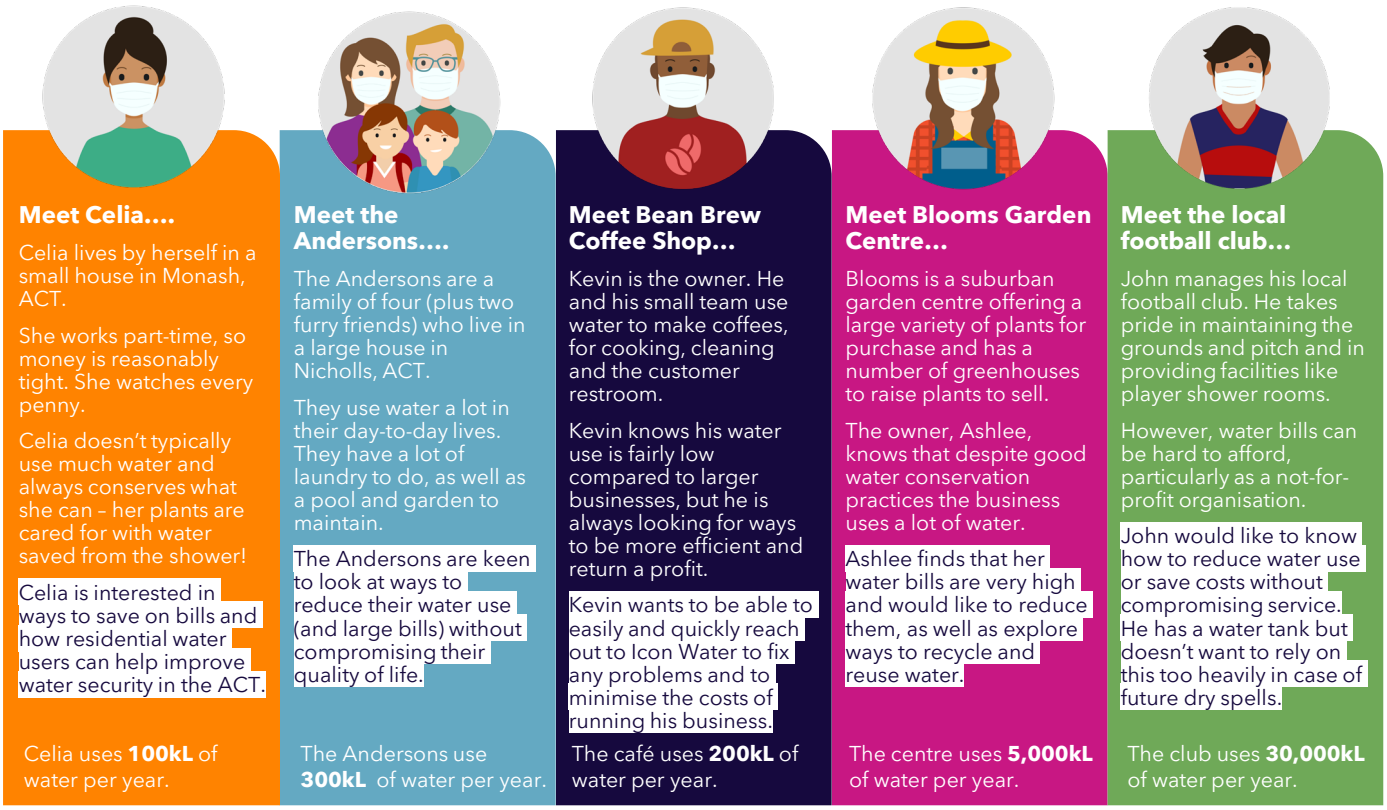
- 12% of focus group participants
- 10% of deliberative deep-dive participants
- 11% of quantitative residential customer survey participants.

3.3.10 Use of community personas

5 different personas were developed to help with discussions about tariffs. For each of the personas below, the implications of different tariff structures were explained. This greatly assisted discussions about impacts to different members of the community and encouraged people to consider the issues of both fairness and equity.

Figure 3.3.10.1 Persona information shown to the Customer Advocacy Forum and Deliberative Deep Dive on tariff options

We have some typical Icon Water customers to help us **think about how the decisions we make today may impact them**



4.

Engagement results - strategy and investment decisions

4.1 Awareness, knowledge of and sentiment towards Icon Water

Most customers, community members and stakeholder participants recognised the Icon Water name.

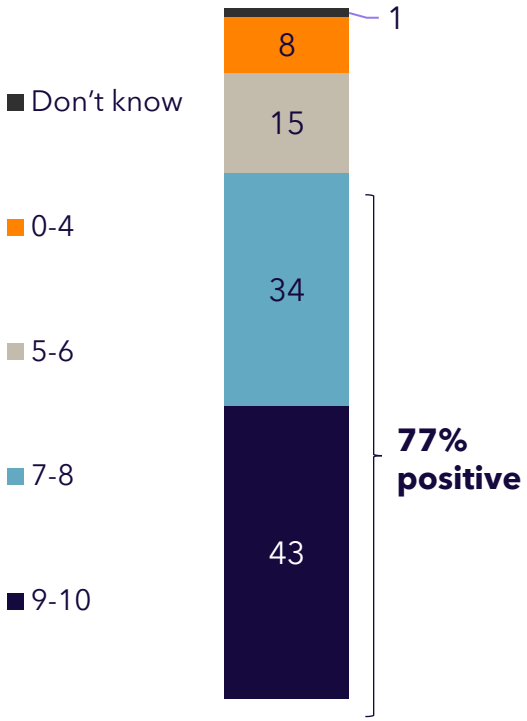
- Recognition of Icon Water typically stemmed from seeing the name on water bills. For this reason, most participants associate Icon Water with the provision of clean water.
- Very few participants were aware of Icon Water's broader services and activities beyond water supply and wastewater services.

Overall sentiment towards Icon Water was neutral; with positivity increasing among customers and community members after learning about Icon Water's broader services and activities.

- When prompted by Icon Water's name only, participants at Stage 1 of the deliberative deep-dive process and those in the customer survey felt mostly neutral towards Icon Water—largely a reflection of their limited knowledge about the scope of activities Icon Water is involved in and lack of issues with water supply or wastewater services.
- Once prompted with more information on Icon Water's services in Stage 1 of the deliberative deep-dive process, positive sentiment towards Icon Water increased, rising from 30% positive (unprompted) to 75% positive (prompted). This is on par with 76% of participants in the community survey who felt satisfied (rated 7+) with their water and wastewater services and 73% who felt that Icon Water meets or exceeds their expectations.
- Most customers and community members were unaware that Icon Water delivers educational initiatives and community sponsorship programs and were 'pleasantly surprised' to learn that Icon Water provides community benefits beyond their essential services (water supply and wastewater management).

Satisfaction with Icon Water
(Open community survey, n=487)

Satisfaction with current water and wastewater services in your area



Reasons for satisfaction ratings

RATED 7 OR MORE OUT OF 10

- No issues
- Good quality drinking water
- Reliable service/ supply
- Issues fixed quickly

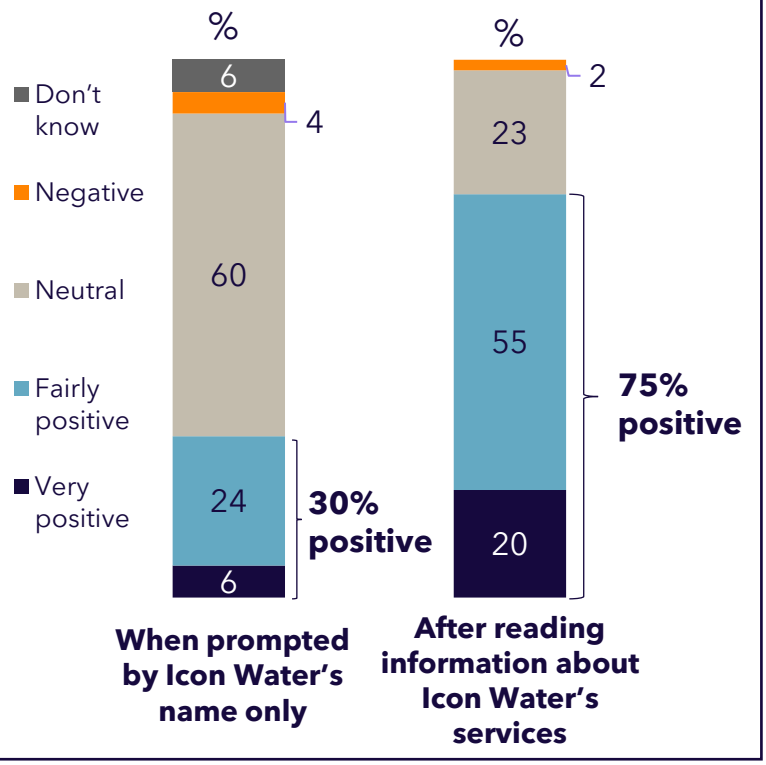
RATED 6 OR LESS OUT OF 10

- Affordability
- Overcharging
- Poor customer service
- Issues with sewer services
- Poor water pressure
- Some issues with discoloration

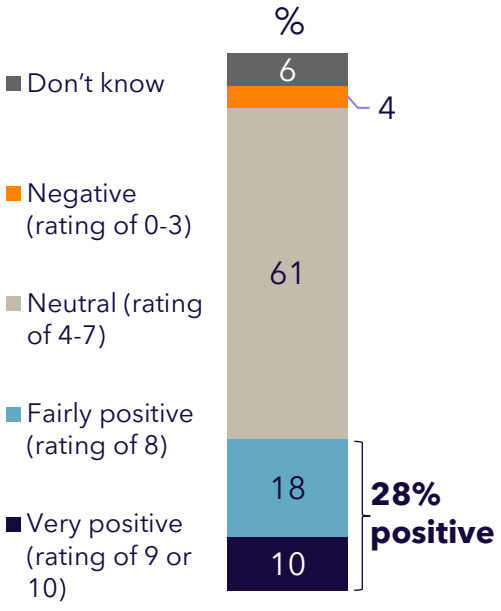
Figure 4.1.1 Satisfaction with Icon Water

Sentiment towards Icon Water

(Deliberative Deep Dive – Stage 1, n=51)



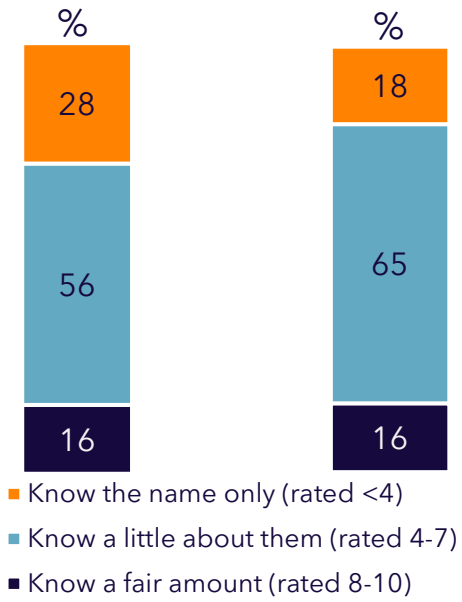
(Customer survey, n=2,645)



Knowledge of Icon Water

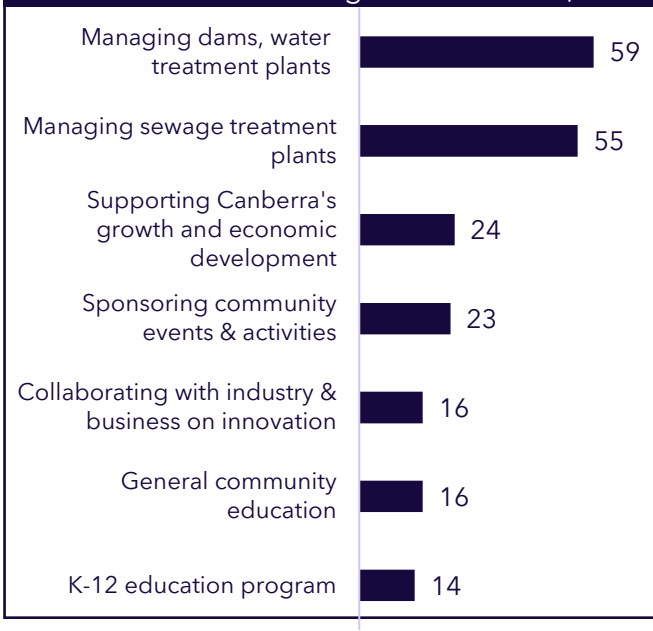
(Deliberative Deep Dive – Stage 1, n=51)

(Customer survey, n=2,645)



Prompted awareness of Icon Water Services

(Customer survey, n=2,645 - % rating awareness as 7+ out of 10 – good awareness)



Customer responses after reading information about Icon Water's services

"I am surprised at the extent of the services Icon provides. Particularly the educational side, both community and school … makes you realise how important a well-run water and sewage provider is."
– Business customer

"I surprised to see the educational programs and sponsorships Icon runs. Didn't expect that. Good on them."
– Residential customer

"I'm quite surprised about the range of support Icon Water gives to the community. Pardon the pun but maybe its presence is diluted because it seems to be involved in too many things!"
– Business customer

Figure 4.1.2 Sentiment towards Icon Water, knowledge of Icon Water, Prompted awareness of Icon Water services

Quantitative customer survey participants were asked for the reasons for their sentiment rating of Icon Water. Their coded feedback is provided below.

Limited awareness of Icon Water's services and lack of issues experienced meant a good proportion of participants were unable to provide detailed feedback.

Beyond this, good service experiences and water quality were the main positive themes, while affordability was a key reason for lower ratings.

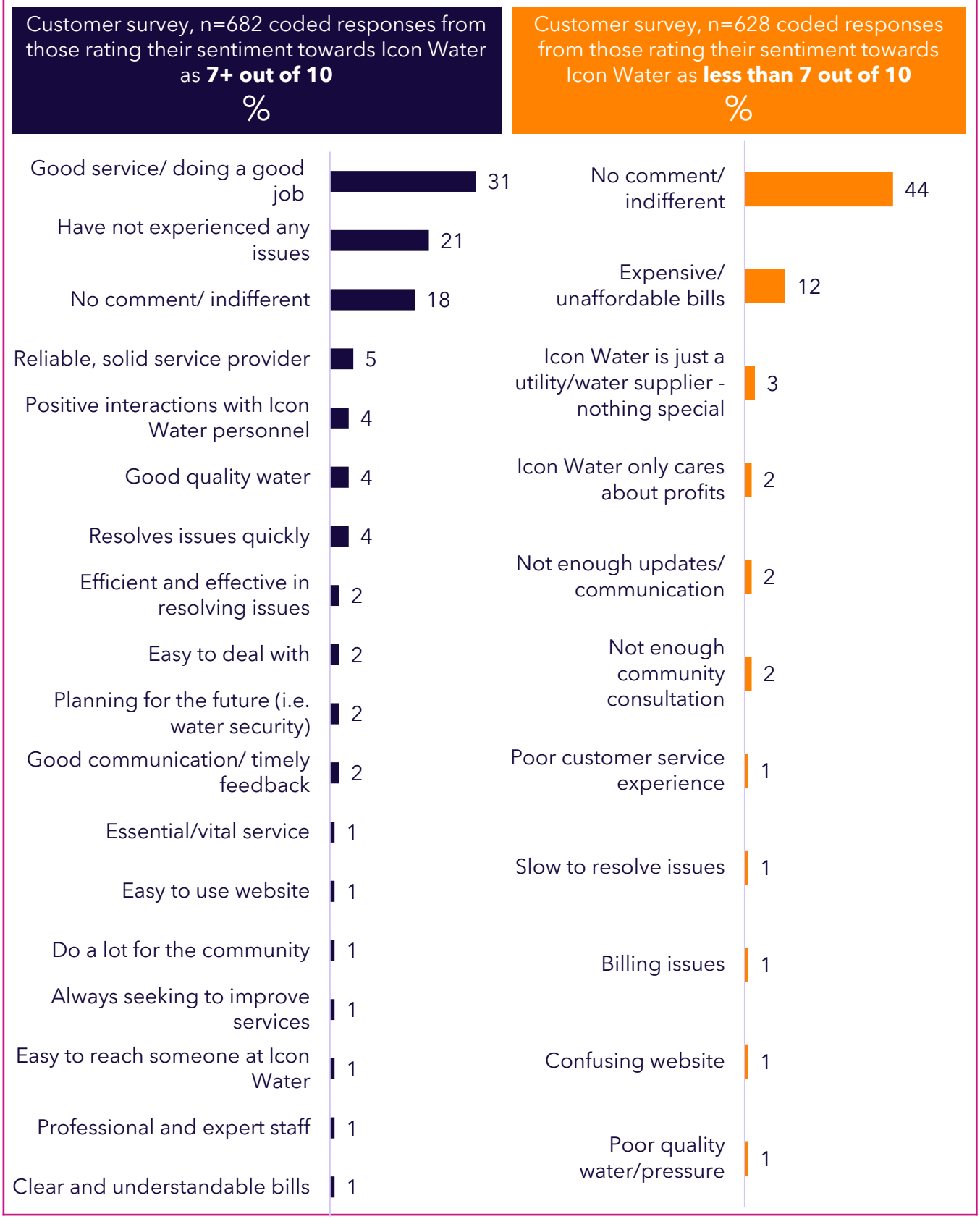


Figure 4.1.3 Reasons for sentiment rating from the quantitative customer survey

Sentiment towards Icon Water by Financially Vulnerable Customers

(Deliberative Deep Dive – Stage 1, n=5)

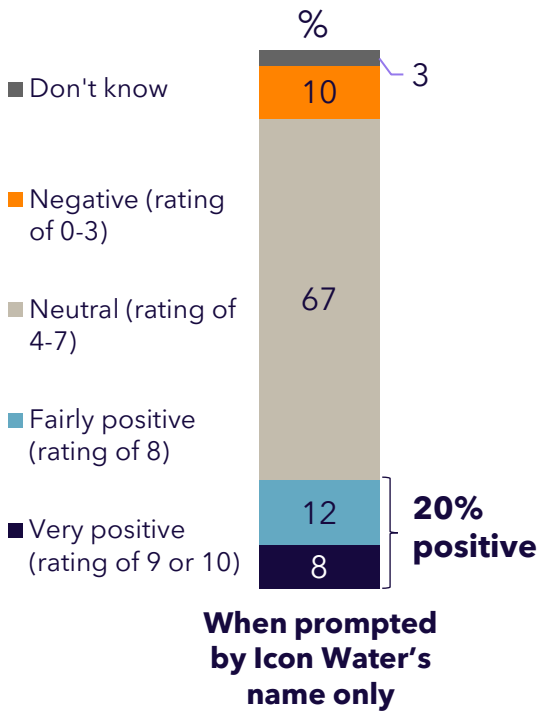
When prompted by Icon Water's name only

All said they were **neutral** towards Icon Water

After reading information about Icon Water's services

All said they were **positive** towards Icon Water

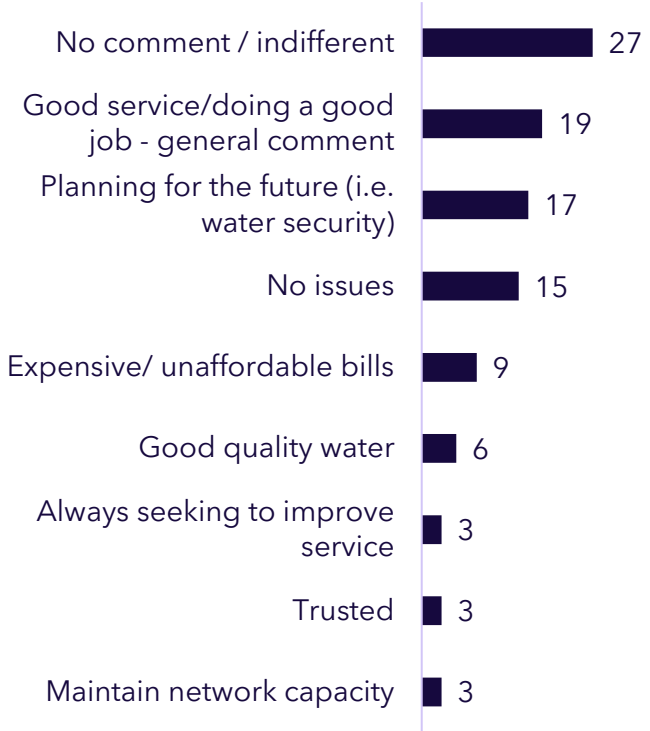
(Customer survey, financially vulnerable customers, n=238)



Reasons for Sentiment Rating in Customer Survey (%)

(Financially vulnerable customers, n=238)

Coded responses from those rating their sentiment towards Icon Water as **7+ out of 10** (n=95)



Coded responses from those rating their sentiment towards Icon Water as **less than 7 out of 10** (n=132)

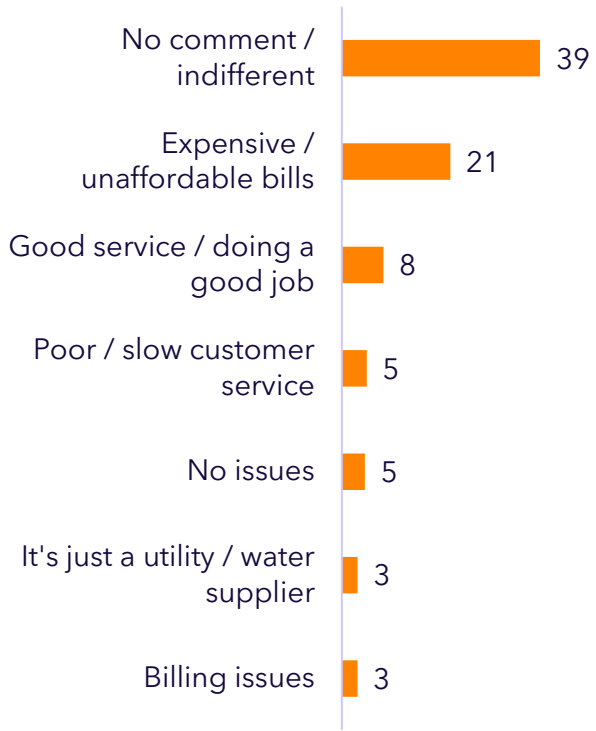


Figure 4.1.4 Sentiment towards Icon Water by financially vulnerable customers
Figure 4.1.5 Reason for sentiment rating by financially vulnerable customers from the quantitative customer survey

4.2 Expectations regarding Icon Water as a valued partner in the community

In the **focus groups**, participants were provided the description of Icon Water's vision to be a valued partner: "Icon Water's vision is to be a valued partner in our community, sustaining and enhancing quality of life".

Based on relatively low levels of community understanding of Icon Water's services, opinion was mixed about whether Icon Water is currently a valued partner.

- Several participants felt that Icon Water needs to have a stronger presence in the community to truly deliver on this vision – for example, through the sponsorship and support of community events, sports teams and educational activities.
- Older participants remembered ACTEW having a strong presence at events across the region and wanted Icon Water to emulate this.

Despite participants noting that Icon Water could increase its presence in the community, most did not see a pressing need for Icon Water to be working more actively towards delivering its vision as a valued partner.

- For some participants, Icon Water's provision of essential water and wastewater services already made it a valued partner to the community.

It is recommended that if Icon Water desires to increase its perception as a valued partner in the community, it will need to drive broader public awareness of the projects and initiatives it already undertakes.

"I saw their brand logo at Questacon – they're out there in the community."
– Residential customer

"I expect water to come out of the tap, and if they're the ones providing that, then they're a valued partner"
– Business customer

"If they want to be a valued community partner, they need to be more visible! ACTEW used to sponsor and support events – they were embedded in the Canberra community."
– Residential customer

Icon Water as valued partner was discussed in the Customer Advocacy Forum.

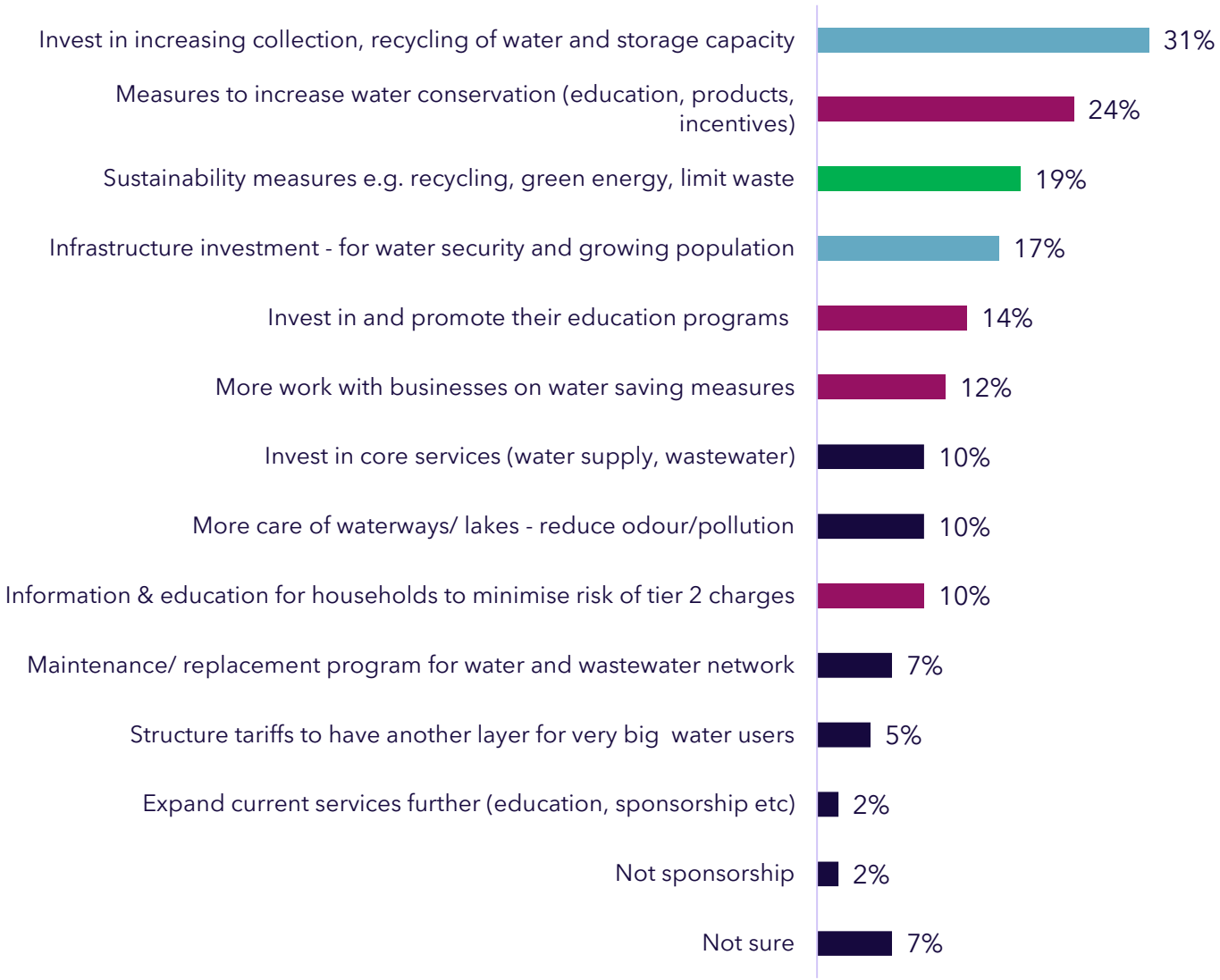
- The term 'partner' was debated, as this term meant something different to participants and therefore Icon Water's role as a partner was perceived differently.
- For one member, the term 'partner' meant sharing burdens, in this case, costs. They thought that for Icon Water to be a valued partner, they should consider cost impacts more, particularly for not-for-profit organisations, and that Icon Water should recognise that increases in charges could impact their ability to provide community services.
- To others, the term suggested separation between Icon Water and the community and they proposed that Icon Water should see themselves as a *member of* the community.
- For those who thought this is was an accurate term, it was agreed that Icon Water contributes significantly to the health of Canberrans and the environment and that the description of them as a partner is a worthy term.

4.3 Unprompted ideas on priority focus areas for Icon Water over the 2023-8 period

In Stage 1 of the **deliberative deep dive process,** participants were asked what they value about living in Canberra.
Almost half of participants mentioned the 'community feel', followed by access to nature and open space. Environmental activities and those that help reinforce the sense of community are considered valuable initiatives that could boost perceptions of Icon Water as a valued community partner.

Deliberative deep dive participants were asked what they thought Icon Water should be focusing on for the next 5-year period. These findings are shown in Figure 4.3.1 below.
The highest number of mentions were water security through increased water reuse, recycling and investment in storage infrastructure, water conservation education and broader sustainability initiatives to reduce waste.

Figure 4.2.1: Customer and community advice on key areas Icon Water should focus on in the 2023-8 period (%) (Source: deep-dive deliberative process, n=51)



4.4 Decisions regarding Icon Water strategy

4.4.1 Water security

How open are people to Icon Water exploring new alternative water sources?

How open are people to earlier temporary water restrictions?

Questions asked about this topic

In various engagement activities questions were asked about whether Icon Water should explore new alternative water sources or increase temporary water restrictions. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statements:

- *Investing in treatment processes and infrastructure to secure future drinking water supply options (e.g. groundwater, purified recycled).*
- *Investing in new infrastructure to enable recycled water to be used to water our green spaces.*
- *Planning for droughts by imposing water restrictions earlier (potentially reducing the severity of later water restrictions).*

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.

Customer Advocacy Forum with 10 members

Members were asked to discuss the following questions :

- *How open are you to Icon Water introducing earlier water restrictions to reduce the severity of later restrictions?*
- *How open are you to Icon Water exploring future water sources? Such as grey, rain, storm, purified recycled water, groundwater, desalinated water.*

Other major stakeholders, including:

3 ACT Community Councils

Environment Forum

Water Expert Panel

Aboriginal elder

Community organisations

Council presentations and one-on-one briefings with community organisations or members did not include specific prompts in regard to water security. Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Presentations to groups asked participants to consider the same questions as the Customer Advocacy Forum.

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statements tested alongside other investment decisions were as per the Community Survey.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community:

- Presentation of information about temporary restrictions with questions on openness to the idea of earlier restrictions, how much time participants would spend in restrictions and thoughts about the dam level that might trigger restrictions.
- Presentation of brief information about future water options and participant's openness to Icon Water exploring each.
- 100-point allocation across different water security activities to show preferences for areas for Icon Water to focus on.

Stage 3 - Second online community:

- Rating of knowledge of the different future water options, then a 'tell us what you know' exercise for each water type.
- 100-point allocation question across different areas for focus, and
- Preference questions in relation to Icon Water focusing on encouraging water saving behaviour vs. investing in new sources.

Quantitative customer survey with 2,645 residential customers from across the ACT

Rating of support for (more/less/no) investment for:

- *Investing in new infrastructure to enable recycled water to be used to water green spaces, such as parks and ovals.*
- *Investing in projects to explore the feasibility of different options to increase Canberra's future water security.*
- *Investing in further community education and support to increase the water conservation behaviours of Canberrans.*
- *Imposing temporary water restrictions earlier than currently to help conserve water in dry spells.*

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

90%

in Stage 1 of the deliberative deep-dive process **were open to Icon Water introducing earlier restrictions**, including 70% who were very open *(n=10)*

"I think they should be increasing storage capacity to cater for Canberra's population growth. They should be looking at building localised recycled water plants in new suburbs, similar to the one in Googong. This would allow new suburbs to efficiently use water to keep things green."

"Would love to see Icon Water continuing to push measures to lead to greater sustainability and water conservation - e.g. conservation programs, incentives, education."

"I think the proposal to introduce temporary water restrictions earlier would be sensible."

Residential customers

88%

in Stage 1 of the deliberative deep-dive process **were open to Icon Water introducing earlier restrictions** *(n=17)*

67%

in the online focus groups **allocated points to Icon Water implementing earlier restrictions** *(n=21)*

39%

in the customer survey **support more spending for earlier restrictions** *(n=2,645)*

90%

in the focus groups **allocated points to Icon Water exploring future water options** *(n=21)*

68%

in the customer survey **support more spending** for exploration of **future water options** *(n=2,645)*

"Their primary investment focus should be on core services…Ensuring the ACT continues to have sufficient water collection and storage capacity for our growing population."

"Icon Water should focus on education of the public and children on how we can all save water etc. Partnerships with companies/ products to assist Canberrans to upgrade their home/investment property to conserve water. They should invest in increasing/ maintaining water catchment areas for the future."

"I don't think introducing water restrictions earlier is the answer. People will just get frustrated with having impositions placed on them without a definite need."

Many talked spontaneously about water conservation measures they themselves were undertaking, such as minimising sprinkler use, replacing lawns with other surfaces/buffalo grass, shorter showers and being aware of the impact of laundry on water use at home. There was a sense of pride among these participants in Canberrans being water conscious.

Most were open to exploration of future water options, sentiment around earlier restrictions was slightly more mixed, with several feeling they were 'already doing enough' to reduce their water use and requiring more guidance and support to achieve lower levels of use.

Small to medium enterprise business customers

100%

in the focus groups **allocated points to Icon Water exploring future water options, and for earlier water restrictions** *(n=6)*

72%

in Stage 1 of the deliberative deep-dive process **were open to Icon Water introducing earlier restrictions** *(n=18)*

67%

in Stage 1 of the deliberative deep-dive process **mentioned (unprompted) the need to increase the reuse and recycling of water and infrastructure as a key priority for Icon Water 2023-28** *(n=18)*

"Icon Water should focus on water harvesting and water recycling for programs such as watering sports fields in times of drought."

"The most important thing we are dealing with is climate change. Icon Water will need to have in place initiatives and projects that will enable it to fulfil demands on water supply as we move into periods of drought and more volatile weather events."

"I think main investment focus should be educating everyday Canberrans about water, wastewater, sustainability and smart use of water."

"My businesses are water-intensive…so, I am well aware of water-restrictions and need for water conservation…introducing water restrictions earlier is not a bad idea."

The topic of water security was very important for small to medium enterprise business customers particularly those with higher water use businesses.

While all participants in the focus groups wanted Icon Water to invest in future alternative water options and earlier restrictions, in the 100-point allocation exercise, future water options were given an average of 15 points (the most points allocated to any initiative) and earlier restrictions received 5 points – indicating a slightly lower level of appeal.

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

81%

were positive in principle about Icon Water investing in infrastructure to enable recycled water to green public spaces, including 47% who were very positive *(n=487)*.

"(I would like to see Icon Water deliver) more recycled water for community facilities (ovals/reserves), further reuse of materials from waste streams (bio solids/energy)."

Open community survey

71%

were positive in principle about Icon Water investing in infrastructure and processes to secure drinking water supply options, including 33% who were very positive *(n=487)*.

"I would like to see Icon Water investing in the ACT Government's wetlands projects. Possibly the provision of quality grey and black water services to homes."

67%

were positive in principle about Icon Water planning for droughts by imposing earlier restrictions, including 30% who were very positive *(n=487)*.

"I'd like water restrictions year round so people don't waste it…"

Customer Advocacy Forum

Mixed sentiment

among forum members

The earlier introduction of temporary water restrictions and use of alternative water sources are topics with overlapping issues.

Water conservation measures can be costly for those who rely on water. Canberrans value their green spaces and increased education and support from Icon Water regarding further use of water restrictions was felt to be needed.

Members raised concerns regarding the impact of earlier restrictions on large water users. Restrictions impact on the operation of sports ovals. ACT Transport and City Services manage some 384 hectares of irrigated grass and during restrictions a number of ovals are 'switched off', which concerns the community. In the last drought period, 35 ovals were completely switched and three partially switched off. The reasons for concern include:

- Loss of access to facilities
- Complaints about the hardness of the ground, irrigation softens the grass and prevents injuries. It can lessen an oval's level of fit for purpose
- During restrictions over a long period of time, people forget about the loss of access to water and cannot understand why sports ovals are in their condition - ongoing communications by Icon Water is required

Irrigation systems are designed to be 60% irrigated and 40% rain. If there is not enough rain and the ovals have to be turned off it would cost the Government approximately $85 million and take up to six months to bring ovals back. If ovals are turned off for a month, the grass dies, and the turf must be removed. This creates significant supply issues and cost burdens once restrictions lift, and enough turf needs to be sourced to restore the ovals to an acceptable standard.

Sporting Clubs noted many members have already introduced drought mitigation measures so may not have much capacity to introduce new mitigation measures.

Customer Advocacy Forum

Examining new alternative water sources was largely favoured and seen as an effective way to conserve water and costs. It was noted that although increased access to recycled water has the potential to lower costs, the impact to the quality of public spaces and community facilities should also be considered.

alternative water sources can be difficult to use. For example, the recycled water pumped from Point Hut has a chemical makeup that impacts the quality of ovals, which means the water needs to be treated first to correct the PH balance. Another example given was the space and infrastructure needed to facilitate the use of recycled water. This is sometimes not a feasible option if space isn't available, or the infrastructure is not able to be maintained properly.

"Restrictions brought in earlier would effect ovals more frequently."

"It's matter of education so people can understand what can be done."

"There is only so much you can do when you get more hot weather and don't have the means to irrigate properly."

"Water security is forefront to us."

Key customer interviews

63%

gave a **high (4-5/5) positivity rating in principle** towards *investing in treatment processes and infrastructure to secure future drinking water supply options*

38%

gave a **high (4-5/5) positivity rating in principle** towards *investing in new infrastructure to enable recycled water to be used to water green spaces.* 38% gave this a mid level rating (3/5).

38%

gave a **high (4-5/5) positivity rating in principle** towards *planning for droughts by imposing water restrictions earlier.* 25% gave a mid rating (3/5) and 25% gave a low (1-2/5) rating.

"Would appreciate opportunities for more frequent engagement as a higher water user. How can we change our practices or get incentives to reduce treated water use? How can we use other water sources?"

"(We are) very interested in water efficiency and ways to reduce consumption."

"(There is) no real incentive. They do nothing to help people conserve water."

Most key customers were hesitant to offer an opinion on this investment, as they did not know the current work Icon Water does and therefore did not have an understanding of what is needed.

Information on Icon Water's current work underway on water security was welcomed, particularly in relation to optimising water efficiency and ways in which Icon Water could better assist larger water users with water conservation.

Aboriginal community

Positive sentiment

from Ngunnawal elder

Water is seen as an important asset and element of country. This participant felt that Icon Water should always look for ways to conserve and re-use as much water as possible.

"Water is one of the most important elements of Country."

Water Expert Panel

Positive sentiment

among panel members

The water expert panel members surmised that water restrictions should be a predetermined decision based on storage levels and expected inflows.
A number of other water management options should be considered, for example dynamic pricing – pricing attributed to the water level reduction in storage.
Prior to introducing restrictions or dynamic pricing, options should be investigated thoroughly such as water reuse, recycling or stormwater use. Research and understanding of the reuse of water through recycling will need to ensure any health risk factors are identified and dealt with, and the co-benefits are widely communicated.

"When you apply restrictions it's a value judgement that society and political leaders make, and not really a scientific question."

"I would be happy for earlier restrictions, but this shouldn't be the first resort."

Environment forum

Positive sentiment

among forum members

Participants at the Environment Forum felt Canberra and Icon Water had the potential to be leaders in this space, as Canberrans would embrace alternative water sources better than other areas.

An investment in water security should consider how best to reuse water conserved. The group noted a lot of water is lost through irrigation. Efforts to conserve this water should seek to redistribute it for environmental purposes.

It was agreed that an investment in water security measures should not result in higher charges for customers.

"We should get over the idea we can't drink this." (This quote refers to future alternative water sources, namely purified recycled water)

Other community groups

Positive sentiment

from ACT Community Council participants and community organisations

Community Council participants supported Icon Water exploring new alternative water sources, particularly for large developments or large water users. There were mixed views expressed on water restrictions; most were in support, but some saw them as unnecessary given recent dam upgrades and sufficient dam storage levels. It was noted more education on water security in general is needed.

Discussions with a large community not-for-profit water user perspective expressed that investment in alternative water sources would be supported, as greater availability of recycled water could greatly assist their operations. This group did not discuss the concept of earlier water restrictions.

"Recycling of stormwater to irrigate our beautiful parklands would be a good idea."

"People don't become careful until there is drought."

"Awful lot of people don't seem to know about (existing conservative water measures)…so an education stream would be useful for that."

"Seems (re restrictions) a little bit alarmist."

Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers)

Participants indicated they supported higher levels of investment for initiatives such as using recycled water to green public spaces and for exploration of future water options.

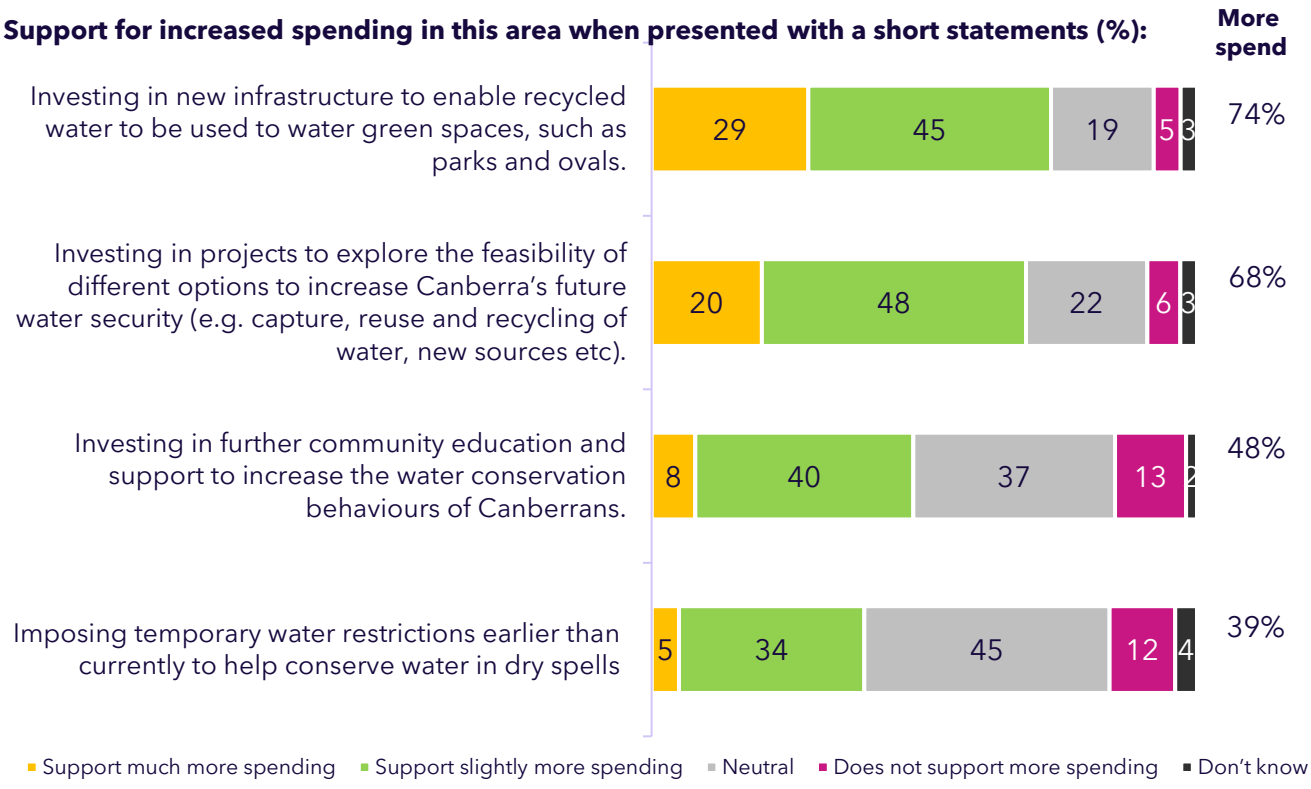


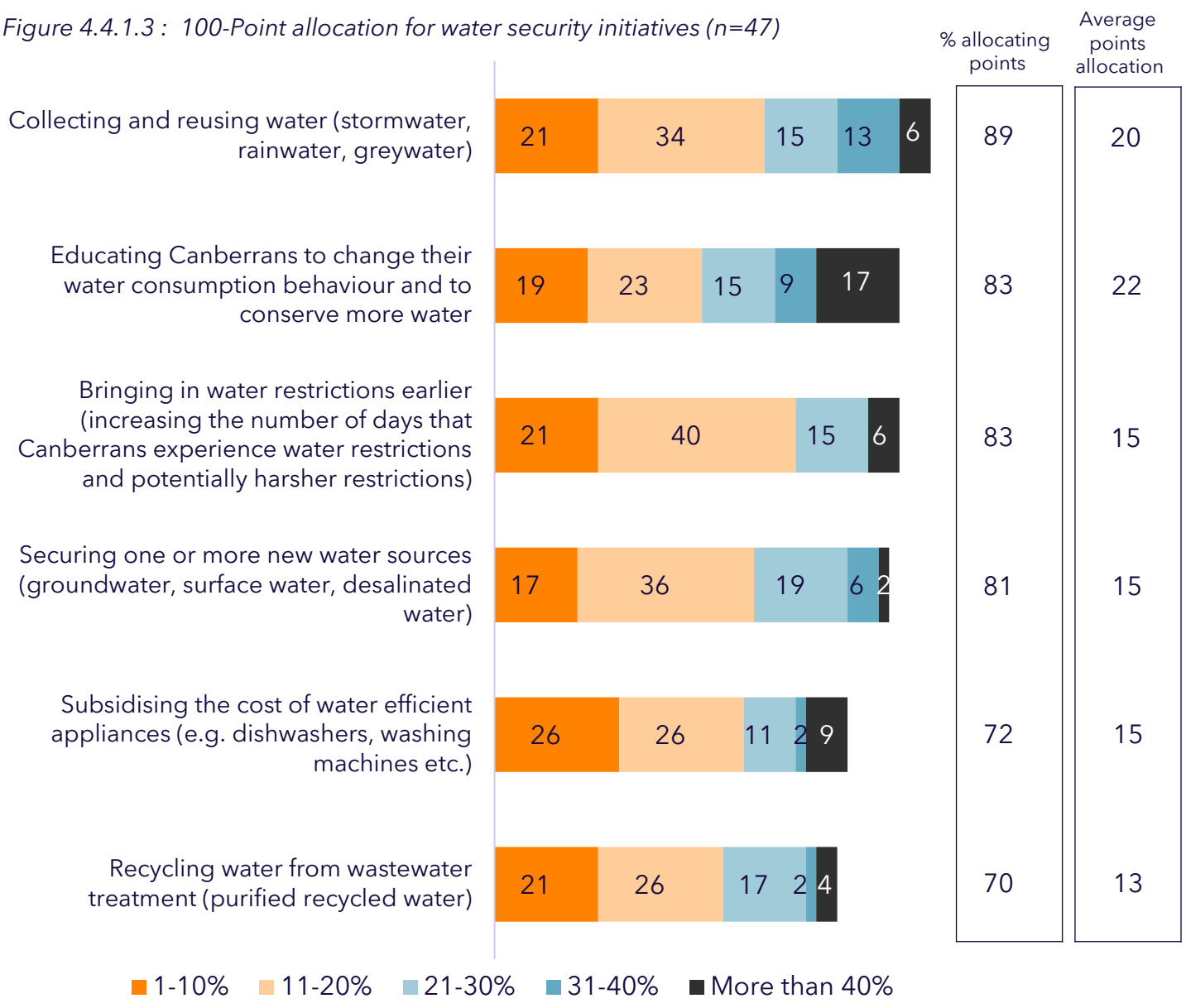
Figure 4.4.1.2 Findings from the quantitative customer survey on water security

Participants in Stage 1 of the **deliberative deep-dive process** (residential and small-medium business customers, and community members) were asked to allocate 100-points across a range of water security activities to show the preference for where Icon Water should focus.

All activities received a broadly similar points allocation, with education and the collection and reuse of water receiving a slightly larger share of points and recycling, subsidies for water efficient appliances and earlier restrictions receiving a slightly lower points allocation. When asked to choose between water conservation and additional supply (either or), opinion was evenly divided.

In sum, there appeared to be customer and community interest in a range of approaches to achieving greater water security, but education and water reuse should be more immediate areas for focus. This aligned with feedback from other stakeholders. The average points allocation for each option is provided below.

Figure 4.4.1.3 : 100-Point allocation for water security initiatives (n=47)



Forced preference questions (either or) (n=47)

Customer and community feedback on new alternative water options

In Stage 3 of the **deliberative deep-dive process,** participants were asked to rate their openness to Icon Water exploring alternative new water supply options. The majority of participants were open to all of the alternative water options tested.

Knowledge levels were mixed, and some participants raised concerns about contamination issues in relation to storm water, greywater and recycled water – particularly for drinking.

Of all the water sources explored, groundwater and desalinated water appear most polarising across all participants, due to concerns about environmental impacts of groundwater extraction and the cost of installing a desalination plant and infrastructure to transport the water to Canberra from the coast.

Table 4.4.1.4 Participant responses to new alternative water sources in the deliberative deep dive

Residential, small-medium business customers and community members provided feedback	Openness to Icon Water supplying each option (n=47)		Rating of knowledge about each: All knowing at least a little (n=47)	Concerns about each option (key themes emerging from unprompted feedback)
	Open to it	Not at all open		
Storm water - which is water that ends up in the drains after it rains	88%	2%	55%	Will we have enough rain to make it worth the investment? Contamination concerns.
Groundwater - which is water that exists underground	81%	1%	53%	Aquifers are under pressure – has an environmental impact
Additional surface water - which would require water moving between water systems, water trading, or increasing available storages	77%	4%	38%	Will it remove it from other locations that need it/ environment?
Desalinated water - which is seawater that has been processed to remove the salt	75%	11%	64%	The cost of transporting it from the coast
Purified recycled water - water collected from wastewater treatment which has advanced treatment for drinking	66%	6%	57%	Some comment on 'bad press' Contamination and taste concerns
Greywater - which is water that is repurposed from other uses such as shower water	63%	11%	62%	Contamination concerns
Recycled water - water collected from wastewater treatment for non-drinking purposes, such as toilet flushing or land irrigation	-	-	68%	Will bacteria be present? Risk of people drinking it
Water efficiency - which is a range of activities to use water more wisely (e.g. education campaigns, behavioural change, water efficient appliances, leakage reduction etc.)	-	-	77%	People are learning more about this each day – making people care is good and it is cheaper than building infrastructure

Conclusion

Across all the engagement forums participants acknowledged that water is a valuable and finite resource. This perception was potentially heightened by experiences of drought conditions and concern about the impact of population growth, climate change and bushfires on future water availability.

When asked to identify areas for Icon Water to focus on, water security initiatives (such as increasing water storage) and educating the community on water saving behaviours were top of mind across stakeholder, customer and community audiences.

In a discussion with a Ngunnawal elder, water was described as one of the most important elements of Country and a strong feature, creatively and educationally, in Aboriginal storytelling.

Future alternative water options

Most stakeholders, customers and community members supported Icon Water exploring future alternative water options. They felt that more mechanisms and infrastructure to capture and reuse water should be implemented where possible. Further, Canberrans would potentially be more likely than other jurisdictions to embrace exploring alternative water sources and that the ACT could become a leader in this space.

While overall levels of support were high for exploration of all options tested, some residential customers and community members raised concerns around the potential for contaminants in reused and recycled water, particularly for drinking. Evidence and community education would be required to help build reassurance and acceptance.

Large water users were particularly in favour of Icon Water exploring increased access to recycled water and greater water collection and reuse. Some expected this water to be supplied at a cheaper rate than drinking water.

Due to cost concerns and environmental risks regarding groundwater and desalinated water, these options were the most polarising.

Introduction of earlier water restrictions

Opinion was mixed around the topic of introducing earlier water restrictions:

- Residential customers were more in favour of earlier restrictions than non-residential customers. Among residential participants there was soft resistance from a minority who thought they were already doing enough to conserve water. Those in favour saw restrictions as a sensible environmental initiative.
- Small to medium enterprise business customers were slightly less supportive of introducing earlier water restrictions compared to considering other water security measures.
- Large water users expressed the greatest level of concern towards introducing earlier water restrictions, due to the potential impact on their businesses.
- It was reported that restrictions would impact the maintenance operations of larger properties, such as large green grounds or sporting fields. These types of water users require large amounts of water to operate effectively. If restrictions reduce their water access and thus ground maintenance activities, it would require significant effort and cost to restore properties to their normal standard in the post-restriction period. It was suggested that the community would likely not support restrictions if it meant public facilities such as sports grounds could not be properly maintained.
- For members of the Water Expert Panel, restrictions were seen as an unnecessary measure that should be treated as a last resort. Staged conservation measures were viewed as a "better use of a finite resource."

4.4.2 Tariffs and affordability

Is the balance of Icon Water's water charges appropriate?

How open are people to a non-residential water tariff?

Questions asked about this topic

In various engagement activities questions were asked about the balance of Icon Water's water charges and whether people were open to a non-residential water tariff. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Tariffs form part of the unprompted rationale for the participants rating of overall satisfaction with Icon Water.

Customer Advocacy Forum with 10 members

Forum members were asked to consider the following questions: *Is the balance between the fixed charges (supply charges) and the variable component (usage charges) in the tariff still appropriate? Options will have different impacts on different customers. Is there a desire for a non-residential tariff to be incorporated into the pricing structure? Options will have different impacts on different customers.*

A poll question asked participants to identify their preferred structure out of Customers pay a higher fixed supply or fixed charge/Supply charges and variable use charges increase at a similar rate/Customers pay an increase in overall charges

Other community groups, including:

3 ACT Community Councils

Clubs ACT

Council presentations did not include specific prompts in regard to tariff structures. Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

A one-on-one meeting was held with members of Clubs ACT dedicated to discussing the current tariff structure and areas for improvement.

Key customer interviews with 8 large organisations

Broad questions of what key accounts thought of the current structure and then what potential changes would make it more suited to their organisation.

Online focus groups with 25 SME business and residential customers

Broad probing on how fair participants felt their charges are.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community: Unprompted ratings of bill comprehension and fairness, followed by presentation of the tariff table and a repeat of the rating questions, then a final fairness question after a summary of Icon Water's services was presented.

Stage 2 - Workshops: Discussion of preference and fairness overall and in relation to five customer personas. The price paths were:

High supply charge - $20 increase each year

Middle road - $10 supply charge increase each year

Overall increase - $6 supply charge increase each year and usage charge increase at the same rate

Stage 3 - Second online community: Presentation of all investment decisions with bill impact data for each level of investment. Participants were invited to select the bill impact they were happy with for each investment decision and to look at the impact of their choices on the five personas.

The tariff structure and charges question was revisited.

Presentation of three options for tariff structures and price increases.

Quantitative customer survey with 2,645 residential customers from across the ACT

- Support for spend level across a range of strategies and investment decisions.
- Willingness to pay modelling (LoS & meters).

See the relevant sections of this report for each investment decision/strategy.

Stimulus material tested

Participants in the **Customer Advocacy Forum** and the **deliberative deep dive process** were presented with detailed information on three optional tariff structures and charging outcomes.

Figure 4.4.2.1 Stimulus material for testing optional tariff structures and charges for our personas.

1	2	3
Customers pay a higher fixed supply or fixed charge	**Take the middle road**	**Customers pay an increase in overall charges**
Supply charges make up a greater proportion of your bill **The amount you pay is more consistent** – how much water you use has less impact on what you pay **The supply or fixed charge continues to increase in 2023 by $20 a year, as it has done in the 2018 to 2022 period.**	Supply charges and variable use charges increase at a similar rate The outcome is more a balance between control and certainty **The supply or fixed charge will increase from 2023 by $10 a year.**	Variable use charges make up a greater proportion of your bill **Bills can vary more** - How much water you use impacts what you pay to a greater extent **The supply charge will increase from 2023 by $6 per year.**

The Program used personas of typical Icon Water customers to help that forum think about how the decisions we make today may impact on them and others. The persons are described on page 36.

The outcomes for our personas described on Page 39 against each tariff option were shown. The figures below also captured projected CPI increases, which was communicated to participants.

Celia
100kL
of water per year.

The Andersons
300kL
of water per year.

Kevin at The Bean Brew
200kL
of water per year.

Ashlee at Blooms
5,000kL
of water per year.

John at the club
30,000kL
of water per year.

NOW 2022-23	**$435**	**$1,142**	**$670**	**$23,326**	**$141,326**
1. HIGHER FIXED SUPPLY (2027-28)	$543 +25%	$1,275 +12%	$787 +18%	$24,243 +4%	$146,415 +4%
2. MIDDLE ROAD (2027-28)	$511 +18%	$1,296 +14%	$772 +15%	$25,932 +11%	$156,972 +10%
3. INCREASE IN OVERALL CHARGES (2027-2028)	$498 +14%	$1,306 +14%	$766 +14%	$26,679 +14%	$161,638 +14%

Figure 4.4.2.2 Stimulus material for testing optional tariff structures and charges for our personas (2)

Findings by customer segment

Large water users

Large water users were consulted across a number of engagement activities. Both commercial and not-for-profit organisations requested a need for a more tailored approach to service, support and pricing from Icon Water to meet their needs.

Key customer interviews
These customers have clear and considered requests for Icon Water about the current tariff structure.

Across each discussion, it was clear that large water users often felt they have specific water needs that would benefit from a more tailored approach from Icon Water in relation to service, prices and support to achieving increased water efficiency. Comments heard included:

- ACT has a secure supply of water yet Icon Water charges are very high for its usage, which doesn't make sense to some
- Large water users will always be charged at a Tier 2 rate, which seems like a punishment for essential water use
- Large water users without the ability to reduce their consumption should be incentivised for their efforts or offered a discount or rebate. There is currently no incentive for large water users to implement water efficient practices or infrastructure, beyond saving money on Tier 2 usage charges
- Sometimes, what or how Icon Water charges seems antiquated. In some cases, they charge for infrastructure that isn't in operation (e.g., flush units)
- There is a need for greater flexibility to allow Icon Water to offer a tailored approach
- Large water users would welcome the opportunity to be guided and supported by Icon Water to be more environmentally and economically sustainable
- Advanced notice is needed and appreciated for price increases to assist in budget planning and allocation

Community organisations
The Customer Advocacy Forum, a Not-for-profit, and several Community Councils were engaged. These groups strongly supported a non-residential tariff, particularly those who ran large community facilities or sporting grounds.

They would welcome engagement around revisions to the tariff structure, and any other investments, that would translate to cheaper costs for members.

Some Community Council members held a similar position; encouraging Icon Water to reconsider the current tariff structure as they felt it fails for facilities that rely on water to function effectively.

All groups advocated for fairness. Discussions noted the following:

- Icon Water should consider a not-for-profit tariff in addition to a non-residential tariff
- There is a misconception that recycled water is cheaper than potable water; recycled water is an expensive option
- Community groups would encourage Icon Water to invest in infrastructure to support greater and more widespread use and availability of recycled water
- Clubs are large water users that operate without large fund reserves. They would benefit from a revised tariff structure or other ways to reduce costs
- People would be more inclined to conserve water if the fixed tariff was reduced

Financially vulnerable customers

In Stage 1 and 3 of the **deliberative deep-dive process,** participants were asked a series of questions about the current tariff structure, their bills, and how fair they think what they pay for water and wastewater services is.

In Stage 1, participants were asked (unprompted) How fair do you feel the amount your household pays for the services you receive from Icon Water is? Participants could select a response from the following options: I have no idea, Very unfair, Unfair, About right, Fair, Very fair.

Two out of the five financially vulnerable participants participating in the deliberative deep-dive process felt what they pay is *unfair*. One felt what they pay was *about right*. Two were renters and therefore, selected *I have no idea*.

Comments offered from participants included:

- Lack of support from Icon Water on ways to reduce water usage and therefore, costs
- Complicated and hard to read bills. Simple explanations on how costs are calculated would be welcomed
- One had experience with an incorrect meter reading and bills

In a separate activity, participants were shown a table outlining the current tariff structure and how rates are calculated. Participants where again asked how fair they felt the amount they pay is. Two again felt it was *unfair,* two felt it was *about right* and one said they had *no idea*.

Comments offered from participants included:

- The tiered system does not seem to support residents. Some felt it was unfair that residents would pay the same as some businesses that would have a higher water usage
- The stimulus material shown was praised. Some participants noted similar simple language should be included in future bills
- The consistent price increase trend concerned some, particularly in a post-pandemic climate for those who have lost jobs or for more vulnerable citizens like those on a pension or other concessions.

In Stage 3, participants (five in total) were asked to select their preferred pricing scenario out of the options presented to them earlier in the process (options shown in Figure 4.4.2.2 on Page 58). Results are shown in the chart below. Lower supply charges ($10 or $6 a year) were preferred by most.

Participants in Stage 3 of the deliberative deep-dive process were asked to view all investment decisions on one worksheet and to select their preferred level of investment for each decision. Results of this exercise can be found in Section 4.6.

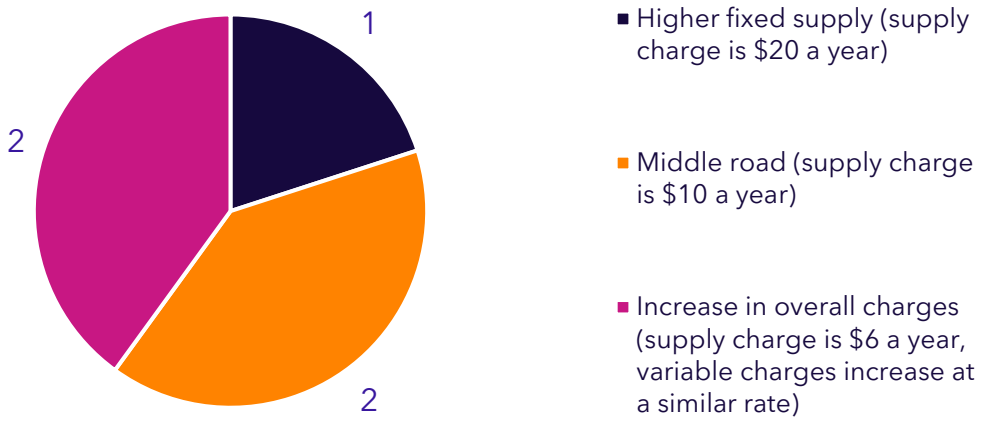


Figure 4.4.2.3 Preferred pricing option from Stage 3 of the deliberative deep-dive

One of the **Customer Advocacy Forum** meetings was dedicated to a discussion on tariffs. Members were asked to consider a number of questions and materials from both the perspective of their members and the broader community. Some forum members represented financially or socially vulnerable community members. Their discussion, therefore, focused on implications for the quality of life of these customers.

Members thought that the equity impact across customer groups be considered with each price option. One argument made stated that those on lower incomes pay a greater proportion of their income on their water bill than those on a higher income. Members who held this view preferred the overall increase price option presented to them (See Figure 4.4.2.2 on Page 58), as the price increase was consistent for each customer persona.

Another member noted that tariff structures should include a price signal for customers, so that they have the opportunity to reduce their water consumption if needed and not be surprised by the final bill.

Other discussions with these forum members raised the importance of education in water conservation as a cost saving measure. Having this knowledge and the necessary support from Icon Water would be welcomed among vulnerable customers.

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the conclusion page.

Open community survey

23%

participants who rated their satisfaction with Icon Water as 6 or less out of 10 gave **expense/ lack of affordability as a reason** (n=110 participants)

68%

of participants were **positive or neutral in principle about higher bill amounts for the provision of higher quality services and new initiatives that would benefit customers and community**. 40% were positive, 28% were neutral and 32% were negative about the idea.

Opinion was mixed on the topic of higher charges for the provision of higher quality services and new initiatives, due to concerns about the impact on vulnerable customers and a sense that utility bills are already relatively high for Canberrans.

"Good service but expensive"

"Affordability could always be better. And incentives to reward and encourage water conservation"

"I think the service is great but I don't believe anyone would get excellent there is always room for improvement"

"'I feel the current service is adequate so paying more is not appealing"

"I don't really want the price to go up but if it's a very small amount it's ok"

Community groups

Negative sentiment

towards the current tariff structure among ACT Community Council particpants and community organisations

It was felt across various **Community Council discussions** that the current tariff structure doesn't support organisations that rely on water to function (e.g. sporting grounds) or vulnerable people (e.g. seniors). Further, participants noted that there is little to no flexibility or opportunity for increased rebates or discounts.
It was noted in one meeting that there is a preference for the community to have more control over their charges (bills) by paying for what they use, rather than a fixed (high) supply charge.
In a meeting with stakeholders who run a **not-for-profit community organisation** the concepts of a
- not-for-profit tariff
- non-residential tariff

were discussed. It was felt that these types of organisations have different needs and given their large contribution to the community, they should be supported with potential cost saving opportunities.

"Why are they (fixed costs) so high for our sector?"

"The dollar issue is what I'm most focused on"

Negative sentiment

among those interviewed towards the current tariff structure

It was a common position across each interview that Icon Water should consider new ways to better cater for large water users.

This was largely from the perspective that most large water users do not have the ability to reduce their consumption without compromising their operations.

It was felt large water users shouldn't be punished for their business type but instead be rewarded for any efforts made to reduce water use or to be more sustainable in how they use it.

This group was not provided with the potential future tariff structure options (page 58).

"You would think with the size and scale of our property portfolio, we would get a discount, but we don't . We would like Icon Water to consider this."

"When I'm paying this amount, I'd like to be able to be told how many (flush units) I am being charged for."

"We are the highest charging state in the country but have the most secure supply in the country – doesn't make sense."

"We would appreciate opportunities for more frequent engagement as a higher water user – how can we change our practices or get incentives to reduce our treated water use?"

"Any increases in water costs has a knock-on effect to other budgets we have. We need to know about increases ahead of time"

"There is no incentive for water efficient fixtures, the price is the same – this should change."

"No real incentive – they (Icon Water) do nothing to help people conserve water. We're going to be in the Tier 2 bracket anyway, whatever we do."

Neutral sentiment

with participants understanding the positives and negatives of different tariff structures on different community segments

Positive sentiment

towards a non-residential tariff

This topic resulted in detailed discussion. The community sectors represented in the Forum deliberated on the impact of different tariff structures.

The concept of significantly increasing supply charges was felt to discourage people to save water ("this is the wrong pricing signal") . Conversely, it was discussed that some customers will be unable to greatly moderate their water usage to respond to pricing.

The different needs for water between not-for-profits and commercial water users was discussed, issues of fairness and cross subsidisation. There is a lack of infrastructure to enable water to be reused as an option. As such the tariff structure is a 'blunt instrument'.

Equity is also an issue for high supply charges – single parent households compared to dual income households. Water is an essential service and there is a need for it to remain affordable.

From a commercial property owner perspective, group members noted price increases are not problematic as long as landlords have oversight into future increases so they can account for them in lease prices.

The participants preferred

- 20% $20 increase in supply charge and less increases in usage charged
- 40% $10 increase in supply charges with the difference in usage charges
- 40% supply and usage charges increasing at the same rate

The concept of rebates for not for profits was raised as a way to support them whilst not impacting vulnerable people.

The concept of a non-residential tariff was strongly supported. Organisations that do not have the ability to reduce consumption or those that contribute to the community and liveability of the ACT should have a separate payment structure to residents and should pay lower usage charges than is currently the case. A rebate for the not-for-profit sector was also discussed.

"If an organisation is contributing to the liveabilty of the ACT then there is an argument they should be charged less."

"Start framing principles of how we should assess this…simplicity is one in terms of whether you are wanting to add more complexity to the tariffs than needs to be."

"The most important thing for commercial landlords is certainty about pricing and where it's going to be able to factor it in to lease costs."

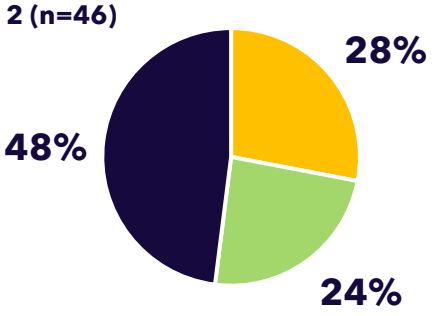
"Important to note that, if liveability is an Icon Water priority, liveability is largely sustained by not-for-profits, so this should be factored into the recovery of costs."

"In the overall scheme of things, does it become an exercise of cross subsidisation? Are you going to recoup the costings from another area or is it an exercise of increasing your revenue base?"

Deliberative deep-dive

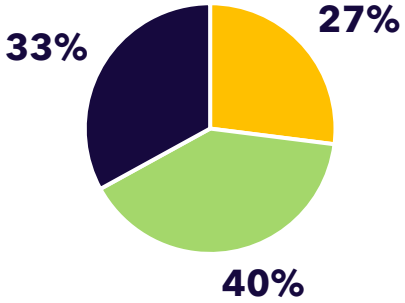
The opinions of participants in the deliberative deep-dive process about the most suitable tariff structure and resulting charges were mixed. The weight of opinion changed between the introduction of the three scenarios at the Stage 2 workshop and when tested in Stage 3. **While most participants initially supported a low supply charge increase, large residential customers and business owners then switched preference to a higher supply charge (middle road option)** as explained below.

Tariff structure and charges preference Stage 2 (n=46)



- A: $20 supply charge annual increase
- B: $10 supply charge and increase in usage charges (middle road)
- C: $6 supply charge and increase in usage charges (overall increase in charges)

Tariff structure and charges preference Stage 3 (n=46)



- A: $20 supply charge annual increase
- B: $10 supply charge and increase in usage charges (middle road)
- C: $6 supply charge and increase in usage charges (overall increase in charges)

Most participants considered the tariff structure scenarios presented to be challenging to make a clear decision on. They considered that there were lots of 'moving parts' to take into account, including people's ability to reduce water use to lessen the impact of price increases.

Some participants questioned why prices were even increasing.

Several participants were in support of a general overall increase in charges which equated to the same percentage charge increase across the board, which they felt was fairer, particularly for the low-income customers. Their attitude was that large business water users should learn to use their water wisely and conserve it.

Others were concerned about the large charges that businesses had to pay compared to other customer types. Others were concerned about their household accidentally falling into the tier 2 usage charges. These participants tended to prefer the higher supply charge option (A) or middle road (B).

A few participants commented that many organisations did provide local community services and shouldn't bear the brunt of increased water costs. In this context it was felt a non-residential tariff should be considered.

Opinions became more mixed after participants had been able to reflect after the workshops.

In Stage 3, SME business customers were more in support of option A and B– receiving 47% (A) and 35% (B) of their vote respectively:

- *"They should be fair for all parties whether you are a small user or a big user you should be charged accordingly, prices should remain as low and fair as possible."*
- *"I've been shocked at how high-water bills were for other businesses I worked with – I think the higher tariff rate is too high – they weren't water intensive."*

In Stage 3 residential customers appeared to be spilt between option B and C (44% each):

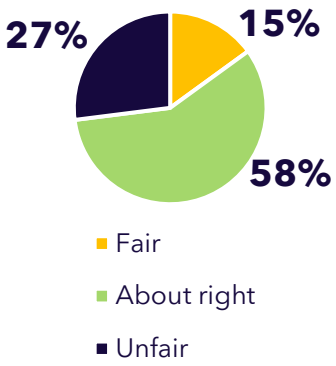
- *"I believe business should pay higher rates as major users. They are able to tax deduct their water charges as business expenses. I don't think individuals and families should be charged at the same rate."*
- *"I worry about my large household accidentally tipping into the higher usage tariff band and getting a huge water bill."*
- *"I have found this an interesting discussion. After reflection, I believe that the base fee should remain as low as possible to encourage water conservation and to make life economically viable for those on low incomes."*

Overall deep-dive community findings

Community, residential customers and SME business customers

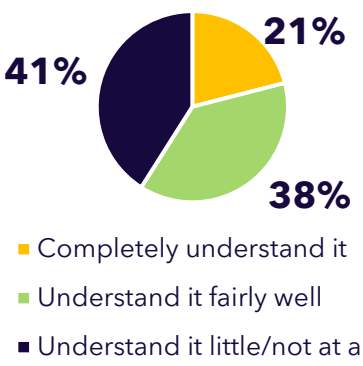
Findings from Stage 1 of the deep-dive deliberative research (Customers and community)

Bill fairness (n=33)



73% say their bills are fair / about right

Bill comprehension (n=39)



59% say they understand their bills well

Other participant quotes

While tariffs was not a financial investment area tested in the **deliberative deep-dive process**, there was still an opportunity to discuss the topic and provide feedback, as a strategy decision for Icon Water. Quotes from these discussions are outlined below, organised by customer segment.

Residential customers

"I can see and understand where they are going with Tariffs and rates and it seems reasonable, I do feel however that the consumption should relate to charges i.e., a lower rate if you are a household that uses less instead of being charged the same as others, this was noticeable when we went over the different rate change options and how they effect different people i.e., single people vs. families vs. workplace. I also think that a concession option should be considered especially for those on pensions etc."

"I have found this an interesting discussion. After reflection, I believe that the base fee should remain as low as possible to encourage water conservation and to make life economically viable for people on limited incomes."

"The different models for the tariffs and charges have been on my mind. I don't like the idea of the single person being impacted by increases as much as larger families or businesses."

Small to medium enterprise business customers

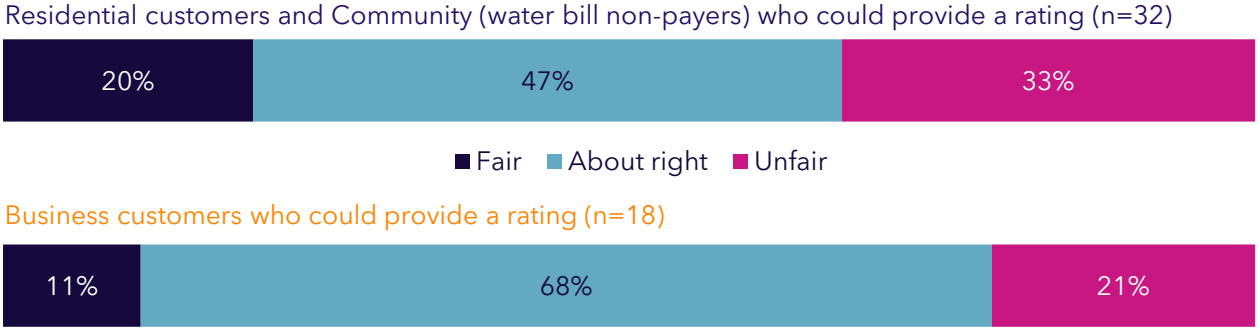
"Still look to some sort of concession for very low users of water in the standing flagfall charge, recognising these individuals still use the wastewater and supply functions of Icon (Water). Would like to see an agricultural tariff for irrigation water, possibly through supply of recycled water."

"From my perspective, being a business that uses very little water, the tariffs seem quite fair. But previously I have been involved in businesses that had to contribute to a share of outgoings from large premises. I was astonished at how large those bills were, considering that they were not water intensive businesses. So the higher rate of tariff charged I think is far too high. In situations like these it's the public or the small traders who pay in the long run as costs are always passed on, one way or the other."

Unprompted perceptions of the fairness of Icon Water's bills

In Stage 1 of the deliberative deep-dive process, participants were asked to rate the fairness of their bills. Generally, most considered their bill to be about right or fair.

Figure 4.4.2.3 Deliberative deep dive initial Perceptions of bill fairness



Non-residential tariff engagement

In the **deliberative deep-dive** Stage 2 workshop discussions about price points, a minority of participants raised (on an unprompted basis) the topic of different tariff structures for different customer types.

Discussion focused on those at either end of the usage spectrum:

- Lower supply charges for low water users from a financial vulnerable background.
- Very large users whose services have a wide community benefit – i.e. not-for-profit sports clubs.

Participants were then prompted with this information and asked for their feedback.

Another option is to have a different charging structure for residential and non-residential customers.

People who use water for their business, include large landowners such as a university or golf clubs or not-for profits for example a sporting club.

If there was a reduction in fees for any sector – this would need to be met elsewhere.

There are further questions re supplying water to the not-for-profit sector – if water is essential, how can they be financially assisted? Should this group be differentiated?

In the discussion that followed, the same points were raised, indicating soft support for different tariff arrangements for some user types:

- Most discussion centred on not-for-profit large water users. There was a general sentiment that businesses should 'lean in harder and not receive a discount'. Other establishments like universities were felt to be able to afford to pay their water bill and should pay for what they use.
- Some question why there isn't additional support for not-for-profits already. Some participants referenced the $400K that Icon Water invested in sponsorships and that perhaps that could be used to offset costs.
- A few participants took the opposite approach, asking for a tariff for very low users (particularly those in hardship), with reduced supply charge. Others mentioned that the Icon Water hardship program would provide discounted water rates, but others countered with the fact that some people wouldn't be aware they could qualify.

Conclusion

Icon Water's bills are seen as fair by the majority of customers. They are seen as expensive by a minority of residential and SME business customers, and by the majority of large water users.

- In the open community survey, one-in-four participants cited cost as the main reason for marking their satisfaction with Icon Water as 6 or lower out of 10.
- Almost three-in-four residential customers and SME business customers in the deliberative deep-dive process viewed Icon Water's bills as 'fair' or 'about right.'

Most large non-residential water users would like to see changes to the current tariff structure that reduces costs and incentivises water conservation. Large customers would support less 'red tape' surrounding the current structure to allow for greater flexibility in customer service regarding bills and payment.

Large customers from the Customer Advocacy Forum and interview discussions would like to see a tariff structure that discourages water waste, but which better financially supports those who rely on water to run their business.

Current water bill comprehension

There was a low level of comprehension of water bills by those in the deliberative deep dive process:

- One-in-five said they completely understood their bill (slightly higher comprehension levels among SME business customers compared to residential customers).

Tariff structures and charges

There is reasonable support among participants who were lower volume water users for the two-tier tariff structure. One-in-four say on an unprompted basis that they value this two-tier structure to help curb unnecessary water use.

Opinions across all forums in relation to the future options for a tariff structure were very mixed. Among participants, opinion was most divided on how to achieve a fair outcome for:

- Large not-for-profit water users (e.g. sports clubs) who deliver a community service.
- Low-income households who could struggle to afford a high supply charge and potentially the usage charge if they are a larger family and slipped into Tier 2 charges.

For this reason, an increase in overall charges (both supply and usage charges or Option C) was slightly more preferred by most residential customers. This tariff option gave each of the five customer personas a similar percentage increase in their bill charges over the 2023-28 period of 14%.

SME business customer participants favoured the higher supply charge.

A minority of participants were concerned about the charges that large water users would be paying compared to low users. These participants preferred the middle road Option B.

Non-residential tariff concept

This tariff concept was presented as an idea only, without economic modelling, options to compare, or analysis of impacts. The conversations on this concept were brief and limited to the Customer Advocacy Forum and the deliberative deep dive process.

The idea of a non-residential tariff was largely supported, particularly by Icon Water's largest customer participants. This support was limited however to not-for-profit community service organisations. There was a perception that 'big business' and 'big institutions' could afford to pay their way and that smaller, community-led organisations should be rewarded for the value they bring to ACT communities.

4.4.3 Customer service and website

Should Icon Water increase their investment in customer experience tools?

Questions asked about this topic

In various engagement activities questions were asked about whether Icon Water should increase their level of investment in customer service tools. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/ negative) in relation to statement:
Investing in customer service and website improvements to make it easier to raise and track connection enquires and to see where outages are that may affect your area.

Key customer interviews with 8 large organisations

In addition to broad, open questions asked in regard to Icon Water's service and responsiveness, each was asked:

- *How satisfied do you feel with the current water and wastewater services provided to your organisation, on a 0-10 satisfaction scale.*
- Rating of sentiment (positive/negative) as per the Community Survey.

Customer Advocacy Forum with 10 members

Discussion question posed was - *What channels do you expect to be available to reach Icon Water when needed?*

Other major stakeholders, including:

3 ACT Community Councils

Council presentations did not include specific prompts in regards to level of service for water.

Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Brief exploration:

- **Stage 1 - First online community:** Exploration within levels of service around satisfaction with current level of service, experiences with Icon Water resolving issues and the dimensions of responsive service.
- No exploration in Stages 2 or 3.

Quantitative customer survey with 2,645 residential customers from across the ACT

Rating of preference around level of investment (more/less) for the following statements:

- *Investing in customer service improvements to make it easier to raise and track enquires and applications*
- *Investing in website improvements to enable real-time mapping of outages across Canberra.*

Findings by customer segment

Listed below are the findings from this topic organised by customer segment.

Community (water bill non-payers)

20%

in Stage 1 of the deliberative deep-dive process **had experienced a water supply or wastewater issue or emergency** *(n=10)*

100%

of those who had experienced an issue or emergency **rated Icon Water's service as 'very good'**

"We were notified in advance [about the water supply outage] and the water was turned back on ahead of schedule"

"Most of my plumbing issues have been fixed by maintenance. The few times Icon Water has come, it has been within a good time range and they have taken the time to knock and explain what the issue was and how it would be fixed. That really is above and beyond any expected service."

"There was an outage the other day in my street, so I contacted Icon Water's sewerage phone line and spoke to a very helpful man that found what the problem was (a burst water main on my street) and gave me an estimated time of it being fixed which was very helpful."

Residential customers

57%

in Stage 1 of the deliberative deep-dive process **had experienced a water supply or wastewater emergency** *(n=17)*

35%

in the quantitative customer survey said they had **ever contacted Icon Water** to raise an enquiry/resolve an issue (n=2,645*)*

78%

of deep-dive participants who had experienced an issue **rated Icon Water's service as either good (56%) or neutral (22%)**

81%

in the quantitative customer survey who had experienced an issue **rated Icon Water's service as either good (65%) or neutral (16%)** (n=1,042)

"Water was restored very quickly with minimal disruption."

"We had to get a replacement of our water meter. They came on the day they had specified and were finished within an hour of starting and had cleaned up after they had finished."

"We had cloudy water for approximately 12 hours. This has happened a number of times and there is never any communication that I have been able to find about it, such as an outages/issues web page."

"Our street had constant water pipe breaks… Icon Water would come out to fix a small section of terracotta pipe and we would be without water for several hours. Weeks would pass and they would be back again to fix another section only a few metres from where they fixed it the last time. Eventually they replaced the pipe, but I would have expected that it would have been fixed that day, and it would not just be a band aid solution."

Generally, residential customers appear to be happy with the responsiveness of Icon Water to their water supply or response to a wastewater issue or enquiry.

Around one-fifth of residential customers who had experienced a water supply or wastewater emergency rated Icon Water's service and performance in resolving the situation as 'poor' (22% in the deep-dive, 16% in the customer survey).

Small to medium enterprise business customers

61%

in Stage 1 of the deliberative deep-dive process **had experienced a water supply or wastewater emergency** *(n=18)*

82%

of those who had experienced an issue **rated Icon Water's service as either good (55%) or neutral (27%)**

Generally, SME business customers appear to be happy with the responsiveness of Icon Water to their water supply or wastewater emergency. Only 9% of SME business customers who had experienced a water supply or wastewater emergency rated Icon Water's service and performance in resolving the situation as 'poor'.

"The leak was causing water to flow through several houses on that street. Icon Water identified the problem and resolved the issue quite quickly as expected."

"We had a sewer blockage in our home due to tree roots growing into a sewer pipe. It probably did take longer than expected for Icon Water to come out and have a look at it (around 3-4 days) but once they got to the problem, it was resolved within a few hours and it hasn't faulted since."

"The particular and most recent interruption was related to the replacement of the antique steel main along part of our street with new plastic piping. The old main had often sprung large leaks over several years. It should have been apparent that the main needed urgent replacement, but instead was routinely patched, sometimes with patches on the patched area. Service was interrupted many times before the main was replaced, with interruption to business and domestic premises without notice. The problem now seems to be fixed."

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

22%

of participants in the community survey **felt 'very positive' in principle about Icon Water investing in customer service and website upgrades to make it easier to raise and track enquiries and see where outages are that may affect their area**. A further 61% were positive to some extent (n=487).

"Better information about consumption of water (both overall, and personal) and pricing. Prices are often hard to understand"

"Cheaper services, better experiences"

Customer Advocacy Forum

Mixed sentiment

among forum members

Forum members noted that, in their position, it was hard to know community preferences. The important thing was accessibility.

With that in mind they suggested that a mix of channels would assist inclusivity but that having too many options could be confusing and difficult for Icon Water to manage effectively.

The phone and face-to-face options were noted as still being highly valued.

Key customer interviews

50%

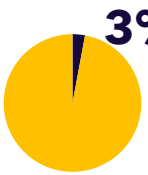
of key customers **gave a mid-range (3/5) positivity rating towards investing in customer service and website improvements**

Icon Water's customer service was widely praised in all interviews. Key customers appreciate Icon Water's attention to detail and the direct lines of contact they have. Criticism given was primarily due to Icon Water's lack of flexibility in response to ad hoc situations or requests, such a requests for certain information to be included on invoices. Others noted that drawn-out approvals processes can cause difficulty or delay for customers awaiting a decision on a request or query.

Further information on discussions with Icon Water's key customers can be found on pages 76-77.

Findings by engagement activity

In the focus groups (n=25), each participant allocated 100 points across 11 different potential investment decisions as part of a constant sum activity.

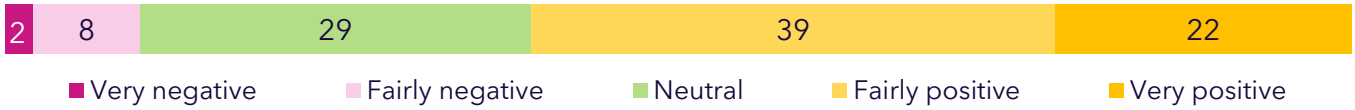


3% of available points were allocated to investing in customer service and website improvements on average.

The largest water users (key customers) would value a more tailored, responsive service
Some key customers (large water users) commented on a lack of flexibility and willingness to accommodate special circumstances or needs by Icon Water. This rigidity has, at times, meant drawn-out processes and unpleasant experiences for customers and a more responsive, agile approach would be valued by them.

In the community survey and key account interviews, participants rated the extent to which they felt positive or negative about Icon Water investing in customer service and website improvements.

Community survey (n=487) (%):

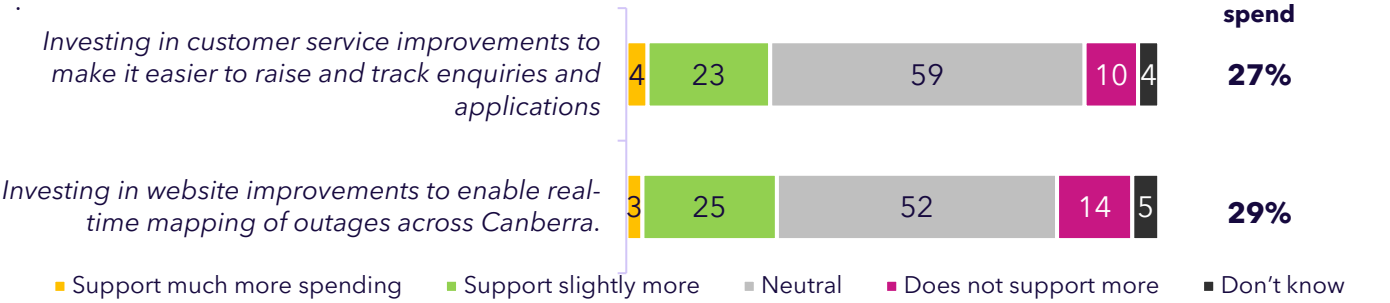


Key account interviews (n=8 – caution low base) (%):

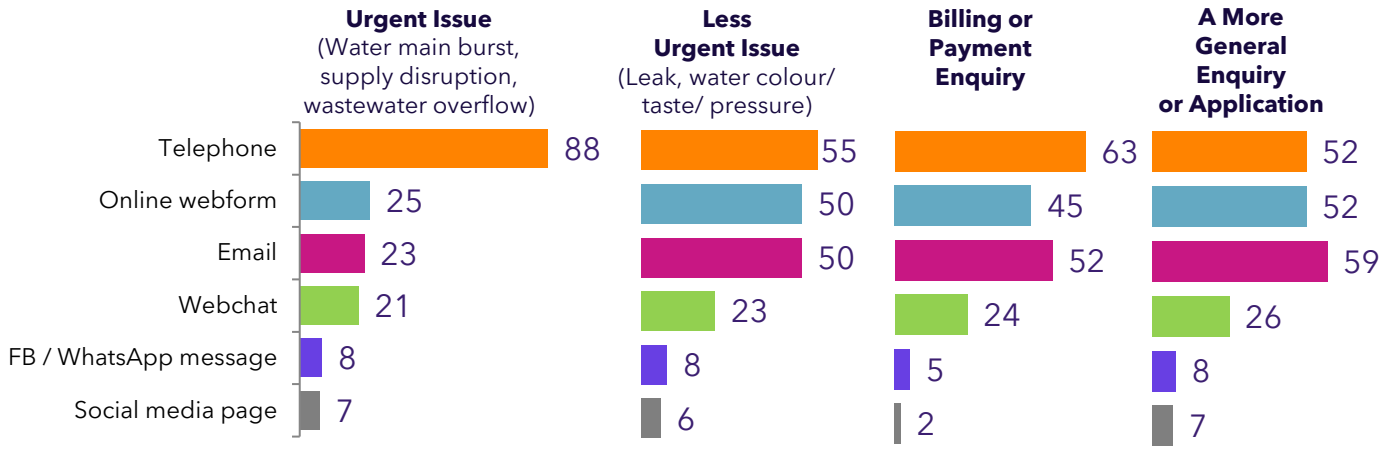
Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers):

Q. Support for more/less spending on the following areas:



Customer service contact channel preferences (%)



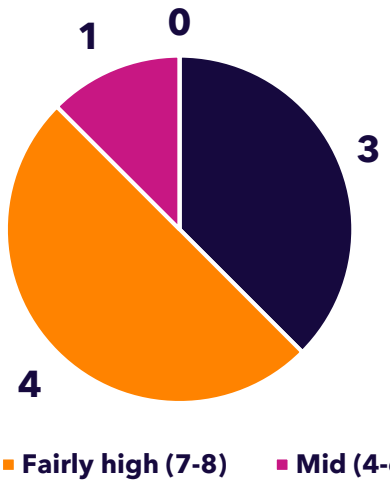
Customer experience – key accounts

Interviews with eight of Icon Water's key customers listed in Section 3.2.2 specifically considered the need for enhanced customer service tools.

Participants thoughts on Icon Water's existing customer service

The participant's overall experiences with Icon Water teams were positive. Shown in the chart below, 88% of customer interviews gave a fairly high or high positive rating regarding Icon Water's services.

Figure 4.4.3.1 How satisfied were key accounts with the current water and wastewater services provided to their organisation? (n=8)



Being large water users, most participants referred to the benefit of having a direct contact at Icon Water and praised this initiative (most took the opportunity to specifically name and thank their Icon Water customer representative).

Some participants shared experiences where their water supply was disrupted with the purpose to demonstrate how quickly Icon Water resolved their issues. Responsiveness, timeliness, and efficiency were common Icon Water traits that were praised.

Some participants noted conversations with Icon Water could be 'rigid', with tone and flexibility identified as areas of improvement. Other potential gaps in service or areas of improvement included:

- Greater transparency of water bills, including detailed outlines of what is being charged
- Clearer information needed to help customers easily identify the Icon Water team they need to contact in order to resolve a particular issue
- Remove use of paper and become 100% digital
- Improve the timeliness of invoices
- Greater flexibility to manage the needs of unique or large water users.

Icon Water's level of responsiveness to queries

Icon Water's responsiveness was generally praised by interviewees. As noted, having a direct contact to oversee an account is welcomed and creates efficiencies in fixing account errors. Suggested ways Icon Water could improve their responsiveness included:

- Consistency in decision-making: a trend was noted where Icon Water changes their mind on decisions, making for inefficient conversations and resolutions
- Less red tape: rigorous approval processes have meant drawn out timeframes for some accounts
- Continual improvement to speed up responses to faults: this comment was made with a view that Icon Water's current response turnaround time is satisfactory, but that investment would be welcome to ensure this quality of service stays the same.

- *"Easy to have open and honest conversations regardless of what it is, no hidden agenda"*
- *"We have a customer representative with Icon Water, it's a great initiative, works very well"*
- *"In 2019 we had our largest water bill ever. We spoke to Icon Water, and they were very happy to come to a payment arrangement to recover the cost"*
- *"They are always good as far as information: send me weekly updates for quality testing, on mailing list, plenty of advanced warning when switching so can control chlorination"*
- *"I've been dealing with them for 25 years – there used to be a time when I could go to a person and be certain they'll stick to the decision, that certainty is not there at the moment. They're more towards standards and going by the books than having a particular solution"*
- *"Their service and responsiveness is very good"*
- *"…they want it on their terms and nothing in between, needed a third party to help us manage them"*

Icon Water's business and investment areas

During each interview, similar to the open community survey and online focus groups, key account customers were asked a series of positivity rating questions on Icon Water's financial investment and strategy decisions and their current business areas.

The area that received the highest positivity rating was investment in network upgrades to reduce outages. Key customers value the day-to-day quality of service and the network. Other highly rated areas included innovation research and implementing the digital meter rollout.

Some customers were not able to answer across all investment areas, noting they did not have enough knowledge to give an accurate rating.

Current business areas that related to customer service received higher ratings, reflecting customers' positive experiences working with Icon Water.

Business areas that received lower ratings were typically those where customers thought Icon Water could be doing more. It was felt that Icon Water could be more proactive in their sustainability initiatives. Some participants concluded that Icon Water could further promote existing work they do in this space to position the company more positively when it comes to this topic, noting that people are unaware of current initiatives.

When asked to what extent Icon Water partners with their organisation, some participants noted greater consistency was needed in the business relationship with some referencing inconsistency of service across teams or having had a better relationship in the past.

Customer experience - residential and small to medium business customers


Customer experiences with Icon Water and their expectations for responsive service were briefly explored in **the online focus groups** and the **deliberative deep-dive process**.

It was noted that only a few customers in each engagement had recent experiences contacting Icon Water. All noted good experiences. As a result the findings below are not based on a robust sample of people who have not had positive recent experiences.

Participants had positive (majority) and negative (minority) experiences to recall in discussions.

- Across the focus groups, seven out of 25 participants (28%) recalled having contacted Icon Water. All those who contacted Icon Water did so by phone, typically to either set up a new account or report a burst pipe or leakage. All described their experiences in contacting Icon water positively.
- One-in-three deliberative deep-dive participants had experienced a water main fault or wastewater overflow within the last 5 years. A further one-in-five had experienced one a much longer time ago, bringing the total proportion impacted to half of participants. The majority (two-thirds) considered Icon Water's performance in resolving their issue to be good. One-in-ten rated Icon Water's performance as poor, mainly due to delays in getting a team onsite or in resolving the issue.
- In the open community survey (n=487), 6% of respondents specifically cited good customer service and fast resolution of issues as reasons for their satisfaction ratings with Icon Water, while 19% made a general comment about good or satisfactory service.
- Around 5% In the open community survey thought that customer service could be better and commented on wanting to see improved customer service through receiving more timely information and communications.

Among the participants asked about Icon Water's customer service, the following themes emerged as factors to having a good customer service experience:

- Getting through and speaking to a knowledgeable Icon Water representative straight away (not passed around or forced to go through menu options).
- Having a team dispatched in a timely fashion – whether this was 15 minutes (to a burst pipe on a major road) or within an hour (to a building site or private address) – this was considered to be timely.
- The fault being fixed quickly – generally within 2-12 hours for a water main.

These themes also reflect what customers expect to see from Icon Water in terms of good service and responsiveness:

- Fast, direct access to a knowledgeable person – an emergency telephone hotline with 24-hour access was expected.
- Good communication throughout – SMS/email notifications or a call to say when a team would be on site (ideally within the hour, particularly for wastewater issues) and the time until resolution, as well as a final notification on completion.
- Resolution of the outage within a few hours – particularly for a wastewater issue. Resolution within up to 12 hours was considered adequate for water supply, but less than half a day was required for wastewater outages. Participants would also expect fast dispatch of a clean-up team for wastewater emergencies due to the health risk.

Community (water bill non-payers)

"The key is communication. It always useful to understand why inconvenience is happening and what are the ramifications if the procedure is not carried out. I think that being able to get through to someone via chat or phone is critical."

"I would like also to interact with my service provider in person. If you guys run community education/meet up sessions, I would like to join."

"Certainly information to help users identify problems and their sources would be most welcome, and also information on pricing regimes. For example, each bill could have added to it a paragraph or two explaining some aspect of the water and sewerage supply system and funding/costs framework."

Residential customers

"I would expect to be able to quickly and easily find the relevant contact information for the issue and to not be placed in a long queue when calling to report it. A quick response is really important. People like personal help so having someone to come out and advise in person would be excellent!"

"Ideally Icon Water would have a dedicated fault line to deal with any repairs/maintenance. An app would be really handy in this day and age to log your fault and show you how the fault resolution is tracking. Acknowledgement is very important, so the email/phone/app, whatever it may be, should acknowledge that the fault has been logged and someone is looking at it straightaway."

"I'd like to be able to speak to someone about the fault fairly promptly and be provided with an ETA on the resumption of the service. If an ETA can't be provided, it would be good to receive SMS updates on the service resumption so I know what to expect or plan for, which would in turn prevent people from repeatedly calling the provider for updates."

Small to medium enterprise business customers

"If it's a broken main, then that should be isolated and shut down. I would expect that Icon Water would have the water, even if in a makeshift form, supplied back to the premises within 12 hours. If it were the same sort of problem but with sewer, then the response times should be halved. The business owners should be kept informed of all timing of repairs and expectations so they can make allowances within their business. Time is money."

"I would expect that there would be a number to call to report an issue, and once reported I would expect a fairly quick response. I would want a team on the ground to investigate almost immediately, and if there was already a team investigating, I would want to know. I would then want updates as to what was going on, and an approximate time we could expect water to be back on."

As a business owner, I would expect Icon Water to act as promptly as possible. If we were to have no water, this will cause major issues for the business, potentially losing thousands in a matter of 30mins. If there is a problem during operating hours, I would expect Icon water to come by within the hour

Conclusion

Participants were asked about the extent to which they would like to see Icon Water invest in improving customer service experiences and systems, including investment in customer service and website improvements to make it easier to raise and track enquires and to see where outages are.

Noting that participants were generally satisfied with the current levels of service for water and wastewater outages, and good experiences among those who have previously contacted Icon Water, few participants were supportive of an increase in charges for upgrades to customer service tools. The ability to quickly log an issue, to receive follow up and to track status is considered by most participants to be part of the standard service (business as usual) and should be provided by Icon Water without increasing charges to customers.

A minority of participants felt that the proposed customer service upgrades would benefit Icon Water more than it would customers. As such, activities to streamline internal processes should be funded by Icon Water rather than customers. Similarly, a small number thought this would mean a smaller customer service team, minimising their ability to speak to someone directly.

Communication channel preferences

During an emergency such as such as a pipe burst or wastewater overflow customers want the ability to speak directly to a knowledgeable person immediately.

While the emergency was being resolved, participants want to receive regular updates by SMS or email as to when the Icon Water team would be on site and the expected timeframe for issue resolution.

For less urgent enquiries, a mix of channels were raised by customer participants – telephone, email and/or webform (with around half of participants mentioning each option).

The option of webchat was preferred by almost half of participants aged under 45 in the quantitative customer survey. Qualitative exploration of this topic in the focus groups reveals that younger participants would prefer to be able to multitask while having an issue resolved and/or be able to submit their enquiry straight away (and receive status tracking updates).

Website upgrades

In relation to improving customer experience and helping keep customers informed, there was some support for investment in the real-time mapping of outages and incidents on the Icon Water website.

This functionality was well-regarded by some participants in the focus groups as a way to help reduce bottle necks and response delays at the customer service centre caused by lots of customers calling to report the issue at the same time, particularly if the information provided included estimates of timeframe until resolution.

However, only a minority of participants (one-in-three or fewer) across a range of engagement tools would support an increase in charges/more spend in this area.

4.4.4 Campaign Evaluation

Care for Water and Free the Poo

SECNewgate Australia

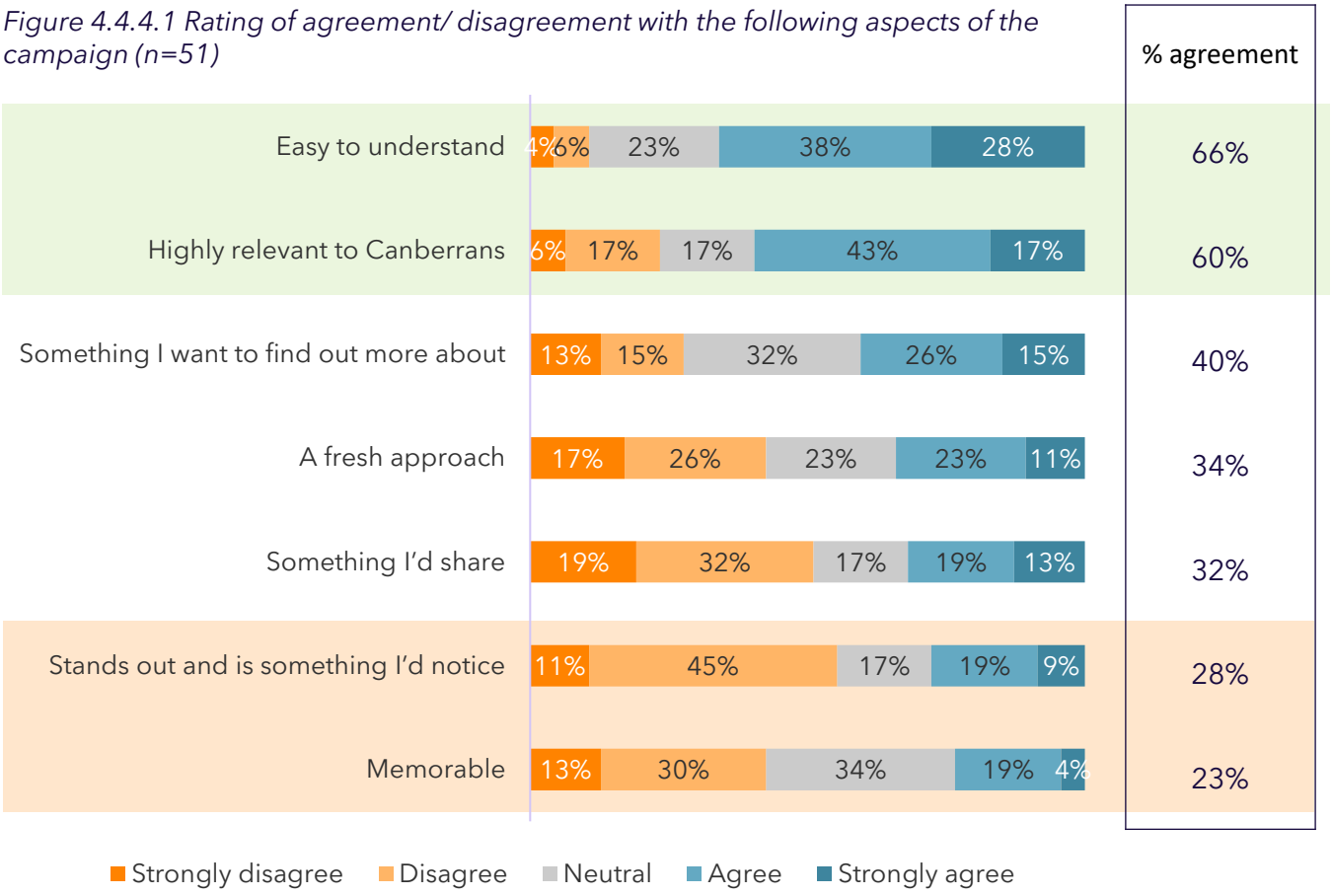
Campaign Evaluation: Care for Water

This campaign was tested in Stage 3 of the **deep-dive deliberative process** (final online community) with 48 residential customers SME business customers and community members (water bill non-payers).

When presented with the logo and tagline lockup, one-in-ten participants in the deliberative deep dive said they had seen the campaign.

While many think that it is easy to understand (saving water) and that it is relevant to them, only one-third agree that it has standout, shareability and memorability.

Figure 4.4.4.1 Rating of agreement/ disagreement with the following aspects of the campaign (n=51)



"It's trying to get me to focus on whether I am doing all I can to conserve water."

"Simple sign, easy to remember."

"It's not very interesting and it's quite old fashioned so isn't appealing to the younger generation who need to carry this message and project forward."

"Be aware of the finite resource. Put it on bus advertising, billboards. Maybe back up with fact-based ads. eg "Canberra will use this amount of water this summer" " If you shave one minute of your shower time you will save our community this" etc. Factual."

Campaign Evaluation: Free the Poo

This campaign was tested in Stage 3 of the **deep-dive deliberative process** (final online community) with 48 residential customers SME business customers and community members (water bill non-payers).

When presented with the print advertisement and radio jingle, one-in-three participants said they were aware of it. Most participants found the campaign stands out and has high memorability. Participants commented positively on its clear message, although some are confused about whether flushable wipes are also part of the problem.

Most agreed that it is a fresh approach and highly relevant to them. The call to action in terms of people wanting to find out more or to share it could be strengthened.

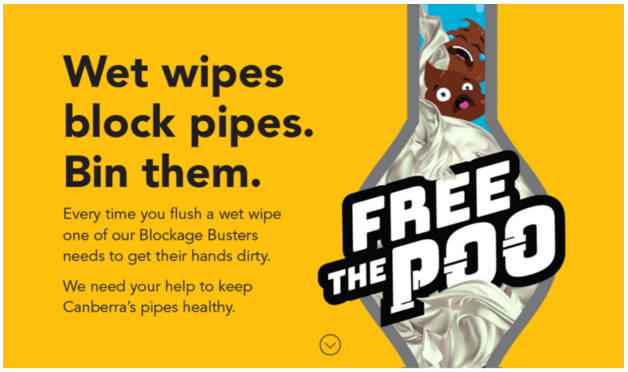
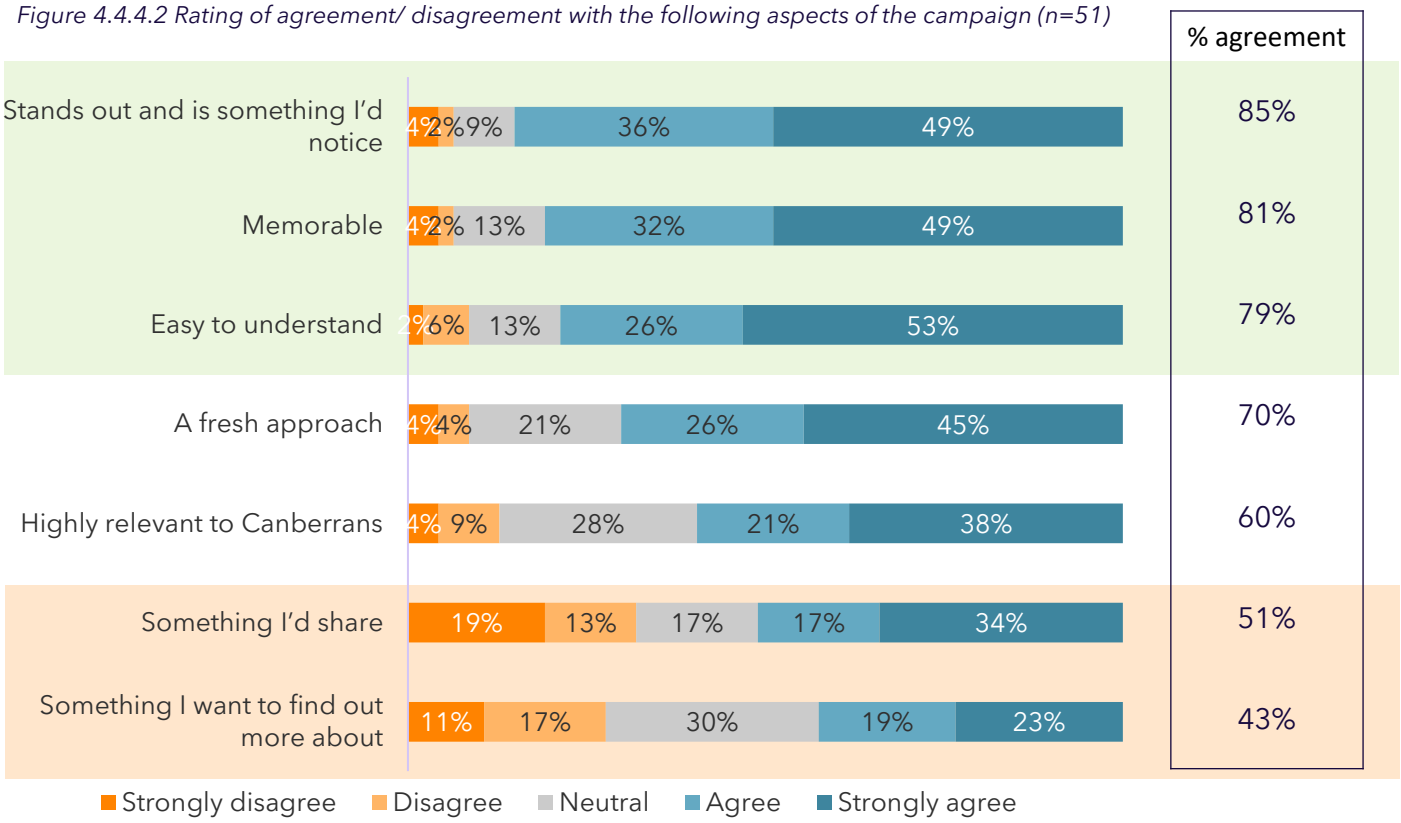


Figure 4.4.4.2 Rating of agreement/ disagreement with the following aspects of the campaign (n=51)



"My 9 and 6-year-old kids would love it and it would probably make them remember not to do it. They will be singing the jingle for months. If you want to appeal to the very young generation who will be future leaders in this space, toilet humour is the way to do it!"

"I think the message should concentrate on not flushing wipes as they block the sewer rather than freeing the poo."

It's bright, to the point, and stands out. The message conveyed is clear. I've seen it in shopping centres, and would expect to find it online, on social media, and out in public. I do think there needs to be a bit more definition between 'wet wipes' and 'flushable wipes'. Most people think that the flushable ones are ok, because they're 'flushable', and that only baby wipes can't be flushed.

"Really good, something I would definitely share. There is humour, it would make my friends laugh, therefore making me want to share it. Really easy to understand. However, I don't feel I need to find anything more about it, I know exactly what it is about."

4.5 Decisions regarding Icon Water financial investments

4.5.1 Should Icon Water invest more, now, to reach net zero GHG emissions ahead of the 2045 target?

Questions asked about this topic

In each engagement activity questions were asked about whether Icon Water should increase their level of investment to accelerate this program. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement:
Investing in measures to speed Icon Water's transition to net zero emissions - ahead of the ACT's 2045 target.

Customer Advocacy Forum with 10 members

Forum members were asked to consider the following question:
How open are you to Icon Water accelerating its program of emission reduction to become net zero in 2030 rather than 2045?

Key customer interviews with 8 large organisation representatives

Rating of sentiment (positive/negative) as per the Community Survey.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three stages:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Question asked about the importance of Icon Water investing to bring forward the speed of becoming net zero by 2030.

Stage 2 - Workshops: Polling and then a coin investment prioritisation exercise for either a:

- Lower cost investment: Internal reallocation of budget
- Medium investment: Other activities would have to be reduced
- Higher cost investment: Would result in a bill increase

Stage 3 - Second online community: Explanation and proposition tested (see overleaf). Participants were asked to select either:

- No investment
- Low investment (net zero by 2045) – bill increase of $0.07 a year
- Medium investment (net zero between 2030 and 2045) – bill increase of $0.22 a year
- High investment (net zero by 2030) – bill increase of $3.86 a year

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Other major stakeholders

3 ACT Community Councils

Community Council presentations did not ask about this program. The feedback received was unprompted and based on pre-existing knowledge or sentiment.

Environment forum with 3 organisations

Expert panel with 6 members

Participants in the Environment Forum and Expert Panel were posed the question:
How open are you to Icon Water accelerating its program of emission reduction to become net zero in 2030 rather than 2045?

Quantitative customer survey with 2,645 residential customers from across the ACT

Rating of whether Icon Water should invest more or less into: *Investing in measures to speed Icon Water's transition to net zero emissions - ahead of the ACT's 2045 target.*

Stimulus materials shown in the deep dive deliberative process

In Stage 1 of the **deep-dive deliberative process** participants were presented with information on the issue of net zero emissions and the opportunity for Icon Water to do more to accelerate the transition to net zero ahead of 2045. This information is shown below.

Please note that discussions around Icon Water's proposal for this potential investment decision were hypothetical only to provide participants ideas on what Icon Water *could* do in this area.

The Issue

Climate change is occurring and its effects are increasing. The last five years have been the warmest on record and global temperatures are on track to increase by at least 3oC this century.

Climate change will have an impact on the availability of water and on the biological processes that Icon Water uses to treat wastewater.

In line with global strategy, the ACT Government has committed to reaching net zero emissions by 2045.

Water and wastewater treatment processes use energy and create greenhouse gases. Having net zero emissions will mean that Icon Water does not contribute to greenhouse gas levels in the atmosphere.

What Icon Water Is Currently Doing

The transition to 100% renewable energy in the ACT has reduced a substantial proportion of Icon Water's emissions already, but to meet the 2045 goals, Icon Water is committed to reducing emissions (from 1990 levels) by:

- 50-60% by 2025
- 65-75% by 2030
- 90-95% by 2040
- 100% (net zero emissions) by 2045

Icon Water's Proposal

While Icon Water is on a journey to net zero by 2045, there are opportunities to do much more, and worldwide emissions targets may be brought forward.

Icon Water is investigating ways to bring forward the speed at which they become net zero to 2030, by:

- Minimising release of greenhouse gases during wastewater transportation and treatment;
- Transitioning our fleet of vehicles to run on renewable energy;
- Sourcing lower carbon energy from local sources; and
- Creating products from wastewater that lock carbon away in the soil and can improve it.

These initiatives will require a significant investment by Icon Water.

In Stage 3 of the **deliberative deep-dive process**, participants were presented with information on the different levels of investment that would be needed to reach net zero emissions ahead of 2045, along with examples of what each of the different investment levels would provide and the expected bill impacts.

Medium and *higher cost* investments are greater than Icon Water's current investment.

Figure 4.5.1.1 : materials presented to the deliberative workshops on Net Zero investment costs

Lower cost investment Icon Water would become Net Zero by 2045	**Medium investment** Icon Water would become Net Zero between 2030 and 2045	**Higher cost investment** Icon Water would become Net Zero by 2030
E.g. More monitoring and optimising processes to reduce emissions **E.g. Offsetting NSW emissions** using our renewable energy certificates **E.g. Reducing fuel use** in vehicles by converting **car fleet to electric** vehicles and minimising travel to meetings **E.g.** Using plant based **lower emitting fuel**	**E.g. Redesigning plants and processes** to minimise greenhouse gases by using a different method to remove the nitrogen **E.g. 100% renewable energy** used at NSW treatment plant and sites **E.g.** Converting **truck fleet to electric/ hydrogen vehicles** **E.g.** Creating soil improvement products from wastewater that **capture and store carbon** **E.g.** Buying **forestry or other offsets** or **planting more trees** to act as carbon sinks	**E.g.** In the event of building a **new wastewater treatment plant**, using latest emission reduction and removal technology **E.g. Retrofitting wastewater plants** with membrane reactors to minimise greenhouse gases
Total investment by Icon Water would be in the order of **$10K - $100K for each investment**	Total investment by Icon Water would be in the order of **$1M - $2M for each investment**	Total investment by Icon Water would be in the order of **$20M - $40M for each investment**
This level of investment would increase customer bills by **$0.07 a year**	This level of investment would increase customer bills by **$0.22 a year**	This level of investment would increase customer bills by **$3.86 a year**

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

100%

by Stage 3 in the deliberative deep-dive process **wanted greater investment** in this area (with 50% wanting medium investment and 50% wanting high investment) *(n=10)*

There was overall support from community members for Icon Water speeding up the transition to net zero emissions ahead of 2045.
Participants acknowledged the importance of investing in this area to drive innovation and minimise the risks to water security posed by climate change.
Questions were asked regarding the real impact some of the activities posed would deliver to reduce GHGs, such as planting of trees or a transition to electric vehicles.

"It's the responsible thing to do for the planet and everyone's future health and wellbeing. And the proposed bill increase is very reasonable."

"Net Zero by 2030 is where the world needs to aim for, and these examples of what Icon would do are things that would need to occur eventually anyway. It makes sense to do this."

"I can't see this having a massive impact. Initiatives like this come off as lip service, are you actually going to plant a tree for every tree destroyed?"

Residential customers

75%

at Stage 1 of the deliberative deep-dive process **felt investment in speeding up achievement to net zero was important**, including 31% who felt it was very important (n=17)

69%

at Stage 3 of the deliberative deep-dive process **supported greater investment**, including 31% who supported a high investment and 38% who supported medium investment (n=16)

62%

in the customer survey **supported increased spending**, including 28% who supported much more spending (n=2,645)

"Overall, a low cost for obvious benefits. We cannot afford to wait and follow someone else down the track as it may be too late."

"Whilst we all would like to see Net Zero targets reached early, the projects can't be rushed and need to be effective both immediately and into the future. A mixture of low, medium and high-level programs is what will work best to achieve this. I believe some of these projects can be funded through existing funding streams."

"If 2045 for net zero was already agreed to and an anticipated cost, why is any additional investment required at all?"

There was overall support for accelerating the transition to net zero emissions ahead of the 2045 ACT government target. The majority of deliberative participants considered the investment important, and the majority of focus group participants allocated points (between 5 and 40) to this activity in the 100-point allocation exercise. Most customer survey participants support increased spending on this area.

The majority of those in the deliberative deep-dive process supported an increase in charges for a faster transition to net zero, generated in part by the relatively low increase in charges on their bill of a 'high' investment in this area.

However, a minority of residential customers were skeptical about whether speeding up the transition to net zero emissions ahead of the ACT Government target was necessary and if the projects suggested by Icon Water in discussions would be the most effective investments to achieve this.

Small to medium enterprise business customers

95%

at Stage 1 of the deliberative deep dive process **felt investment in speeding up to achieve net zero was important**, including 67% who felt it was very important (n=17)

100%

at Stage 3 of the deliberative deep dive process **supported greater investment**; including 82% who supported high investment and 18% who supported medium investment (n=17)

"A small amount to pay to reach net zero earlier. I think most Canberrans would agree."

"Consistent with an important policy. Icon Water would need to do its share. Would be good to be a 'whole of government' approach to avoid inefficiencies."

"These sound like great initiatives and if they get us closer to net zero earlier, then they are well worth it."

"No doubt high investment is the only option but need to be clearer on what Icon Water will do to become net zero emissions."

The overall view expressed was that a bill impact of $3.86 was a reasonable, or cheap, investment in what they saw as an important topic.

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

67%

of participants **felt positive in principle about Icon Water investing to speed up to achieve net zero** (n=487), including 38% who felt very positive.

"Anything to protect the environment is important to me."

"Environmental sustainability must be at the forefront of new developments. This couldn't be more true for water that flows into the Murray Darling Basin."

Key customer interviews

63%

of key account interviews **gave this area a mid-range or neutral (3/5) positivity rating**

- Participants expressed mixed views on whether Icon Water should be involved in this space
- They needed more information on projects and planned outcomes in order to provide a more accurate assessment. As such, most opted to give a neutral, mid-range rating
- Most participants thought Icon Water could be more proactive

"I don't know what things they have in place already."

"What do they contribute (now)?"

Customer Advocacy Forum

Positive sentiment

among forum members

Participants

- supported this initiative and praised Icon Water for their deep thinking about this issue
- largely agreed if net zero can be achieved sooner then it should be
- noted that Icon Water needed to consider the compromises that would be required with this investment to avoid transitioning a major cost burden to customers
- queried if Icon Water had investigated what was possible with current technology to achieve this target sooner

"I think most would support this."

"This seems more effective than buying green energy."

"We have a high responsibility to do better."

Other community groups

Positive sentiment

among ACT Community Councils

The Community Council members that discussed this investment expressed interest and support but suggested the level of investment should be relative to Icon Water's greenhouse gas emissions.

Environment and water groups

Positive sentiment

among forum members

- Environment Forum attendees were in support of this investment, agreeing that 2045 is too late and an earlier target is a sound idea.
- The group noted Icon Water has a significant role as a large land manager in the ACT and should work towards good environmental outcomes in its investments.
- Participants stated a desire for any bill impacts to not disadvantage people at social risk (vulnerable customers) but instead should encourage good behaviour through incentivisation.

"Really interesting and great to see how much you're doing."

"Appreciate honesty."

Positive sentiment

among panel members

Water Expert Panel members strongly supported this investment; supporting both the investment itself and Icon Water using their position to be a leader in this endeavor for the ACT. It was agreed this should not be an isolated investment and that more should be done to positively contribute to, and benefit the ACT community overall.

"I strongly support net zero by 2030."

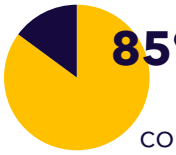
"Somebody has to lead."

"It is fantastic Icon Water is thinking so thoroughly about getting to net zero emissions."

Overall deep-dive community findings
Community, residential customers and SME business customers

Figure 4.5.1.2 Overall deliberative deep-dive findings on net zero

Importance of speeding up net zero when tested in isolation at Stage 1 of the deliberative deep-dive (n=51):



85% considered it important to speed up the transition to net zero ahead of 2045 (53% considered it very important)

Investment level preference from Stage 2 of the deliberative deep-dive (n=45):

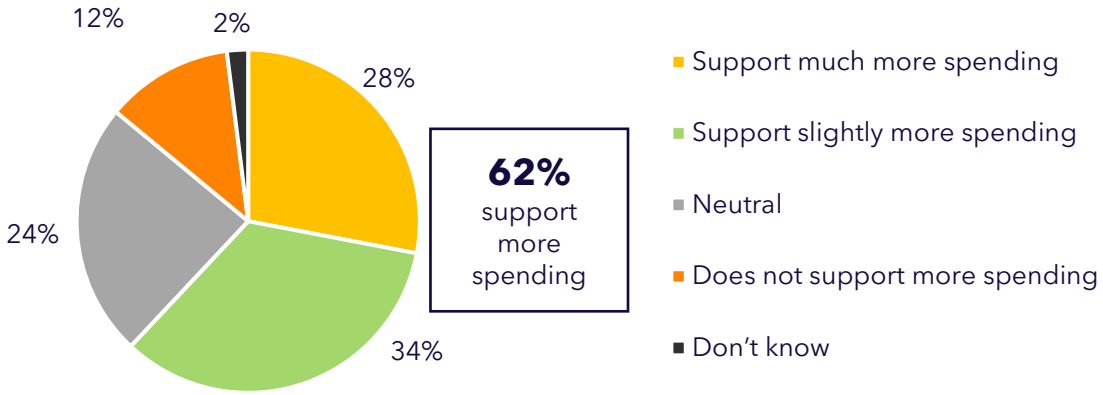
78% would be open to a high or medium investment, including 38% who would prefer a high investment

Findings from the Stage 3 deliberative deep-dive process trade-off exercise (all results from this exercise can be found in Section 4.6)

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process

Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers)



Q. Support for more/less spending on this area (to speed up transition to Net Zero) when presented with a short statement about it: *Investing in measures to speed up transition to net zero emissions within the water industry ahead of the ACT government's 2045 target.*

Please note, no bill impact information was presented at this question and so, participants were agreeing to the idea in principle.

Conclusion

There were high levels of participant support for transition to net zero emissions ahead of 2045, with and without information about possible impacts to customer charges.

Climate change and the topic of transitioning to net zero was discussed unprompted by customers and community.

- When asked what Icon Water could do to improve life in the ACT, many participants mentioned Icon Water should invest in net zero initiatives and commit to ensure water security in the face of a changing climate.
- Across the investment areas but more notable in conversations regarding this program, community and stakeholders believe given Icon Water's position as a large organisation and a large landowner in the ACT, all investments should be made with the intention to lead positive change and environmental outcomes.

A few participants raised questions about whether Icon Water should invest in speeding up the transition to net zero ahead of government targets, which they felt must have been set for a reason.

A minority of participants in the deliberative deep-dive process and the Customer Advocacy Forum were skeptical about the impact Icon Water cutting its greenhouse gas emissions would have, perceiving Icon Water to be a relatively low emitter.

- However, when they were presented with the fact that Icon Water's GHG emissions account for 1% of the emissions for the ACT, several were surprised at how large Icon Water's contribution to ACT emissions was, and this changed their perspective .

Icon Water's efforts to reduce greenhouse gases and the potential impact of planned initiatives is a topic that stakeholders, customers and the community would value knowing more about. Some participants found it difficult to support this investment area without knowing what Icon Water is currently doing to reduce GHG emissions and their related cost impacts. More information on this would be welcomed.

At the time of discussion, the Glasgow COP 26 Conference was underway and media coverage of this may have possibly elevated people's perceptions of the importance of this topic. Some participants talked spontaneously about the impact of bush-fires and drought and linked these events to climate change.

4.5.2 Should Icon Water invest in expanding its efforts to recover resources?

Questions asked about this topic

In each engagement activity questions were asked about whether Icon Water should invest to recover resources.

Community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement – *Investing in innovations in water supply, wastewater treatment, resource recovery or greenhouse gas reduction (through research and development)*

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three stages:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Question asked about the importance of Icon Water expanding its resource recovery efforts.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- Lower cost investment: Internal reallocation of budget
- Medium investment: Other activities would have to be reduced
- Higher cost investment: Would result in a bill increase

Stage 3 - Second online community: Explanation and proposition tested (see overleaf). Further information provided on investment costs for expanding resource recovery efforts; participants asked how far Icon Water should go:

- No investment
- Low investment – bill increase of $0.07 a year
- Medium investment – bill increase of $0.46 a year
- High investment – bill increase of $3.73 a year

Please note, the scenarios testing prices evolved over the course of this deep-dive process as understanding of consumer and community attitudes was built, and econometric price modelling was conducted in tandem by Icon Water.

Customer Advocacy Forum with 10 members

Forum members were posed the following question in group discussion after a presentation from Icon Water - *What are your thoughts about Icon Water expanding its ability to process wastewater and green waste together to generate energy, reduce greenhouse gas production and facilitate soil improvement?*

Other major stakeholders, including:

3 ACT Community Councils

Environment Forum with 3 organisations

Expert panel with 6 members

Council presentations did not include specific prompts in regard to this program. Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Members of the Environment Forum and Expert Panel were posed the same question as the Customer Advocacy Forum, above.

Quantitative customer survey with 2,645 residential customers from across the ACT

Rating of whether Icon Water should invest more or less into – *Investing in innovations in water supply, wastewater treatment, resource recovery or greenhouse gas reduction (through research and development)*

Stimulus materials shown

In Stage 1 of the **deep-dive deliberative process** participants were presented with introductory information on the issue of resource recovery, what Icon Water is doing as part of current resource recovery initiatives, and the potential to further expand resource recovery activities.

Please note that discussions around Icon Water's proposal for this potential investment decision were hypothetical only to provide participants ideas on what Icon Water *could* do in this area.

The Issue

The introduction of a landfill levy in the ACT, various inquiries into the waste industry, an updated national waste policy, the 'War on Waste' documentary and the global shake-up to waste markets has increased the community's awareness of the importance of reusing waste wherever possible and then recovering resources from waste.

Recovering the resources from waste has benefits. For example:

- **Reducing environmental pollution:** In landfill, useful material such as nitrogen, phosphorous, carbon, metals, plastics and chemicals are wasted and contribute to environmental pollution as they degrade.
- **Creating jobs:** 10,000 tonnes of waste that is recycled creates 9.2 jobs compared with only 2.8 when landfilled.

What Icon Water Is Currently Doing

Research shows that Icon Water manages more solid organic waste than what is collected from ACT household kerbside collection.

To date, Icon Water has implemented several initiatives, which are cost effective and which have been recognised through the 2020 Banksia Gold Award:

- **Agri-ash production** - 16 tonnes/day of soil conditioner for use in agriculture
- **Spoil reuse** – reusing 5,000 tonnes/year of excavated dirt that cannot be used for any other purpose
- **Water treatment solids reuse** - 2,200 tonnes/year of solids to be made into compost
- **Using recovered glass sand** – to replace 2,000 tonnes of virgin sand used for sewer pipe embedment
- **Biochar** – a trial creating charcoal from treated wastewater solids for use in horticulture
- **Recycling office waste** – containers, metal, paper, and organics.

Icon Water's Proposal

Icon Water could expand their activities to recover resources further, including recycling other types of waste and/or exploring how to create new and improved products from their waste.

In Stage 3 of the **deliberative deep-dive process**, participants were presented with further information on the different levels of investment that would be needed to expand Icon Water's resource recovery efforts, along with examples of what each of the different investment levels would entail and expected levels of charges.

Figure 4.5.2.1: Stimulus presented to the deliberative workshop on Resource Recovery Costs

Lower cost investment Expansion of current activities	**Medium investment** Investigation of innovative approaches	**Higher cost investment** Implementation of major innovation
An expansion of existing activities. Add water treatment solids to green waste from households and compost to stop 2,500 wet tonnes/year going to landfill.	Identification of innovative processes to drive activities in this space forward. Research, develop and pilot processes for creation of improved products from wastewater solids for agricultural / horticultural use.	Investigation of major innovations that will revolutionise Icon Water's resource recovery efforts and put Icon Water in a leadership position in this space: • Hydrogen fuel research and development, trials and pilots • Wastewater biorefinery research and development to recover chemicals and energy from wastewater
Total investment by Icon Water would be in the order of **$200K to >$500K**	Total investment by Icon Water would be in the order of **$500K to >$1M**	Total investment by Icon Water would be in the order of **$40M to >$100M**
This level of investment would increase customer bills by **$0.07 a year**	This level of investment would increase customer bills by **$0.46 a year**	This level of investment would increase customer bills by **$3.73 a year**

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

90%

in Stage 1 of the deliberative deep-dive process considered **expanding resource recovery efforts to be important**, including 70% who thought it was very important (n = 10)

90%

in Stage 3 of the deliberative deep-dive process would like to see **greater investment made in this area**, including 70% who wanted to see high investment and 20% who wanted to see medium investment (n=10)

There was a high level of community support for this initiative. Many considered that Icon Water making an upfront investment in this area would lead to bill reductions down the track, from commercialisation of products and from operational efficiencies achieved.

"Excellent initiative to make the most from any by products that are discarded during their regular process."

"With this particular initiative, I would assume that Icon Water will work in partnership with NSW who has recently announced a $3B hydrogen initiative thus potentially reducing any Research and Development costs and realizing a much better bang for buck for ACT customers."

"Given the minimal increase to the cost per year, I think it would be good to do anything possible to assist in resource recovery."

"I don't think we should be focusing on low-cost investments as it's a waste of money that could be used to advance innovation. Icon Water needs to make a large investment that will generate significant change."

Residential customers

75%

in Stage 1 of deliberative deep-dive process considered **expanding resource recovery efforts to be important**, including 38% who considered it to be very important (n=17)

69%

in Stage 3 of the deliberative deep-dive process said Icon Water should make a **greater investment in this area**, including 25% who wanted high investment and 44% who wanted medium investment *(n=16)*

73%

In the quantitative customer survey would **support more spending in this area**, including 25% who would support much more spending *(n=2,645)*

There was good support for investment in this area and wide recognition of the potential benefits of innovation in reducing waste going to landfill and in providing potential bill savings for customers over the long term from efficiencies made.

"This is a small price to pay for major, world-leading innovation. Provided, however, that these projects actually lead to something productive and are not just academic research that other nations may be able to utilise but we can't/won't for whatever reason. All research in this space has to be practical and applicable to Australia's needs."

"Leveraging off other research sources in these fields may help reduce the costs for Icon Water to conduct these activities and reduce the increase to the end users (however small or big that saving may be)."

"Would we need such a huge investment? Can Icon Water not rely on some sources that are already in the market or been found and then move ahead in Innovation?"

"I need to know the ongoing future cost for this initiative before supporting it. $0.46 is not much, but the real question is how much it would cost to implement following the Research and Development and Pilot phase."

Small to medium enterprise business customers

75%

in Stage 1 of the deliberative deep-dive process thought that expansion of resource recovery efforts was an **important area of investment for Icon Water**, including 38% who thought it was very important *(n=17)*

76%

in Stage 3 of the deliberative deep-dive process said Icon Water should make **greater investment in this area**, including 29% who wanted high investment made and 47% who wanted medium investment made *(n=17)*

Many could see the commercialisation opportunities that might arise from work in this space and the generation of jobs to support these expanded resource recovery activities resonated well.

A number of stakeholders wanted more information about the outcomes of the specific projects outlined and seemed genuinely interested in finding out more.

"These are really good initiatives that I wasn't aware of. Icon should be telling us more about this and also what sort of income this generates to offset the cost of their services. I like the fact that it has a positive spin. Jobs are important."

"I like the idea of the bigger "blue sky" items but need to find a way to make this a more economical option as outcomes aren't guaranteed!

"Focus on it all! The costs are insignificant enough, and the benefits well and truly outweigh them."

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

13%

spontaneously **mentioned a desire for Icon Water to be involved in waste management** and sustainability initiatives.

While not specifically tested in the survey, when participants were asked what types of services they would like to see Icon Water deliver, there were good levels of unprompted mentions of this topic. It was the fourth most mentioned desired service, after affordability and cheaper bills (23%), usage tracking and leak identification (18%), and maintenance of core services (16%).

"Good to minimise wastage as water is precious"

"Environmental sustainability must be at the forefront of new developments…"

"Sustainability services to make our city more efficient and environmentally friendly in the long term'

Environment groups

Positive sentiment

among Environment Forum members

Environment forum participants were in support of this investment.

The group agreed that technology investment to recover resources should have additional environmental benefits and contribute to the bigger picture of sustainable practice. It was noted such an investment should not come at a cost to the customer and be of a level that would impact quality of life.

"Really interesting and great to see how much you're doing"

Water Expert Panel

Positive sentiment

among panel members

Water Expert Panel members identified the opportunities far outweigh the challenges faced with resource recovery. Opportunity for collaboration across the water industry creating partnerships will be crucial for success.

Investing in resource recovery efforts will have a direct correlation to achieving Icon Water's net-zero emission goal earlier.

"I think it's a great idea"

"Icon Water is in a unique position to investigate these options"

"Excellent, innovative stuff and strength to your arm"

Customer Advocacy Forum

Positive sentiment

among forum members

Forum members were invited to discuss this topic early in the program and largely within the context of their sustainability discussion, which meant their input was based on more limited information than investment decisions tested in other, later forum meetings.

Members were largely in support of Icon Water investing in expansion of resource recovery efforts, given Icon Water's unique position to make a significant difference in this space. The main caveat given was to ensure outcomes could be achieved without transitioning a large cost burden to customers.

Key customer interviews

63%

of stakeholders gave this investment a high (4-5 out of 5) positivity rating

Stakeholders gave this rating without any background information, so this sentiment was based on their personal and professional perspectives on what Icon Water should be doing in regard to sustainability and resource recovery.

Those who provided a lower rating wanted more information on the program.

"I'm unable to comment as I'm not sure what they are doing now"

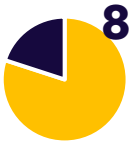
Overall deep-dive community findings
Community, residential customers and SME business customers

Findings from the deliberative deep-dive research (n=51 customers & community)

Importance of expanding resource recovery when tested in isolation in Stage 1 of the deep-dive (n=47):

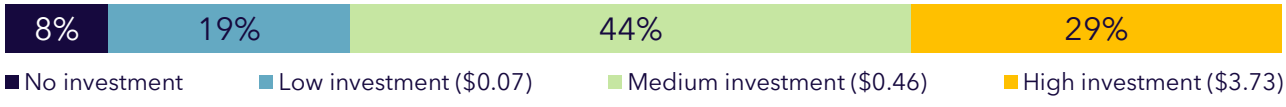
89% considered it important for Icon Water to expand resource recovery efforts (57% very important)

Investment level preference from Stage 2 of the deep-dive (n=41):



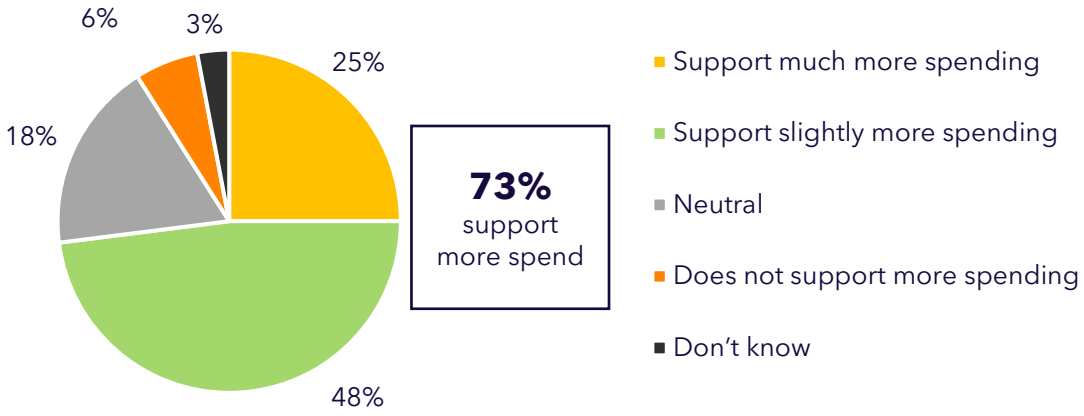
80% would be **open to a high or medium** investment; including 24% who would prefer a high investment and 56% who would prefer a medium investment

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process



Quantitative customer survey

Findings from the quantitative customer survey (n=2,645 residential customers):



Q. Support for more/less spending on this area (expanding resource recovery efforts) when presented with a short statement about it: *Expanding ability to recover resources from waste, for example, to process wastewater and green waste together to generate energy and soil improvement products.*

Please note, no bill impact information was presented at this question and so, participants were agreeing to the idea in principle.

Conclusion

Many participants considered an expansion of resource recovery efforts could provide a wide array of benefits – for waste reduction, job creation, income from commercialisation, and greater operational efficiencies. As a result, they felt that it would be an important area to focus on.

- On an unprompted basis many customers, stakeholders and community members discussed the importance of minimising waste and maximising reuse and recycling efforts.
- The vast majority of participants in the deliberative deep-dive process supported at least medium investment in this area, particularly if Icon Water could present clear outcomes and demonstrable returns to customers in terms of bill savings over the long term.

Very few participants understood the processes and activities involved in resource recovery. This raised questions around what the outcomes and customer benefits would be.

- Most participants had never heard of the outputs of resource recovery (for example, agri-ash and biochar), and wanted more information about how the products could be used.

Investment in this space would need to be accompanied by customer and community education, particularly if a bill impact would result.

There was strong support for Icon Water to make targeted and well considered investments in expanding its resource recovery efforts.

- While seen as a good initiative, many participants wanted Icon Water to investigate the work already underway in this space in other organisations and jurisdictions to avoid 're-inventing the wheel' in research and development spending.
- They wanted Icon Water to focus on initiatives that would achieve cost-efficiencies and/or make revenue from commercialisation opportunities, with savings in expenditure and increased revenue passed on to customers via lower bills.

A few participants were concerned about investment in this area overlapping with investment in other sustainability areas such as net zero, effectively doubling the level of investment.

- Some participants questioned why net zero emissions, innovation and resource recovery were considered separate topics, as they presumed that these topics would be related, and that improving one area would help improve all areas.

4.5.3 Should Icon Water invest in order to innovate?

Questions asked about this topic

In each engagement activity questions were asked about whether Icon Water should invest in innovation.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement – *Investing in innovations in water supply, wastewater treatment, resource recovery or greenhouse gas reduction (through research and development)*

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.

Customer Advocacy Forum with 10 members

Forum members were asked to consider the following question: *What level of investment should Icon Water make regarding research and innovation?*

Forum members were presented with three options:

- Supporting innovation: No change to current budget, $2-5 of a typical water and wastewater bill
- Driving innovation: Bill increase, $7-10 of a typical water and wastewater bill
- Leading innovation: Bill increase, $30-35 of a typical water and wastewater bill

Other major stakeholders, including:

3 ACT Community Councils

Council presentations did not include specific prompts in regard to this program. Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three stages:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Question asked about the importance of Icon Water being seen as an innovator.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- Supporting innovation: No change to current budget ($2-$5 of a typical bill)
- Driving innovation: Bill increase ($7-$10 of a typical bill)
- Leading innovation: Bill increase ($30-$35 of a typical bill)
- Somewhere between Driving and Leading innovation: Bill increase (up to $20 of a typical bill)

Stage 3 - Second online community: Explanation and proposition tested (see overleaf). Participants asked how far Icon Water should go in investing in innovation:

- Current level of innovation ($0 impact on bill) – Supporting innovation up to $200,000
- Driving innovation ($6 impact on bill) – Driving innovation up to $1,000,000
- Leading/Driving innovation ($20 impact on bill) – Between leading and driving between $1M-$5M
- High investment ($33 impact on bill) – Leading innovation - $5M

Please note, the prices evolved over the course of this deep-dive process as understanding of consumer and community attitudes was built, and econometric price modelling was conducted in tandem by Icon Water.

108

Quantitative customer survey with 2,645 residential customers from across the ACT

Rating of whether Icon Water should invest more or less into – *Investing in innovations in water supply, wastewater treatment, resource recovery or greenhouse gas reduction (through research and development)*

Stimulus materials tested

In Stage 1 of the **deliberative deep-dive process**, participants were presented with information on different ways Icon Water is considering committing to innovation.

Please note that discussions around Icon Water's proposal for this potential investment decision were hypothetical only to provide participants ideas on what Icon Water *could* do in this area.

ICON WATER AS AN INNOVATOR

Icon Water is constantly seeking ways to do things more efficiently and to reduce its impact on the climate and environment. Examples of some of the innovations Icon Water is exploring include:

- Exploring new energy sources to run water and wastewater treatment processes, potentially generated from the processes themselves.
- Exploring useful products that can be generated from wastewater and water treatment processes, such as hydrogen, ammonia and biochar (which improves soils and locks away carbon instead of emitting it into the atmosphere).
- Reducing greenhouse gas emissions.
- Examining wastewater treatment processes to return world-leading, clean water to rivers and lakes and which minimise the use of disinfection chemicals (e.g. LED UV disinfection).
- Digital and technological innovations, to optimise processes, speed up Icon Water's detection and rectification of issues, and online tools to educate the community about water and wastewater.
- Understanding and managing emerging contaminants that can exist in wastewater such as PFAS, hormone disruptors or pharmaceuticals.

Icon Water's commitment to innovation includes participating in industry-wide projects and information sharing forums, sponsoring relevant research and evaluating technologies and innovations that are being used elsewhere in the water industry.

Icon Water's current investment in innovation is in the region of $200,000 a year (around $2 to $5 of a typical bill).

In Stage 2 of the **deliberative deep-dive process**, and in the **Customer Advocacy Forum** participants were presented with information on the bill change resulting from different levels of investment into innovation.

Committing to innovation – what level of investment?

Supporting innovation No change to current budget	**Driving Innovation** Bill increase	**Leading Innovation** Bill Increase
• **Participation in industry** projects & info sharing • **Sponsoring** a PhD student • **Adaption of technology** after uptake elsewhere	• Membership of **research centres and hubs** for access to latest research • Participation in **trials of new technology** • Employing a **research and development coordinator**	• **Leading industry research** projects • **Partnering with a university** to resolve a particular area of concern • Employing an in-house **innovation team**
$200,000 per year or $2-$5 of typical water and wastewater bill	**$1,000,000 per year or $5-$7** of typical water and wastewater bill	**$5,000,000 per year or $30-$35** of typical water and wastewater bill

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

100%

in Stage 1 of the deliberative deep-dive process thought it was **important for Icon Water to be seen as an innovator**, including 60% who thought it was very important (n=10)

When this topic was discussed openly, there was a certain amount of pride in the way people spoke for the ACT (Icon Water) to be seen to lead in innovation.

This was accompanied by acknowledgement that innovation was essential to address key environmental challenges, increase water security, achieve operational efficiencies and ultimately benefit customers.

"Like any public service provider, Icon Water must continually be looking at ways of innovating with the purpose of providing a better and more efficient service to its customers. I see no real drawbacks."

"It all sounds really good, but how realistic is it that any new innovations will be implemented? Sounds like an expensive and laborious task to try new things on a large scale. I'm a tad skeptical. Love the idea of it though and think they should be innovating"

"Icon should continue to be innovative as I think this is reflective of the Canberra community itself. Being a leader in innovation should be something to be proud of."

Residential customers

87%

in Stage 1 of the deliberative deep-dive process thought it was **important for Icon Water to be seen as an innovator**, including 38% who thought it was very important *(n=17)*

57%

in Stage 3 of the deliberative deep-dive process **would like to see increased investment in innovation**, including 31% who said they would like a high investment made to allow Icon Water to do more to lead innovation *(n=16)*

65%

In the quantitative customer survey would **support more spending** in this area, including 21% who would support much more spending *(n=2,645)*

There was widespread concern about the current low level of spend on innovation by Icon Water and most would like to see spend increase, primarily to help address environmental challenges, build water security and to increase operational efficiencies. There was an expectation that savings would be passed back to customers.

While some participants had pride in Icon Water taking a more of an active role in driving innovation, a few had concerns about Icon Water, a relatively small water company, serving a small population, investing too heavily in this space, due to the potential impact on bills.

"Investing in innovation is really important. Every region across the world has valuable insight to share. Australia has numerous advantages and challenges when it comes to water supply, and it is important that we are up there with the leaders in innovation in order to be able to share knowledge across the world"

"I don't think $200K is a large investment. Not sure we will see too much innovation from such a small budget!"

"I don't particularly care if Icon Water is seen as an innovator. It is critical that it provides the service as efficiently and as effectively while keeping the costs to a minimum. We are only a small city and unless there is something unique or we already do something world-leading, I don't think such a small population as we have in the ACT can afford to invest heavily in unique research when so many other national and global institutions with far greater resources are already doing it."

Small to medium enterprise business customers

100%

in Stage 1 of the deliberative deep-dive process thought it **was important for Icon Water to be seen as driving innovation**, including 61% who thought it was very important *(n=18)*

70%

in Stage 3 of the deliberative deep-dive process would like to see Icon Water **increasing its investment in innovation**, including 17% saying they would like a high investment made to allow Icon Water to do more to lead innovation *(n=17)*

"I think these initiatives are great. I'm wondering if $200K is enough investment as innovation is so crucial to our sustainability in the future"

"I feel this type of investment in innovation is important because it is critical that the environment is in a healthy state as it is the environment that ultimately sustains us and the planet."

"As a business user, I am constantly thinking of my water usage and wondering how to make it more efficient. I think that drawing on the expertise of our universities to drive innovation would be a good investment. I do not know if Icon is spending too much or too little in this area. I think spending money on innovation is important."

There was strong support for Icon Water to drive innovation more strongly, especially in relation to sustainability, environmental and water security initiatives. Several had concerns that the current level of spend was insufficient to result in major progress.

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

72%

were **positive in principle about Icon Water investing in innovation** in water supply, wastewater treatment, resource recovery and greenhouse gas reduction through research and development, including 36% who were very positive (n=487).

Innovation was an investment area with a good level of support in principle from community members.

"Keep improving with new technology for (to be) future ready"

"…being proactive rather than slow to react"

"New technology and better innovation"

"(Invest in) research and development into cutting methane emissions."

Key customer interviews

63%

of stakeholders gave this investment a **high (4-5 out of 5) positivity** rating

Stakeholders gave this rating without access to background information, so was based on their personal and professional perspectives on what Icon Water *should* be doing, i.e. 'innovate or stagnate'.

Those who provided a lower rating sought more information on the program.

Customer Advocacy Forum

Neutral sentiment

among forum members

Forum members generally supported Icon Water's intention to invest in innovation, however, they were cautious in their support and raised questions including how this overlapped with other investment areas such as achieving net zero emissions and resource recovery.

When presented with the stimulus material on cost options the bill allocation for the highest investment option ($30-35) deterred some members (mainly those representing vulnerable citizens), with discussion this would be too much for older citizens and that other investment areas put to the group would be better placed to receive extra funding.

"The solution (to the higher cost) would be to wait until technology is further developed"

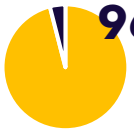
"A $30 increase is too high for older people"

"There are other things on the agenda we have to prioritise"

Overall deep-dive community findings
Community, residential customers and SME business customers

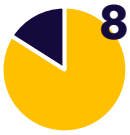
Findings from the deliberative deep-dive research (n=51 customers & community)

Importance of Icon Water as an innovator when tested in isolation at Stage 1 of the deep-dive (n=51):



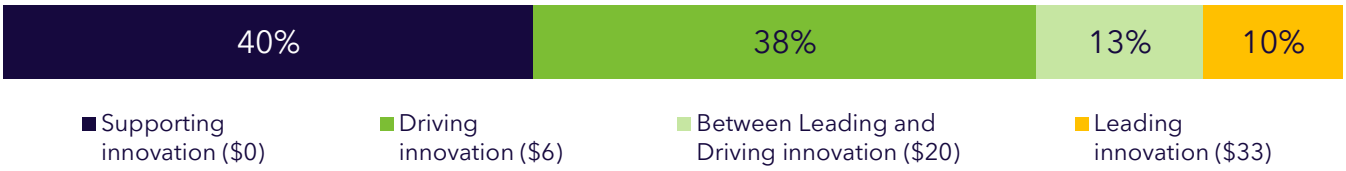
96% considered it important for Icon Water to be seen as an innovator (including 53% who said it was very important)

Investment level preference from Stage 2 of the deep-dive (n=45):



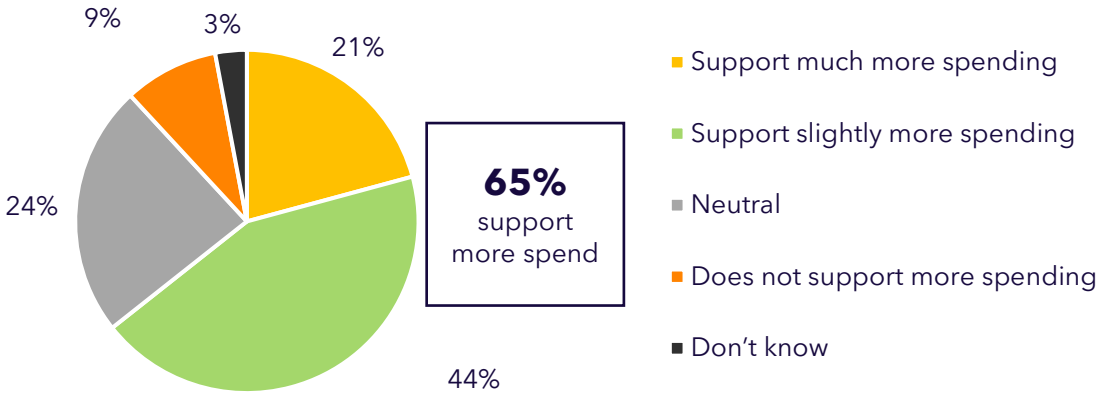
85% would be open to a bill increase (either Leading or Driving innovation)

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process



Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers):



Q. Support for more/less spending in this area (innovation) when presented with a short statement about it: Investing in driving targeted innovation in water supply, wastewater treatment, resource recovery and greenhouse gas reduction (through research and development).

Conclusion

Overall, there was majority support for Icon Water to focus on and spend more on innovation. Two-thirds of participants across a range of engagement tools supported more investment in this area.The current level of spending was seen as too low to achieve meaningful change.

Most participants wanted to see targeted investment in innovations in processes and technology in areas that would improve environmental outcomes (e.g. water quality in lakes and waterways), future-proof water security and increase operational efficiency.

There was an expectation that savings would flow back to customers in the form of bill savings from operational efficiencies implemented.

Some participants viewed innovation as an essential part of a forward-thinking organisation and had a sense of pride in Icon Water potentially taking a leading role in this space in the water industry. Some customers and community members wanted to see Icon Water and Canberra 'punch above their weight' and be world-leading.

However, a few participants had reservations about the level of investment that would be required for Icon Water to achieve significant outcomes, whether the investment into innovation would pay off, and if Icon Water should move beyond its essential services to focus on innovation at all.

Some participants noted that investment in innovation doesn't always or necessarily equate to demonstrable results and benefits to customers. This made them hesitate to see large investments in innovation unless there was some reassurance that specific projects would yield significant positive impact.

Some participants felt that innovation was beyond Icon Water's remit of providing essential water and wastewater services, and thought such innovations were better provided by other organisations with more resources or capacity. To move beyond support in principle, several customers want tactical and targeted spending on innovations that would ultimately deliver returns to them in the form of lower bills in the long-term.

4.5.4 Should Icon Water reduce the timeframe for its digital meter program and do customers want to pay for this?

Questions asked about this topic

In various engagement activities questions were asked about whether Icon Water should increase their level of investment for installing digital meters across the network. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement: *Rolling out digital meters to Canberra homes and businesses to provide people with their water usage daily.*

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Customer Advisory Forum with 10 members

Forum members were asked to consider the following question: *How open would you be to digital meters being rolled out to every customer?* They were presented potential investment options (low, medium, high, or none) and asked to complete a poll to identify their preferred option.

Other major stakeholders, including:

3 ACT Community Councils

Council presentations did not include specific prompts in regards to digital meters.

Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). A question was asked about importance of Icon Water investing in this technology. The details included a $245 one-off installation charge and $16 yearly ongoing charge.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- Low investment: $12 yearly charge for every property to have a digital meter installed by 2041
- Medium investment: $18 yearly charge for installation by 2035
- High investment: $24 yearly charge for installation by 2029

Stage 3 - Second online community: An explanation was provided, and further questions asked around people's openness to the following propositions and the fairness of all customers paying from start of the rollout:

- $16 yearly charge from the start of the rollout for all properties to receive a digital meter by 2041 (tested first)
- $8 yearly charge from the start of the rollout for all properties to receive a digital meter by 2035

Please note, the scenarios for price testing evolved over the course of this process as an understanding of customer and community attitudes was built, and econometric price modelling work was conducted in tandem by Icon Water.

Quantitative customer survey with 2,645 residential customers from across the ACT

People were asked to rate their support (more/less/no) to the investment described as: *Rolling out digital meters to homes and businesses across Canberra to enable customers to monitor their water usage daily if they wish, enabling quick identification of overuse and hidden leaks*

After being shown information on the topic customers were asked a willingness to pay question: *Would you be willing to pay an extra ($ AMOUNT) per year on your water rates for the next 5 years to have a digital water meter installed at your property?*

Stimulus materials tested

In Stage 1 of the **deep-dive deliberative process** participants were presented with information on the benefits of digital meters and the reasons behind the rollout.

Please note that discussions around Icon Water's proposal for this potential investment decision were hypothetical only to provide participants ideas on what Icon Water *could* do in this area.

The Issue

With the ACT's population expected to reach 0.5 million by 2040 and the impact of climate change predicted to result in more extreme droughts in the future, Icon Water needs to find ways to improve how they manage the water network.

A big part of this effort is to more accurately measure and manage water use.

What Icon Water Is Doing Currently

Icon Water currently uses mechanical water meters to record customer water consumption. These meters are read by meter readers every quarter (once every 3 months) in order to provide the customer with a bill for the water consumed.

The long time periods between meter readings can mean increased water use, such as from undetected leaks, can go unnoticed. Undetected leaks can cause property damage and depending on the severity can potentially cost customers up to $15,000 in extra consumption on their Icon Water bill.

Mechanical meter readings must be performed in person. If the meter reader cannot access the meter, the reading will be estimated, and this can lead to inaccurate billing.

Icon Water's Proposal

Icon Water is exploring whether to upgrade existing mechanical water meters to digital water meters. Digital meters automatically record water usage at more regular intervals, typically several times a day.

This more detailed information is then sent automatically by a radio network to Icon Water and the customer directly. The benefits of a digital meter are:

- Customers can identify and rectify their water overuse quickly,
- Icon Water can identify and rectify leaks quickly, which is a better way to manage the water supply system and water loss,
- An increase in the accuracy of customer bills,
- They retain a higher level of accuracy over their lifespan,
- There is a greater ability for Icon Water to provide more targeted support to customers to become more water efficient, and
- Icon Water can better understand water use to help with water security planning.

In Stage 2 of the **deliberative deep-dive process, and in the quantitative customer survey,** a more detailed explanation of the rationale for installing digital meters was explored, including information on the amount of water lost currently through water leaks.

We have some new information to share about the digital meter rollout.

As you are aware from the workshop, digital meters can help customers and Icon Water track water use much more accurately, sometimes up to several times a day and this has benefits for leak identification and accidental overuse, so that it can be quickly addressed.

Icon Water's tariffs and charges are structured to encourage people to conserve water. Any water use above the average for a typical property (200kL a year) will be charged at a higher rate. This higher rate is almost $5 per kL - almost double the rate for water use below this threshold.

If you have an unidentified water leak, the first you may know about it is that you would receive a very high quarterly bill for water use. These are currently $1,500 on average but can rise to as much as $8,000, or even $15,000 in a few cases. Icon Water does work with impacted customers to reduce their bill shock, however, significant out of pocket expenses do occur.

Currently, each year 150 to 200 residential properties may experience an unidentified leak. The chances of a household in the ACT experiencing a leak in any given year is 0.1%.

In FY2020-21 unidentified leaks at residential customer properties accounted for 65,200kL of water lost from the network (the equivalent of a years' worth of water use by 320 properties!).

Icon Water will be launching a digital meter trial to test the various technologies and confirm benefits. Following this, Icon Water is looking at rolling out digital meters across the network, with the aim that all customers would have a meter installed by 2041. The timing of when customers receive their meters will depend on how long ago their meter was last replaced, with priority given to customers with older meters.

This will incur an additional ongoing yearly charge on the water bill for all customers to cover installation of the digital meter for the hosting of water use data collected and for development and support of the customer portal so that customers can check their water use.

The chance of you experiencing a leak in any given year will not change.

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

100%

in Stage 1 of the deliberative deep-dive process considered the rollout of digital meters to be an **important area for focus by Icon *Water,*** including 50% who said it was very important *(n=10)*

Generally, the broader community welcomed the idea of digital meters to reduce water waste, but renters were unsure whether it would fall to them or their landlords to pay any installation or ongoing charge. In addition, there was some resistance to people being potentially charged prior to receiving their digital meter.

"Love the idea that people can register a leak."

"Icon Water seems behind the times on this. It needs to be done much sooner."

"I support the rollout of digital meters, but I am surprised at the concept that the full cost of the meter needs to be passed onto the customer. I would have expected savings."

"I don't believe that the credibility of Icon is enhanced if people are charged before receiving a service."

Residential customers

82%

in Stage 1 of the deliberative deep-dive process considered that digital meters should be **an important area for focus** *(n=17)*

63%

In the quantitative customer survey **supported more spending** on a digital meter rollout, including 20% who supported much more spending *(n=2,645)*

"Good idea but I think just give people the option to individually pay for a digital meter early if they want one. Otherwise, just roll them in as the old ones expire."

"I had a subsequent question about the security of digital meters - personal information, technology crashes etc. I would like to know how this will be managed."

"Potential roll out of digital meters plan is feasible but still needs finer tuning of the consumer costs involved and the idea of rollout be based on what priority grounds."

A rollout of digital meters was supported by most participants, particularly those with larger households who had concerns about accidentally slipping into the tier 2 tariff band (once tariffs had been discussed in the deliberative deep-dive).

Two thirds of participants in the focus groups allocated between 5 and 40 points to digital meters in the 100-point allocation exercise, considering it a fairly important area for focus.

However, several were confused about the need to pay an ongoing charge for this digital meter and why this may apply prior to installation of their meter. This dampened interest in the idea somewhat, although they valued the technology.

A minority of participants were skeptical about Icon Water's motivations for installing digital meters. They had concerns about Icon Water closely monitoring their water use and targeting support. They also feared the technology was being recommended because it would increase their bills.

A minority of participants were also concerned about how prone to cyber attacks the system might be.

Small to medium enterprise business customers

89%

in Stage 1 of the deliberative deep-dive process considered digital meters to be an **important area for focus by Icon Water**, including 67% who said it was very important *(n=18)*

Digital meters implemented across the network was supported by most, particularly those with water intensive businesses to help manage their water use and bills. One or two participants in the focus groups and the deliberative deep dive process did comment on having had occasionally received very high bills (bill shock).

"I would love a digital meter; it gives a more accurate reading, and the leak detection would be amazing. I have experienced getting an exorbitant bill from a leak and paying for a digital meter is way cheaper than that bill."

"Digital meters are the way forward to ensure accuracy of billing and efficiency of measuring usage. Offering incentives to end users would speed up the rollout."

"My water bill is currently shared equally with other businesses in my building. This means that I use far less water, but I pay the same as them. Could a digital meter be programmed to monitor the water usage of each individual business within the building?"

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

60%

of participants were **positive in principle towards the installation of digital meters**, including 32% who were very positive *(n=487)*

Participants were positive about the idea of a digital meter rollout in principle.

"Water usage and leak detection would be very welcome…"

"Would be very interested in better services that monitor water usage. Great initiative to help support our planet and would save us trying to find something to invest in"

"Digital metering tied to an app that allows you to see consumption patterns and make alterations to consumption"

ACT Community Councils

Positive sentiment

among Community Council participants

The topic of digital meters was spoken about at the meeting with a nominated member of the Gungahlin Community Council. Digital meters were perceived as having a significant water and cost saving benefit and were therefore supported in principle.

Customer Advocacy Forum

Neutral sentiment

among forum members, however, some members of the Community Advocacy Forum wanted to see more information on the long-term cost and benefits

The group had a neutral sentiment towards a rollout of digital meters, noting there are a few elements yet to consider in the accessibility features of the technology, including the ability for those with impairments to read and operate a digital meter, the predicted long-term cost benefits, and how benefits would impact across the whole customer base.

There was discussion around 'who pays' particularly in relation to vulnerable citizens who were renting, and whether landlords would see the benefit and absorb the cost.

"The benefit of digital meters is currently not a perceived one…it only matters when it happens to you."

"In regard to a digital transition, there may be fear amongst certain groups such as seniors."

"For an individual owner…I think it's fantastic… but our tenants wouldn't monitor it."

"Because it's not an optional thing for customers to do… from a fairness perspective… if people don't actually have the choice in getting a digital meter because it's their time in the replacement schedule… there's an argument to say that this should be spread across the customer base".

Key customer interviews

75%

of those interviewed **gave the idea of a digital meter rollout a high (4-5 out of 5) rating for importance**

Key customers were very positive towards digital meters in terms of the ability to more closely monitor their water use and achieve greater billing accuracy for the large volumes they use.

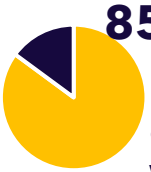
"The technology side is probably where they're weakest – invoicing, metering, helping people manage it… if they can improve their digital metering systems, that will help with billing issues."

"Who would want to know that level of detail?"

Overall deep-dive community findings
Community, residential customers and SME business customers

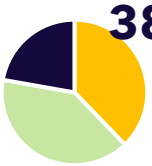
Findings from the deliberative deep-dive research (n=51 customers & community)

Importance of Icon Water rolling out digital meters when tested in isolation in Stage 1 of the deep-dive (n=47):



85% **considered it important** for Icon Water to invest in rolling out digital meters, including 53% who considered it very important

Investment level preference from the workshop from Stage 2 of the deep-dive (n=43):



38% **would be open to a bill increase** and a further 40% prefer a medium cost (other activities would need to be cut back)

Openness when propositions tested in isolation at Stage 3 of the deep-dive (n=48) – please note, the $16 option was tested first:

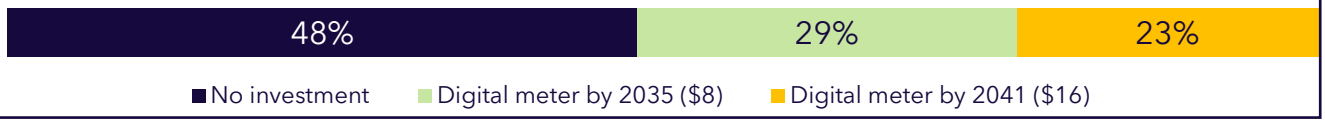
48% were open to paying **$16 a year or a digital meter by 2041**, Including 25% who said very open

64% were open to paying **$8 a year or a digital meter by 2035**, including 33% who said very open

Fairness when proposition tested in isolation at Stage 3 of the deep-dive (n=48):

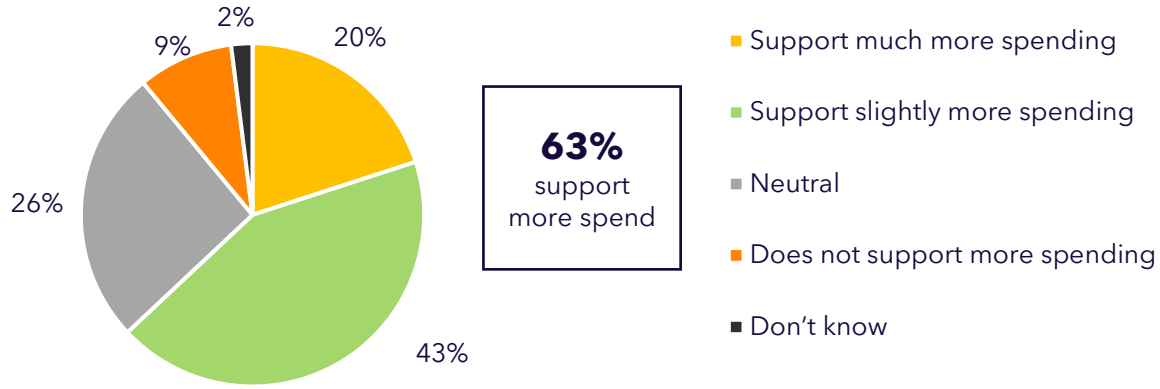
36% thought it was **fair /right that all customers should pay from the start** of the rollout

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process



Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers)



Q. Support for more/less spending in this area (digital meter rollout) when presented with a short statement about it: *Rolling out digital meters to homes and businesses across Canberra to enable customers to monitor their water usage daily if they wish, enabling quick identification of water wastage and hidden leaks.*

Please note, impact to charges was not tested at this question, participants were only responding to the idea of a rollout of digital meter technology in principle. Impact to charges was explored in later questions as part of the Contingent Valuation exercise (Willingness to Pay). Results from this exercise can be found in Section 4.6.3.

Conclusion

There were good levels of participant support for digital meter technology implementation across all audiences:

- Many saw digital meters as a necessary technical evolution to provide customers more oversight of their use and charges, and to increase the accuracy of billing.
- Some customers saw digital meters to be a way to increase internal efficiencies at Icon Water and a way to reduce water overuse/loss.

However, there was confusion about the customer charges that would need to be paid, and this impacts openness to support a rollout, specifically:

- *Why everyone would be charged a yearly fee from the commencement of the rollout instead of from when they have their digital meter installed*. There was some resistance to this proposal, particularly from lower income residential customers and most participants thought it was unfair.
- *Why everyone would need to be part of the rollout*. Some business and residential customers suggested that an 'opt-in' approach would be fairer – ensuring that those who wanted a meter (and who could afford one) would pay the installation and ongoing fee.
- *Why there would be an additional ongoing charge payable for a technical solution that would effectively cut-down on human resource required.* While this was explained by the Icon Water representative at the deliberative deep dive workshops some customers were still confused. Several participants said they would be happy to pay a one-off fee rather than an ongoing charge.

A few customer and community participants expressed minor concerns around privacy, which should potentially be addressed during the implementation of this program with supporting community information. These included concerns about Icon Water using the technology to target approaches to individual customers based on their water use, as well as concerns about data security, questioning whether the system could be hacked.

Willingness to pay

Please refer to section 4.6.3 for the results of the Willingness to Pay exercise and results that was conducted as part of the Residential Customer survey (n=2,645).

4.5.5 What role should Icon Water have in contributing to liveability in Canberra?

Questions asked about this topic

In various engagement activities questions were asked about what role Icon Water should have in contributing to liveability in Canberra. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement:
Icon Water's vision is to be a valued partner in our community. To help achieve this vision, we are exploring ways we could improve liveability in the ACT. For example, we could invest in improving how some of our infrastructure looks, river health, community water literacy, or preserving our heritage assets. How big a role do you think Icon Water should have in improving liveability in the ACT?

Customer Advocacy Forum with 10 members

Forum members were asked to consider the following question: *What does liveability mean to you? And what further role should Icon Water have in contributing to liveability in Canberra?*

Online focus groups with 25 SME business and residential customers

As part of a constant sum question (investment of 100 points) the following statement was tested alongside other investment decisions: *Investing in initiatives that improve the liveability of Canberra, such as improving how some of our infrastructure looks, river health, community water literacy, or preserving our heritage assets.*

Other major stakeholders, including:

3 ACT Community Councils

Council presentations did not include specific prompts in regard to liveability.

Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Rating of how significant IW's role should be, as well as exploration of projects that IW should be involved in.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- Low investment: Internal budget reallocation (aesthetic improvement of assets)
- Medium investment: Cutting back budget for other activities (opening up land around assets)
- High investment: Bill increase for customers (infrastructure)

Stage 3 - Second online community: Further thoughts collected and preference for investment level (when shown alongside other investment decisions):

- Low: $0.07,
- Mid: $0.46,
- High: $0.72 and $3.73

Please note, the scenarios pricing tested evolved over the course of the deep dive deliberative process as understanding of customer and community attitudes was built, and econometric price modelling work was conducted in tandem by Icon Water.

Quantitative customer survey with 2,645 residential customers from across the ACT

People were asked to rate their support (more/less/no) to the investment described as:
Investing in projects that improve community liveability, such as painting murals on Icon Water assets like storage tanks, pumping stations or water treatment buildings, and increasing access to open space on and around Icon Water assets, such as on top of underground storages and alongside pipes.

Stimulus materials tested

In Stage 1 of the **deep-dive deliberative process** participants were presented with more information on potential ways in which Icon Water could enhance liveability in Canberra.

Please note that discussions around Icon Water's proposal for this potential investment decision were hypothetical only to provide participants ideas on what Icon Water *could* do in this area.

The Issue

Liveability outcomes are considered when Icon Water plans projects. They have to align with Icon Water's core business of managing the water and wastewater networks and have to have no material impact on budget.

Icon Water's Proposal

Icon Water is considering whether the community would like them to make deliberate investment decisions that could be used to improve liveability in Canberra.

For example, when planning upgrades to wastewater treatment plants and sewer networks, a significant liveability outcome could be to invest in the treatment and transport of wastewater to expand the recycled water network for irrigating public sporting fields, improving the water quality of lakes and waterways and greening of public spaces.

Icon Water is currently limited by the location of the treatment plants that are located in Lower Molonglo and Fyshwick. This means that currently, recycled water cannot be provided across the whole of Canberra.

However, when planning upgrades to treatment plants and sewer networks, a significant liveability outcome could be to create a decentralised wastewater treatment system with smaller treatment plants strategically placed throughout Canberra to expand the recycled water network.

Of course, this type of liveability outcome would add significant cost to Icon Water's projects and not typically an investment they would consider. However, Icon Water would consider such investment if there was overwhelming community support.

Findings by customer segment

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

90%

in Stage 1 of the deliberative deep-dive process **supported Icon Water in having a role in contributing to liveability** in the ACT, including 20% who supported a significant role and 70% who supported 'somewhat of a role' *(n=10)*

Community participants were generally supportive of Icon Water contributing to liveability in the ACT, but some considered aesthetic improvements to assets and large infrastructure to be slightly outside of Icon Water's remit and wanted Icon Water to focus instead on improving the quality of water in waterways and lakes or using recycled water to green public spaces.

There was a sense that Icon Water already contributed to liveability through its core activities (water supply and wastewater services).

"I'm very happy with its current contributions but definitely support further involvement."

"I am still surprised by how much Icon is giving back to the community and to improve the longevity."

"I think the painting is a good idea as it contributes to livability."

"I really liked the idea of incorporating infrastructure into the community by creating combined spaces."

"I wonder now if its outside their remit?"

"What capacity is there to build underground storage tanks? Schools and ovals should utilise runoff, rainwater from gutters and drains to water ovals and the like – grants available?"

Residential customers

82%

in Stage 1 of the deliberative deep-dive process **supported Icon Water having a substantial role in contributing to liveability in the ACT**, including 38% who supported Icon Water having a significant role *(n=17)*

27%

In the quantitative customer survey **supported more spending on liveability initiatives** (n=2,645)

While there is high interest in Icon Water having a role in contributing to liveability, feedback focused on ensuring that bill impacts from 'non-essential' investments (such as aesthetic improvements to assets) would be minimised to support vulnerable customers. Potentially for this reason, support for increased investment was relatively low in the quantitative customer survey.

There was a preference for large infrastructure investments to be delivered in partnership with other government agencies to minimise spend and impact on customer bills.

"I think the best way Icon Water can contribute to liveability in the ACT is through the care of our waterways. Keeping our ponds and lakes clean, safe and well lit for local residents to be able to enjoy."

"In my opinion liveability is the ACT Government's responsibility, not Icon Water. If, through delivering core services, Icon Water contributes to the ACT's liveability, then this is a bonus. It should not inform decisions on any activities which while they might increase liveability, also increase the cost of essential services to ACT residents."

"I think it is a 'nice to do' but not if it means increasing regular bills."

Small to medium enterprise business customers

72%

in Stage 1 of the deliberative deep-dive process **supported Icon Water in having a role** in contributing to liveability in the ACT, including 50% who supported Icon Water having a significant role *(n=18)*

Several acknowledged Icon Water's efforts to date in contributing to liveability outcomes for Canberra through delivery of core water and wastewater services. For those participants this is creating liveability.

There was support for an expansion of this role in relevant areas for Icon Water, such as in the irrigation of public spaces using recycled water, improving water quality in waterways and lakes and putting on water-based events such as regattas to build community presence and profile.

"Without clean, accessible water, a city becomes unlivable. So, Icon play a huge role in making Canberra what it is."

"From a business owners' perspective, I feel that Icon Water has a couple of different roles when it comes to livability: Primarily ensuring the water supply and sewerage system is safe and reliable…Other than that, supporting "water based" events (e.g lake-based events such as rowing / sailing regattas and the like) would be a good way to get information out about what Icon Water is doing."

"Icon has demonstrated that they are thoughtful and active in contributing to livability in the ACT. However, after the studies, compared to other aspects I don't place livability high on my 'to do list.' I believe this isn't an important matter compared to other aspects."

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

84%

of participants in the community survey in principle **wanted Icon Water to have a role in contributing to liveability** in Canberra, including 41% who wanted Icon Water to have a significant role.

Participants were positive towards Icon Water improving the appeal of its assets, preserving heritage assets and in improving waterway health.

"Help support improved waterways, wetlands and rivers"

"Engaging with schools to teach kids about environmental impacts on water and how we should look after resources"

"Securing our resources for the future, supporting the environment whilst keeping costs manageable for citizens"

ACT Community Councils

Neutral sentiment

among ACT Community Council participants

Although not explicitly spoken about as an investment area. Discussions with Council members revealed a high expectation for Icon Water to contribute to the liveability and wellbeing of the ACT community, as well as the environment, and that an increased role in this would be supported.

Tuggeranong Community Council specifically raised improving the quality of Lake Tuggeranong could be a potential project with an increased investment.

Customer Advocacy Forum

Neutral sentiment

among forum members

The group agreed high quality services were expected and should continue, however, several participants felt that increased costs to customers to support this investment could negatively impact liveability.

One member noted this topic required viewing through two lenses; either as a resident (customer) or as the wider community. They discussed that people from different backgrounds or socio-economic status would value Icon Water's investment in this space differently.

It was suggested Icon Water consider if investing in this area was too far outside their remit as an essential service provider. It was raised that some of the activities presented- particularly in relation to infrastructure projects - should be the role of the ACT Government and not Icon Water.

"Canberrans have high standards for quality of life"

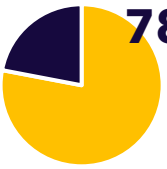
"Improvements in this space could impact the cost of living"

"If someone is homeless and can't access water in a private dwelling, public water facilities would be of very high value and contribute to their quality of life"

Overall deep-dive community findings
Community, residential customers and SME business customers

Findings from the deep-dive deliberative process (n=51 customers & community)

The role participants would like Icon Water to have – at Stage 1 of the deep-dive process (n=47):

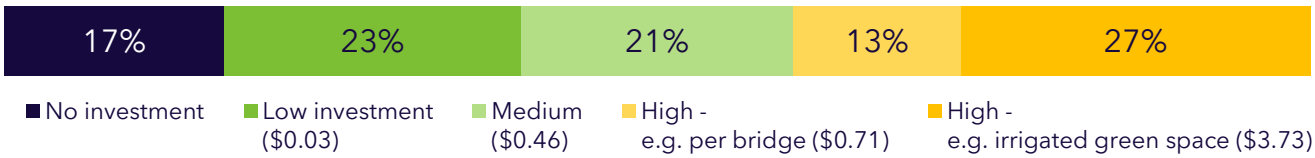


78% **wanted a role for Icon Water** in contributing to liveability, including 40% who wanted Icon Water to have a significant role

Investment level preference at Stage 2 of the deep-dive process (n=43):

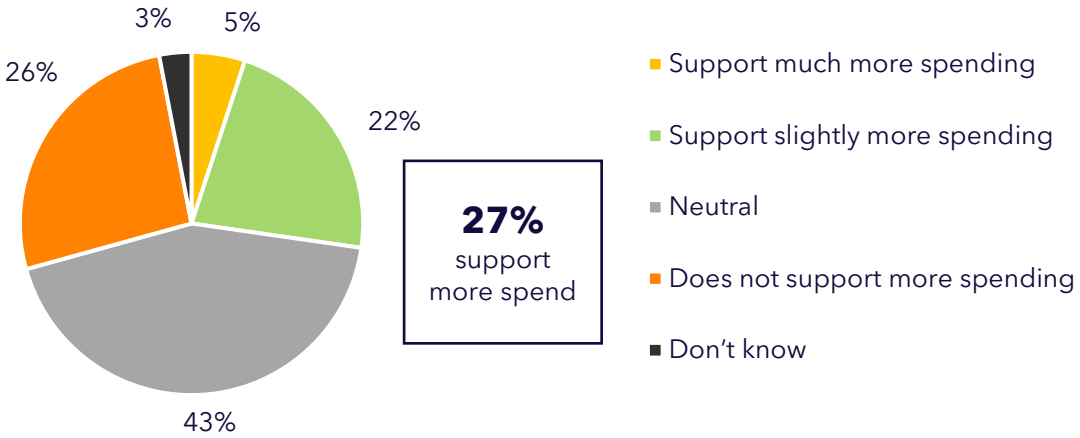
72% **were open to a high or medium investment** by Icon Water in this area, including 23% who were open to high investment.

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process



Quantitative customer survey

Findings from the quantitative customer survey (n=2,645 residential customers)



Q. Support for more/less spending in this area (liveability) when presented with a short statement about it: *Investing in projects that improve community liveability, such as painting murals on Icon Water assets like storage tanks, pumping stations or water treatment buildings, and increasing access to open space on and around Icon Water assets, such as on top of underground storages and alongside pipes.*

Please note, participants were not presented with any bill impact information – this is agreement in principle with the basic idea.

Conclusion

There was differing support for Icon Water to have a role in contributing to wider liveability initiatives in the ACT. Liveability is a broad term and as a result a range of perspectives were provided.

Some participants considered Icon Water to already have this role as a provider of water and wastewater services – these essential services create community liveability.

Life is considered to be generally good in the ACT – few participants cited any major water or wastewater issues impacting liveability other than tree-roots in water and wastewater mains or water quality in waterways/lakes.

On an unprompted basis, discussion about the liveability activities Icon Water could undertake extended directly from the core services it provides. The highest levels of support were seen across audiences for Icon Water's involvement in using recycled water to irrigate public spaces, as well as improvement of water quality in waterways and lakes.

If Icon Water extended too far outside their core remit or the investments would result in a large increases in charges, a role for Icon Water in contributing to liveability was considered a 'nice to have' rather than an essential service.

Several participants said they would prefer the investments in this space to come either internally from Icon Water or through Icon Water partnering with other government agencies, and not from charging (especially vulnerable) customers. These comments were made most often in relation to initiatives to improve the appearance of Icon Water assets and the larger infrastructure projects.

When data on potential bill charges was presented in the deliberative deep-dive process, almost four-in-five participants supported some level of charge impact, with one-in-four supporting the very high investment option (irrigated green space @ $3.73 per customer), commenting on the significant benefit 'for the price of a cup of coffee'.

Potentially due to concerns over charges, only one-quarter of quantitative customer survey participants (with no charge impact information) supported the idea of Icon Water spending more on liveability initiatives.

SEC Newgate notes that across engagement discussions, it was apparent that some customers and community members were not clear on Icon Water's remit, namely the fact that Icon Water does not control the ACT's urban waterways and lakes. Sentiment expressed by participants reflected their support for Icon Water to look at ways of extending their remit to allow for work in this space, such as partnering with the ACT Government on relevant projects. Overall, this discussion also related to the issue of greater community education, noting this lack of understanding of Icon Water's role and remit.

4.5.6 Should Icon Water improve its level of service to managing water and wastewater disruptions and outages?

Questions asked about this topic – Water supply

In various engagement activities questions were asked about whether Icon Water should increase their level of investment for levels of service for water outages. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement: *Investing in upgrades that aim to reduce the duration, frequency and impacts of future water and wastewater faults and maintenance.*

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Customer Advocacy Forum with 10 members

Forum members were asked to consider following questions in group discussion:

- *Would you be willing to pay more to ensure equal levels of service across Canberra?*
- *How open are you to Icon Water investing in improving its level of service during water supply interruptions, faults, and emergencies?*

They were presented potential investment options and completed a poll to identify their preferred option.

- **Maintaining planned maintenance levels**: no change to charges
- **Reduced planned maintenance**: saving $10-15 per year to bills
- **Improved planned maintenance:** adding $10 per year to bills.

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Question asked about satisfaction with the current level of service provided by Icon Water, their experiences with Icon Water during a water supply disruption and what responsive service from Icon Water would look like.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- **Maintaining planned maintenance levels**: no change to charges on bill with a one-in-13 chance of being impacted.
- **Reduced planned maintenance**: saving $10-15 per year to bills, increasing impact to one-in-12 properties and climbing.
- **Improved planned maintenance:** adding $10 per year to bills, decreasing impact to one-in-14 properties and declining.

Stage 3 - Second online community: Proposition tested (see overleaf). Questions were asked about how open participants would be to paying for increased maintenance to ensure greater service equity across the network and for them to select an investment level (and bill impact) alongside the other investment decisions.

Please note, the scenarios pricing tested evolved over the course of this deep-dive process as understanding of customer and community attitudes was built, and econometric price modelling work was conducted in tandem by Icon Water.

Other major stakeholders, including:

3 ACT community councils

Council presentations did not include specific prompts in regards to level of service for water.

Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Quantitative customer survey with 2,645 residential customers from across the ACT

People were asked to rate their support (more / less / no) to the investment described as: *Investing in maintenance upgrades that aim to reduce the frequency and impacts of future water supply disruptions, interruptions and bursts.*

After being shown information on the topic customers were asked a willingness to pay question:. The wording of the question was slightly different depending on where the participant was located and the risk they faced in relation to having a water supply disruption at their property:

- SHOW ONLY TO PARTICIPANTS AT LOW RISK OF WATER SUPPLY DISPRUPTION: *Would you be willing to pay an extra $ AMOUNT) per year on your water rates for the next 5 years to help severely impacted customers (8,000 properties) reduce their water supply disruption frequency from once every 5 years to once every 10 years?*
- SHOW ONLY TO PARTICIPANTS AT HIGH RISK OF WATER SUPPLY DISRUPTION: *Would you be willing to pay an extra ($ AMOUNT) per year on your water rates for the next 5 years to reduce the water supply disruption frequency at your property (and other severely impacted properties – 8,000 in total) from once every 5 years to once every 10 years?*

Stimulus material tested – Water supply

In Stage 1 of the **deep-dive deliberative process**, participants were presented with the following information on the current level of service, their chance of experiencing a water supply disruption and the impact of Icon Water eliminating or doubling planned maintenance efforts on the network:

The pipes that supply water to your home or business degrade over time or become blocked. This fault can potentially cause an interruption in supply. It could become an emergency. This can result in major impacts to customers, such as no water coming out of your tap, the water being cloudy in color, or it can come out with a reduced water pressure. It can also cause property damage if flooding occurs.

Icon Water is committed to providing its customers with access to safe drinking water by:

- Responding to all faults and emergencies, attending as soon as possible and ensuring customers are not without water for more than 12-hours by either restoring supply or providing bottled water.
  - Typically, water supply is restored within 4 to 6 hours
- Undertaking a program of planned water system renewal:
  - If three pipe failures occur within a 12-month timeframe, Icon Water replaces the entire area of pipework.
  - A notice of the impending system maintenance will be sent to impacted property addresses two weeks in advance. The notice will provide an estimate of when Icon Water will be there and how long the interruption to supply will last.

Providing this level of service requires an investment of $10 million over the next 5 years, which is included in your bill. This level of service means that in the next fifteen years, around 13,000 people (or 8% of customers) would have an interruption, a fault or emergency.

In Stage 3 of the **deliberative deep-dive process**, and in the **quantitative customer survey**, the stimulus was adjusted to explain the facts underpinning the overall chance of a customer experiencing a water supply disruption: that while the majority of customers in the network would be unlikely to experience a water supply disruption over 15 years, a proportion of properties in the network would experience one or more disruptions.

Customers were asked if they would be prepared to pay to bring all customers up to a similar level of service equity.

Most customers (75%) will never experience water supply disruption in the next 15 years.

This means the chances of you experiencing a supply disruption in the next 15 years would be 25%.

However, due to the location of their property and/or the characteristics of the soil that the pipes are embedded in, 4% of customers (8,000 properties) are severely impacted and may experience multiple supply disruptions over this period, equating to a supply disruption once every 5 years on average.

Increasing the maintenance of the water supply network will help the 4% of severely impacted properties achieve a water supply disruption frequency of once every 10 years (the new level of service).

What we are asking you to consider is whether you would be willing to have a small increase to your bill to improve the service for the 4% of customers so their experience is more in line with everyone else.

Findings by customer segment – Water supply

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

90%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with the current level of service provided by Icon Water**, including 40% who were very satisfied *(n=10)*

The vast majority of community participants were satisfied with the current level of service provided by Icon Water for resolution of water supply faults and emergencies (when it was detailed to them) and several were pleasantly surprised by the 6-hour timeframe for resolution of issues and provision of bottled water for longer disruptions.

Few had experienced any issues first-hand.

"It is good to see they have a keen focus on preventative work and invest in this greatly."

"I believe that the water supply and filtration system works very well in the act with minimal faults so in my perspective nothing should change and works very well."

"It seems rational and the concept of replacing pipes where three incidents occur seems an appropriate form of risk minimisation."

"It is good that only 8% of customers are affected by an interruption. I am a bit surprised at the cost over 5 years - it seems more reasonable than I'd have thought supply interruption would cost."

Residential customers

88%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with Icon Water's level of service**, including 44% who were very satisfied *(n=17)*

50%

in Stage 3 of the deliberative deep-dive process said they were **open to paying an additional $10 a year** for all in the ACT to achieve a similar level of service, including 31% who were very open *(n=16)*

56%

in the quantitative customer survey **supported more spending** in this area, prior to seeing any price proposals *(n=2,645)*

"I am happy about the response time they usually take."

"4-6 hours is an acceptable length of time to resolve a water supply issue. I had not thought about supplying bottled water if needed ... this is a great idea. I think that being able to ensure only 8% of customers suffer water supply issues over a 15-year period is surprisingly good."

"If stats above correct and have been objectively interpreted, then the above service seems quite good. Surprisingly good. I think replacing the entire pipe network if 3 fails within 12 months is a good idea- people can't deal with repeated issues like this. I really don't have any issues with this."

The sentiment of residential customers reflected that of community members – they were generally satisfied with the current level of service, had rarely experienced any issues and saw little reason to invest more to improve levels of service, even when service equity came into the discussion.

The key components of the current level of service aligned well with their perceptions of responsive service for water supply faults and outages. There was a desire to be kept in the loop by SMS or email throughout the outage to set expectations around the timeframe for issue resolution.

For many participants, the proportion of properties severely impacted by disruptions was acceptably low. Some were concerned about the bill impact on vulnerable customers of an increase in levels of service.

However, a proportion said they would be open to paying an additional $10 a year if they needed to improve level of service, although they were concerned about the impact of this on vulnerable customers.

Small to medium enterprise business customers

72%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with Icon Water's current levels of service** for water supply, including 61% who were very satisfied *(n=18)*

49%

in Stage 3 of the deliberative deep-dive process said they were **open to paying an additional $10 a year** for all in the ACT to achieve a similar level of service, including 41% who were very open *(n=17)*

SME business customers were generally happy with the current levels of service, but those with more water intensive businesses were slightly more concerned about how long they may be without water, expecting a quicker window for resolution.

Other business customers had questions about who would fund temporary measures, such as temporary customer washroom facilities, in a long-term supply outage.

"It's good to see that that there is a transparent maintenance/replacement program. That the program is not just repairing old faults over and over again. That it is forward thinking, that they are thinking well into the future."

"I like that they are proactive in replacing not just fixing on multiple pipe failures. And that the stats for water outages is only 8% over the next 15 years. That's also impressive."

"I have been asking for new pipes for years and still nothing."

"6-hours is a long time for me to be without water. Would we have to pay to provide temporary washroom facilities during the outage?"

Findings by engagement activity – Water supply

Listed below are the findings from this topic organised by engagement activity. Overall findings can be found on the Conclusion page.

Open community survey

70%

of participants felt **positive in principle about Icon Water investing in upgrades** to reduce the duration, frequency and impacts of water and wastewater faults and maintenance, including 30% who were very positive. *(n=487)*

As a core area of service delivery for Icon Water, based on the brief information provided, most of those in the community survey were positive about Icon Water seeking to improve maintenance of the network.

However, statistics on the incidence of issues or the increase in charges for an increase in levels of service were not tested with this audience, so they were agreeing in principle.

"The water service is reliable, issues are fixed quickly, the water is clean"

"…As long as the supply is available, the quality is good, then I am happy"

"The service is already very good. Leaks and other issues should be part of the service. Families need lower prices"

Positive sentiment

among forum members

The group noted the current levels of service for managing water supply outages is good. Investment levels should not be reduced, as short-term cost savings could mean long-term network reliability consequences.

Maintaining the current level of service was generally supported. Increasing the level of service was seen as creating a cost impact for vulnerable customers.

Concerns were raised regarding the areas in the ACT that experienced regular water outages and their relation to areas of social risk (vulnerable customers).

"(The current level of service) is taken for granted."

"Properties with regular outages are a concern for us."

"Decreasing the standard and taking a price saving would be good in the short-term but would have long-term consequences".

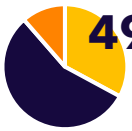
Overall deep-dive community findings
Community, residential customers and SME business customers

Findings from the deep-dive deliberative research (n=51 customers & community)

Icon Water's current performance in resolving water supply issues at Stage 1 (n=17 impacted by an issue):

60% **were positive about Icon Water's response.** 30% were neutral,10% were negative

Satisfaction with Icon Water's current LoS at Stage 1 when detailed it (n=47):

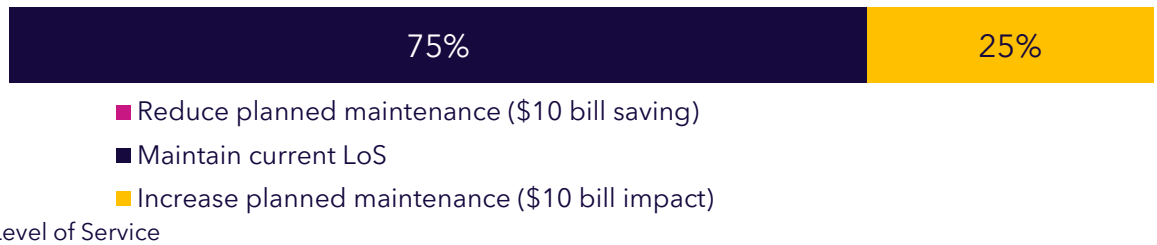


49% were very satisfied with current level of service and **83% are satisfied overall** (either very or fairly)

Preference for LoS: In response to a 1-in-12 -14 chance of issues at Stage 2 (n=46)

65% **say Maintain current level of service.** 30% say Increase it

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process



LoS = Level of Service

Key customer interviews

88%

of stakeholders **gave this a high (4-5/5) positivity rating**

Investment in consistent water supply was seen as a very important area of focus for Icon Water and worthwhile.

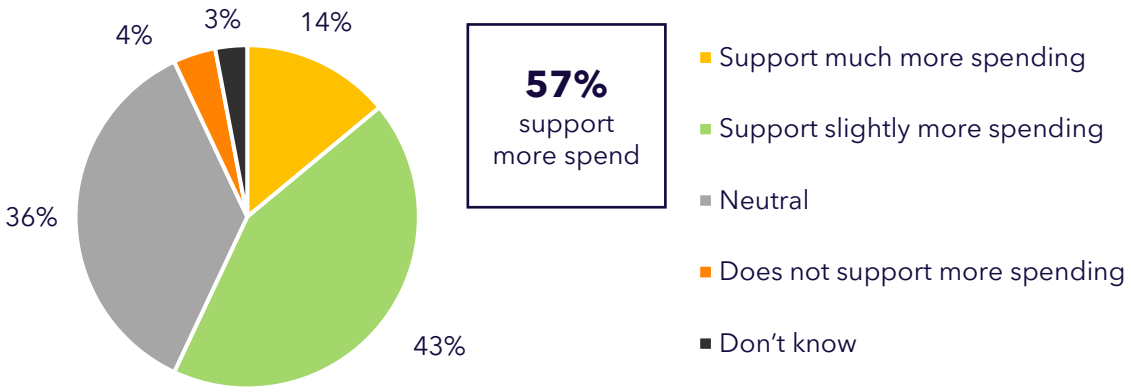
However, it was preferred that Icon Water maintain what was largely perceived as a high-quality existing service.

"Emergency response can't criticise them on that. Every time we've had something, there's been someone here within 4 hours."

"They have to keep investing in this to continually develop to make it stay as is."

Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers)



Q. Support for more/less spending in this area (water supply system) when presented with a short statement about it: *Investing in maintenance upgrades that aim to reduce the frequency and impacts of future water supply disruptions, interruptions and bursts.*

Please note, impact to charges was not explored in this question, participants were just agreeing in principle to increase spend on maintenance. Impact to charges was explored in later questions as part of the Contingent Valuation exercise (Willingness to Pay). Results from this exercise can be found in Section 4.6.3.

LoS = Level of Service

Conclusion

Only a minority of participants had experienced water supply issues, and most were satisfied with the current level of service for managing outages:

- One-in-three participants in the deliberative deep-dive process and in the quantitative customer survey had experienced a water supply disruption.
- Of those who had experienced a disruption, the majority were positive about Icon Water's performance resolving it and only one-in-ten were negative.
    - Feedback from those who felt positive focused on the rapid restoration of supply with minimal disruption, customers feeling 'kept in the loop' about when the team would be onsite, when work would be completed and in the advice Icon Water personnel provided, such as what to do about colour changes in water.
    - Reasons for a poor performance related to customers experiencing repeated disruptions.

Perceptions of what constituted responsive service in response to supply disruptions aligned well with current levels of service:

- Water supply typically restored within 4 to 6 hours. Most participants wanted resolution within half a day to a day.
- Provision of bottled water if supply has not been restored for 12-hours or more. This was considered by many to be an unexpected and well-regarded support measure.
- Advanced notice of impending system maintenance (delivered two-weeks in advance) and provision of an estimate of when Icon Water would be there and how long the interruption to supply will last. Being kept in loop in relation to Icon Water's arrival on site and estimated time to completion was considered important by many participants, to help manage their expectations.

In the case of a water supply emergency, participants want the ability to report an issue by phone and speak to a knowledgeable Icon Water representative without delay, to have a team onsite within the hour and resolution within half a day to a day.

- Particularly important was the ability for the customer to stay informed about the outage and time until resolution, ideally by SMS or email and/or updates on social media.

The majority of participants engaged in the 2021/2022 program opted to maintain current levels of service. While water supply services were seen as core to the Icon Water offering, satisfaction with the current levels of service and a reticence to increase bills for vulnerable customers meant the majority preferred to maintain the current level of service.

When detailed information was provided about the existing level of service, the proportion of customers impacted by issues was considered low and at an acceptable level by most participants. Few participants saw the need to increase the equity of service across the network.

- Customer Advocacy Forum members had higher levels of concern about service inequity, however, ultimately most preferred the 'maintain' option which had no bill amount impact for vulnerable customers.

Across all engagement there was very limited support for reducing the current levels of service.

Willingness to pay

Please refer to section xxx for the results of the Willingness to Pay exercise and results that was conducted as part of the Residential Customer survey (n=2,645). Willingness to pay

Questions asked about this topic - Wastewater

In various engagement activities questions were asked about whether Icon Water should increase their level of investment for levels of service for managing wastewater outages. The questions asked are outlined below.

Open community survey with 487 people from across the ACT

Rating of sentiment (positive/negative) towards the statement: *Investing in upgrades that aim to reduce the duration, frequency and impacts of future water and wastewater faults and maintenance.*

Key customer interviews with 8 large organisations

Rating of sentiment (positive/negative) as per the Community Survey.
Please note, discussion with key customers spoke about water supply and wastewater together

Online focus groups with 25 SME business and residential customers

Part of a constant sum question (investment of 100 points) – statement tested alongside other investment decisions was as per the Community Survey.

Customer Advocacy Forum with 10 members

Forum members were asked to consider following questions in group discussion:

- *Would you be willing to pay more to ensure equal levels of service across Canberra?*
- *How open are you to Icon Water investing in improving its level of service during sewer and wastewater faults and overflows?*

They were presented potential investment options and completed a poll to identify their preferred option:

- **Maintaining planned maintenance levels:** no change to charges on bill
- **Reduced planned maintenance:** saving $35 per year to bills
- **Improved planned maintenance:** adding $100 per year to bills

Deliberative deep-dive process with 51 participants

- 23 residential customers:
- 18 SME business customers
- 10 broader community members (water bill non-payers)

Questions and scenarios posed across three phases:

Stage 1 - First online community: Explanation and proposition tested (see overleaf). Question asked about satisfaction with the current level of service provided by Icon Water, their experiences with Icon Water during wastewater fault or emergency and what responsive service from Icon Water would look like.

Stage 2 - Workshops: Polling and coin investment prioritisation exercise for:

- **Maintaining planned maintenance levels:** no change to charges on bill with a one-in-50 chance of being impacted.
- **Reduced planned maintenance:** saving $35 per year to bills, increasing impact to one-in-33 properties and climbing.
- **Improved planned maintenance:** adding $100 per year to bills, decreasing impact to one-in-80 properties and declining.

Stage 3 - Second online community: Proposition tested (see overleaf). Questions were asked about how open participants would be to paying for increased maintenance to ensure greater service equity across the network and for them to select an investment level (and bill impact) alongside the other investment decisions.

Please note, the scenarios pricing tested evolved over the course of this deep-dive process as understanding of customer and community attitudes was built, and econometric price modelling work was conducted in tandem by Icon Water.

Other major stakeholders, including:

3 community councils

Council presentations did not include specific prompts in regards to level of service for water.

Feedback received was therefore unprompted and based on pre-existing knowledge or sentiment.

Quantitative customer survey with 2,645 residential customers from across the ACT

People were asked to rate their support (more / less / no) to the investment described as:
: *Investing in maintenance upgrades that aim to reduce the frequency of future sewer faults, blockages and overflows.*

After being shown information on the topic customers were asked a willingness to pay question:. The wording of the question was slightly different depending on where the participant was located and the risk they faced in relation to having a sewer fault, blockage or overflow at their property:

- SHOW ONLY TO PARTICIPANTS AT LOW RISK OF WASTEWATER FAULT/OVERFLOW: *Would you be willing to pay an extra $ AMOUNT) per year on your water rates for the next 5 years to help severely impacted customers (16,000 properties) reduce their wastewater blockage or overflow frequency from once every 5 years to once every 10 years?*
- SHOW ONLY TO PARTICIPANTS AT HIGH RISK OF WASTEWATER FAULT/OVERFLOW: *Would you be willing to pay an extra ($ AMOUNT) per year on your water rates for the next 5 years to reduce wastewater blockages or overflow frequency at your property (and other severely impacted properties – 16,000 in total) from once every 5 years to once every 10 years?*

Stimulus material tested - Wastewater

In Stage 1 of the **deep-dive deliberative process** participants were presented with information on the current level of service, their chance of experiencing a wastewater pipe blockage or overflow and the impact of Icon Water eliminating or doubling planned maintenance efforts on the network

Sewers take the wastewater from your home or business. These pipes can degrade over time, or become blocked and need to be inspected, cleaned, repaired or replaced. If there is a blockage in your sewer pipe, you won't be able to flush your toilet, and it could cause overflows outside and/or inside your property.
In terms of sewer faults, Icon Water currently:

- Responds to sewer faults and emergencies, attending as soon as possible and fixing overflows and blockages within 6 hours.
- Undertakes a program of sewer pipe maintenance. A notice of the impending work will be sent to impacted property addresses two weeks in advance. The notice will provide an estimate of when Icon Water will be there and how long the interruption will last.

Providing this level of service requires an investment of $60 million over the next 5 years, which is included in your bill. This level of service means that in the next five years around 3,300 people (2% of customers) would experience a sewer overflow, with:

- 20 to 25 customers experiencing sewer flooding inside their property each year.
- 200 to 250 customers experiencing sewer flooding in their yard/outdoor areas each year.

In Stage 3 of the **deliberative deep-dive process**, and in the **quantitative customer survey**, the stimulus was adjusted to explain:

- the overall chance of a customer experiencing a wastewater pipe blockage or overflow
- that while the majority of customers in the network would be unlikely to experience a blockage or overflow over a 15-year period, a proportion of properties in the network would experience multiple faults.

Materials asked - *would they be prepared to pay to bring all customers up to a similar level of service equity?*

Most customers (85%) will never experience a wastewater blockage or sewer overflow in the next 15 years.

This means the chances of you experiencing a blockage or overflow in the next 15 years would be 15%.

However, due to the location of their property and/or the characteristics of the soil that the pipes are embedded in and/or vegetation and trees in close proximity, 8% of customers (15,000 properties) are severely impacted and may experience multiple overflows and blockages over this period, equating to one every 5 years on average.

Increasing the maintenance of the wastewater network will help the 8% of severely impacted properties achieve wastewater overflow or sewer blockage rate of one every 10 years (the new level of service).

What we are asking you to consider is whether you would be willing to have an increase to your bill to improve the service for the 8% of customers so their experience is more in line with everyone else.

Findings by customer segment - Wastewater

Listed below are the findings from this topic organised by customer segment. Overall findings can be found on the Conclusion page.

Community (water bill non-payers)

70%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with Icon Water's LoS** for sewerage and wastewater, including 30% who were very satisfied *(n=10)*

These community members are generally happy with the current level of service provided by Icon Water for wastewater and pleasantly surprised by the relatively low incidence of issues.

However, several participants commented that 6-hours is a long time to wait for resolution if a customer had sewage flooding into their property – considered a major health risk.

"I am quite surprised that the estimated time frame for sewerage faults and emergencies is as long as 6 hours… I would have thought given the hygiene factor, that sewerage would be treated with more urgency."

"I don't expect to be affected, however, if I had already been affected or became affected, I would probably prefer that the number of impacted properties was less."

"I am thoroughly surprised at the numbers of current overflows seeing as I have experienced external overflow at my last residence. I am satisfied at how serious and quickly sewage issues are dealt with."

Residential customers

81%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with Icon Water's current LoS**, including 31% who were very satisfied overall *(n=17)*

62%

in the quantitative customer survey were **supportive of more spending** in this area (prior to seeing any pricing) (n=2,645)

6%

in Stage 3 of the deliberative deep-dive process said they were **open to paying an additional $100** a year for all in the ACT to achieve a similar level of service *(n=16)*

"The cost of the service being so expensive was a surprise. It is good that you have estimated the cost and built it into your forward planning."

"I still feel that manpower needs to allow for a faster response time to sewerage issues. I understand this would be expensive, but 6 hours is a long time for 250 people to watch their yards fill with sewerage."

"Pleasantly surprised to read Icon's commitment across the region as I am satisfied, aware and reassured of Icon's processes to rectify outages."

The sentiment of residential customers echoed that of community participants, in that they were generally happy with the current level of service provided by Icon Water for their wastewater system and, while there was some support for more spend in this area, few could justify an additional $100 a year.

A few more customers commented on the length of the 6-hour timeframe for rectification being a long time and others would like to see measures to keep them in the loop in relation to time to resolution by SMS/email. Others asked why the investment in the wastewater network was so much more than for water.

When asked about their experiences with Icon Water resolving wastewater faults, most of those who had experienced a fault were happy with the ability to speak to a knowledgeable person quickly and with the speed of response (time to site, time until resolution). The few who were less satisfied with Icon Water's response to their fault said that it was mainly due to the time it took to prove that the fault lay with the Icon Water system (requiring them to first pay for a plumber).

Small to medium enterprise business customers

78%

in Stage 1 of the deliberative deep-dive process said they were **satisfied with Icon Water's LoS**, including 56% who were very satisfied overall *(n=18)*

30%

in Stage 3 of the deliberative deep-dive process said they were **open to paying an additional $100 a year** for all in the ACT to achieve a similar level of service *(n=16)*

Despite some concerns from this audience about the length of time they might have to wait for resolution to a wastewater emergency and the potential impact on their business as a result, most were happy with the current (low) incidence of impacted properties and saw little reason to improve the current LoS.

Some of the few who had experienced a wastewater fault had found it hard to get Icon Water to respond quickly due to a need to prove that the issue lay with Icon Water's system and not their own sewers. This had caused frustration.

"It seems like a lot of people getting a pretty gross outcome, especially inside a property. But you have to factor in that there are 165,000-odd customers so that number is not that large."

"I was fairly dissatisfied with the service I faced. had to organise my own plumber for a sewerage overflow."

"'Wow $60 million in 5 years to keep sewerage over 5 years. I must say this surprised me."

"I expected that response to sewer faults and emergencies would have specified timeframe rather than "as soon as possible."

"I was surprised with the number that expect sewer flooding inside their property."

Findings by engagement activity

Listed below are the findings from this topic organised by engagement activity. Overall findings are on the Conclusion page.

Open community survey

70%

of participants felt **positive in principle about Icon Water investing in upgrades** to reduce the duration, frequency and impacts of water and wastewater faults and maintenance, including 30% who were very positive *(n=487)*.

As a core area of service delivery for Icon Water, based on the brief information provided, most participants were positive about Icon Water seeking to improve delivery in this space.

Participants did not receive information on the incidence of issues or the cost of improving the levels of service and were agreeing in principle.

"The water is clean and reliable and the wastewater is dealt with appropriately"

"(I would like to see Icon Water deliver) clean, affordable water and environmentally friendly wastewater management"

"(I would like to see Icon Water deliver) "better water supply and diversified wastewater treatment schemes"

Customer Advocacy Forum

Neutral sentiment

among forum members

Investment in the maintenance of the wastewater system was seen as worthwhile.

Faults in these systems were considered to be primarily due to tree root ingress and several felt that investment in preventative measures here could mean cost savings for customers in the longer term.

However, concerns were raised over the potentially significant bill increases involved. More detail would be required to enable positive support.

"It sounds like tree roots are the big contributor. I wonder how much maintenance could actually address that"

Key customer interviews

88%

of stakeholders gave this a **high (4-5/5) positivity rating**

Icon Water investing in its wastewater system was seen as very important and worthwhile.

However, it was largely perceived as an already high-quality service with few experiencing issues currently.

"We will increase our supply needs and water and wastewater production, so we encourage Icon Water to keep up with that."

"We haven't had too many issues with faults, but the more you can do to reduce faults has to be a good thing."

Overall deep-dive community findings
Community, residential customers and SME business customers

Findings from the deep-dive deliberative research (n=51 customers & community)

Icon Water's performance in resolving their issue at Stage 1 (n=16 impacted by an issue):

63% **were positive.** 11% were neutral 20% were negative 6% weren't sure

Satisfaction with Icon Water's current level of service at Stage 1 (n=47):

40% were very satisfied with the current LoS. **78% were satisfied** (either very or fairly satisfied).

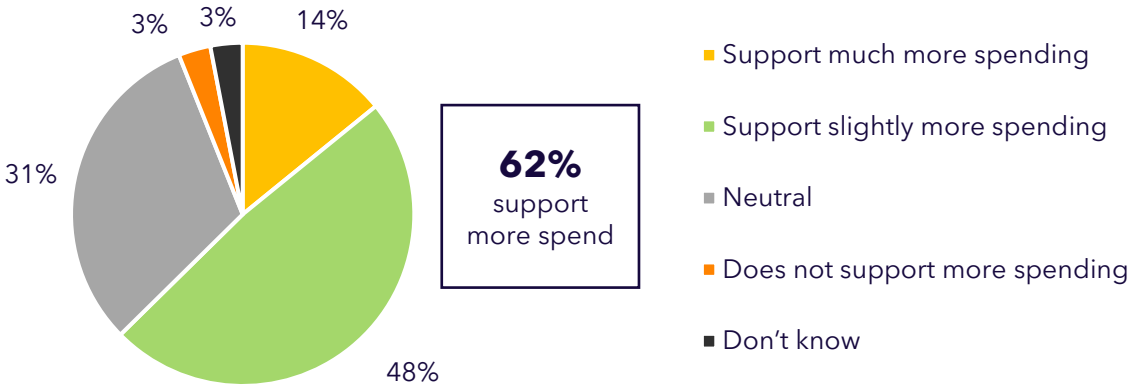
Preference for LoS: In response to an increase in LoS to reduce chance of issues from 1-in-33 to 1-in-80 (Stage 2) (n=46)

70% said Maintain current LoS. 26% said Increase it. 4% said Reduce it

Preference for yearly bill impact when traded off versus other investment decisions (n=48)
Stage 3 (final stage) of the deep-dive process

Quantitative customer survey

Findings from the customer survey (n=2,645 residential customers):



Q. Support for more/less spending in this area (wastewater network maintenance) when presented with a short statement about it: *Investing in maintenance upgrades that aim to reduce the frequency of future sewer faults, blockages and overflows.*

Please note, impact to charges was not explored in this question, participants were just agreeing in principle to increase spend on maintenance. Impact to charges was explored in later questions as part of the Contingent Valuation exercise (Willingness to Pay). Results from this exercise can be found in Section 4.6.3.

Conclusion

Only a minority of participants had experienced issues with their wastewater system and those who had generally reported positive experiences with Icon Water resolving the fault.

Positive feedback focused on rapid restoration of supply with minimal disruption, good clean up and the customers feeling kept in the loop (as to when the team would be onsite, when work would be completed) and in clearly explaining the issues and the steps to resolution.

Reasons for a poor performance by Icon Water related to repeated breaks/blockages, as well as Icon Water being slow to attend. In part this slowness to attend was because of the need for the customer to prove the problem was with Icon Water and not on their property.

The vast majority of participants were satisfied with the current level of service (when it was described to them). The main reasons for satisfaction given were the relatively low incidence of issues currently experienced on the network.

Those dissatisfied with the current levels of service had either experienced high levels of issues themselves or felt that the 6-hour time frame for resolution was too long for something that can be a health risk.

In the case of a wastewater emergency, participants want the ability to report an issue by phone and speak to a knowledgeable Icon Water representative without delay, to have a team onsite within the hour and resolution within half a day.

Particularly important was the ability for the customer to stay informed about the outage and time until resolution, ideally by SMS or email, as well as to have ready access to advice and support in relation to the safe clean up of the health hazard.

The majority of participants opted to maintain current levels of service. While the thought of a wastewater overflow was concerning, the $100 yearly charge increase was considered too much to spend. As a result, few saw a need to increase service equity across the network to this extent.

Willingness to pay

Please refer to section 4.6.3 for the results of the Willingness to Pay exercise and results that was conducted as part of the Residential Customer survey (n=2,645).

4.6 Community and customer priorities amongst different financial investments

4.6.1 Considering investment decisions side by side

Participants in the **Open Community Survey** (Appendix C) were asked to consider a range of initiatives and 487 participants provided feedback.

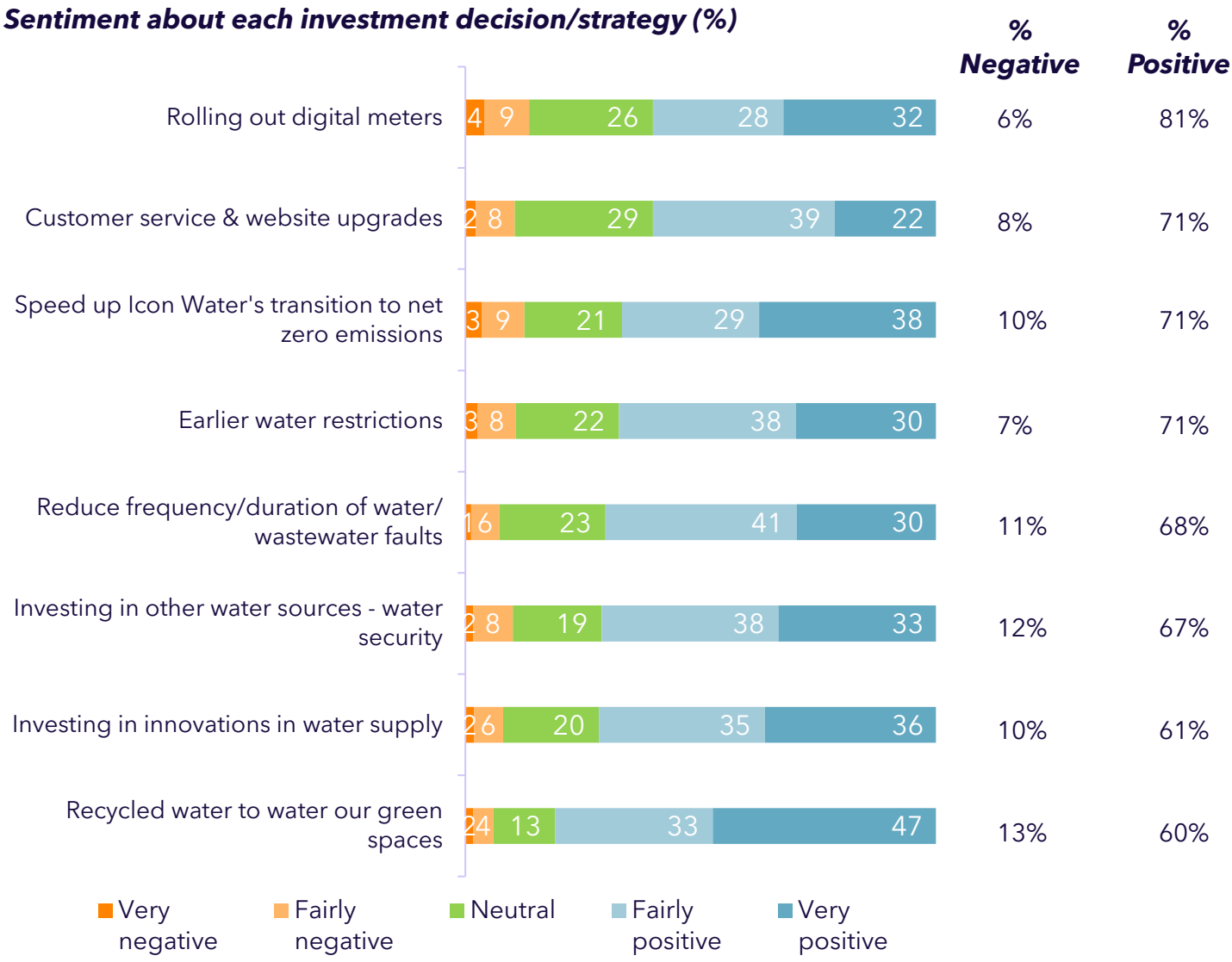
The survey provided participants with a sentence on each investment decision and strategy and asked for disagreement or agreement in principle. It did not nominate the financial amounts required to invest or test potential future charges with customers.

Overall, 40% of participants were positive and 28% were neutral about higher bill amounts in return for higher quality services and new initiatives.

The majority of participants were positive about Icon Water investing in all of the strategies and investment decisions tested. Specifically, the use of recycled water to green spaces, the investment in innovation and speeding up Icon Water's transition to net zero greenhouse gas emissions received the strongest levels of support.

Just 6% of participants were not positive about any of the investment decisions/ strategies, 72% were positive about 5 or more decisions/strategies, including 24% who were positive about all decisions/ strategies.

Figure 4.6.1.1 Summary of sentiment towards the various investment decisions/strategies from the Open Community Survey



Participants in Stage 3 of the **deliberative deep-dive process** were asked to view all investment decisions on one worksheet and to select their preferred level of investment for each decision, with the ability to see how their choices would impact their bill amounts overall, and bills for the five customer personas described in Section 3.3.9.

The results of the trade-off exercise are presented on the following page.

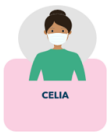
Investing in a faster transition to net zero greenhouse emissions received the biggest share of high investment allocations, with investing in improving levels of service for water and wastewater outages the least. On average, the decisions that participants made gave them an average bill increase of approximately $32.

Figure 4.6.1.2 Screenshots of the investment worksheet completed by deep-dive participants

Make your investment decisions here...

	Levels	Average bill impact ($ per year)	CLICK ON EACH COLOURED BOX BELOW AND SELECT AN OPTION FROM THE DROPDOWN LIST FOR EACH AREA. IF YOU WANT TO REMOVE A COST FROM AN AREA, JUST DELETE IT
CONTRIBUTION TO LIVEABILTY IN THE ACT	No investment	$0.00	
	Low investment - Aesthetic enhancement of assets	$0.03	
	Medium investment - Increasing recreational space around assets	$0.46	
	High investment - Price per pedestrian bridge	$0.71	
	High investment - Price for water recycling for green spaces	$3.73	
LEVEL OF SERVICE - Water supply	Reduce level of investment in the maintenance program	-$10.00	
	Maintain current level of investment in the maintenance program	$0.00	
	Double the level of investment in the maintenance program	$10.00	
LEVEL OF SERVICE - Wastewater/ sewer	Reduce level of investment in the maintenance program	-$35.00	
	Maintain current level of investment in the maintenance program	$0.00	
	Double the level of investment in the maintenance program	$100.00	
RESOURCE RECOVERY EXPANSION	No investment	$0.00	
	Low investment - Expansion of current activities	$0.07	
	Medium investment - Investigation of innovations	$0.46	
	High investment - Implementation of major innovation	$3.73	
ACCELERATION TO NET ZERO GREENHOUSE GAS EMISSIONS	Low investment – Achieve net zero by 2045	$0.00	
	Medium investment - Achieve net zero between 2030-2045	$0.22	
	High investment – Achieve net zero by 2030	$3.86	
COMMITMENT TO INNOVATION	Current level of innovation - (Supporting) ($200,000)	$0.00	
	Driving innovation - ($1,000,000)	$6.00	
	Leading/Driving innovation (between $1M and $5M)	$20.00	
	High investment – Leading Innovation - ($5,000,000)	$33.00	
DIGITAL METERS	No investment	$0.00	
	Everyone gets a digital meter by 2041	$16.00	
	Everyone gets a digital meter by 2035	$8.00	
TOTAL			**$0.00**

See the bill impact of your decisions on different customer types



100kL of water per year.

300kL of water per year.

200kL of water per year.

5,000kL of water per year.

30,000kL of water per year.

	CELIA	THE ANDERSONS	KEVIN - BEAN BREW COFFEE	ASHLEE - BLOOMS GARDEN CENTRE	JOHN - NOT-FOR-PROFIT SPORTS CLUB
	Low residential water user, low income, single person household	High residential water user, family household	Low non-residential business water user	High non-residential business water user	Very high non-residential (not-for-profit) water user
CURRENT BILL	$435	$1,142	$670	$23,326	$141,326
2027/2028 BILL UNDER CURRENT PATH **EXCLUDING** INVESTMENT DECISIONS	$511	$1,296	$772	$25,932	$156,972
% INCREASE **EXCLUDING** INVESTMENT DECISIONS	17%	13%	15%	11%	11%
2027/2028 BILL UNDER CURRENT PATH **INCLUDING** INVESTMENT DECISIONS	$511	$1,296	$772	$25,932	$156,972
% INCREASE **INCLUDING** INVESTMENT DECISIONS	17%	13%	15%	11%	11%

Figure 4.6.1.3 Summary of preferences for yearly amount when investment decisions were considered side by side in the deliberative forum

Yearly investment allocation at the end of the deep-dive deliberative process (n=48).

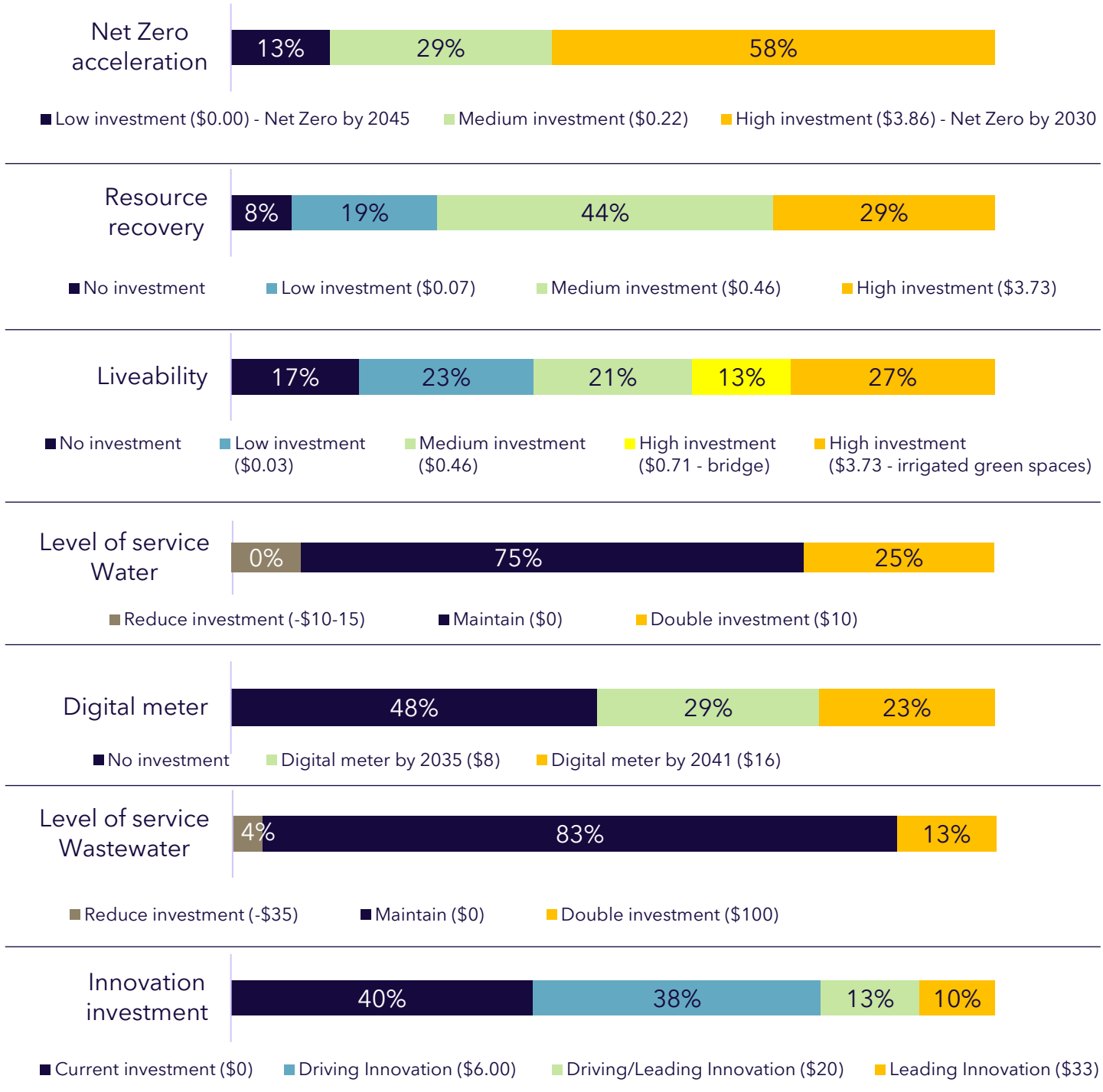
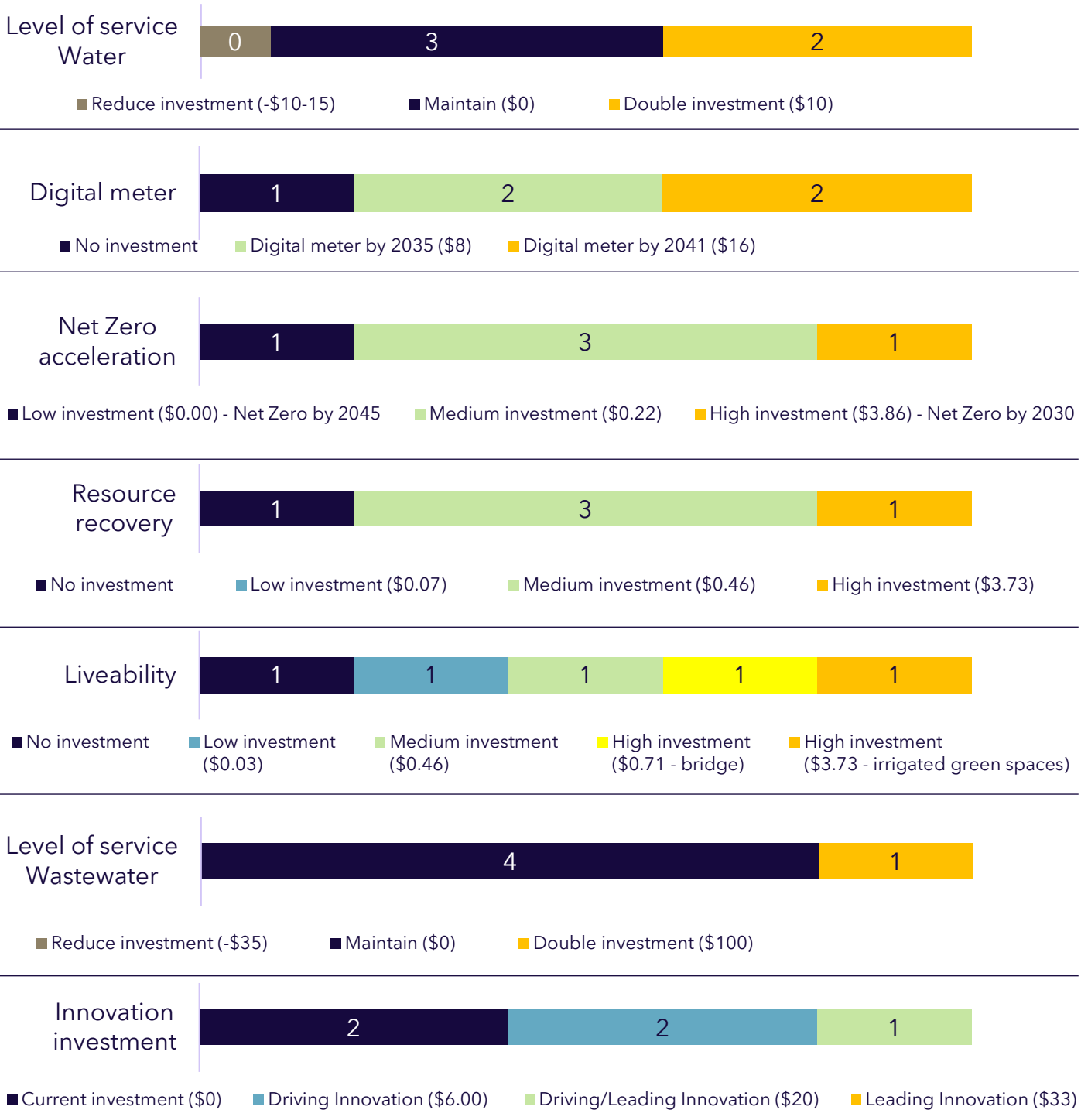


Figure 4.6.1.4 Summary of preferences from financially vulnerable participants for yearly amount when investment decisions were considered side by side in the deliberative forum

Yearly investment allocation at the end of the deep-dive deliberative process (n=5)

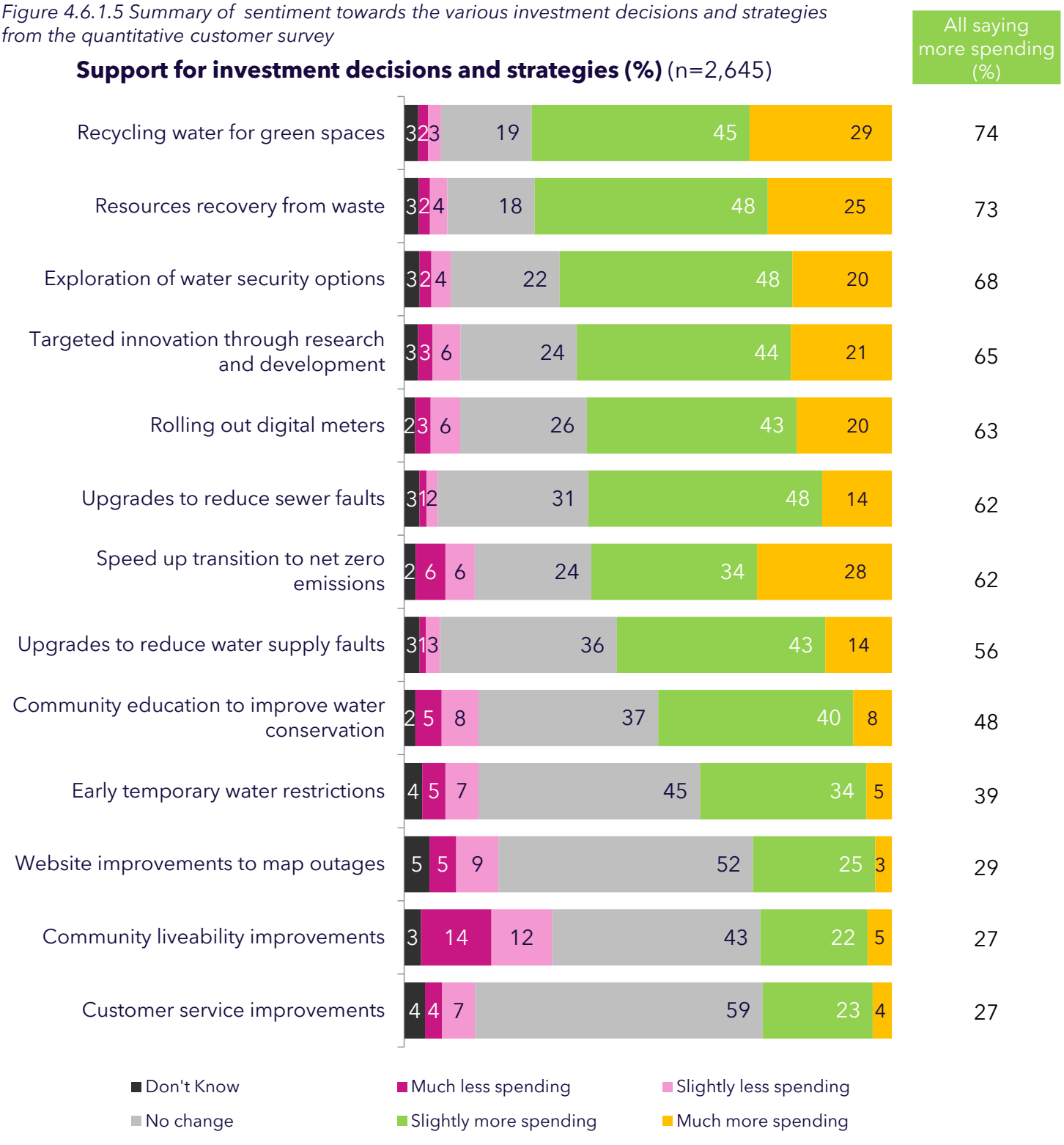
Caution – low sample size. Figures are actual counts not percentages



Participants in the **quantitative customer survey** were asked to view all investment decisions and strategies on one page and to rate their level of support for Icon Water spending on each area.

Participants were shown a brief statement explaining each decision/strategy to form a basic understanding of the topic. SEC Newgate could then obtain a topline measure of spend support. These findings are shown below in order of decreasing level of support for more spend. The findings were broadly in line with other engagement forums, with sustainability and water security initiatives receiving higher levels of support and other areas of more mixed appeal. 6% of participants did not select 'more spending' for any of the investment decisions/strategies. 70% selected 'more spending' for 6 or more, including 6% who selected all decisions/strategies.

Figure 4.6.1.5 Summary of sentiment towards the various investment decisions and strategies from the quantitative customer survey



*Please note that figures in charts may not always add to 100% due to rounding

4.6.2 Financially vulnerable customers

One-in-ten (n=238) customers in the **quantitative residential customer survey** classified themselves as financially vulnerable, in that they either had some difficulty making ends meet or were having a lot of difficulty covering basic living expenses.

The remaining sample (n=2,193 customers), classified themselves as doing OK and making ends meet or doing well and feeling comfortable.

A further n=214 preferred not to answer this question.

Before examining the investment decision support levels among financially vulnerable customers, it is worth examining the key demographic and attitudinal differences between them and the customers who did not classify themselves as financially vulnerable.

Profile of customers who classified themselves as financially vulnerable

They were more likely to:

1. **Live in an area at lower risk** of water supply outages and wastewater overflows (75% of Financially Vulnerable customers vs. 65% other customers).
2. **Have a lower gross annual household income** - 45% of Financially Vulnerable customers had an income of less than $80,000 compared to just 19% of other customers.
3. **Know very little about the topic of water** e.g. how it gets to their home, how it is treated – 36% of Financially Vulnerable customers rated their knowledge as less than 4 out of 10 compared to 25% of other customers (where 10 means 'expert' and 0 means they know nothing).
4. **Feel negatively towards Icon Water** – 54% of Financially Vulnerable customers rated their sentiment as less than 7 out of 10 compared to 40% of other customers (where 0 means very negative and 10 means very positive).
5. **Be less satisfied with Icon Water's responsiveness** to an issue or enquiry they have raised – 48% of Financially Vulnerable customers rated their satisfaction as less than 7 out of 10 compared to 30% of other customers.

No differences were observed by age, gender, employment type, type of home or water bill amount.

The following chart shows level of support for spending on investment decisions and strategies by financially vulnerable customers as part of the **quantitative customer survey.**

In general, financially vulnerable customers indicated lower levels of support for more spending across all investment decisions, but the relative degree to which each decision was supported broadly aligned with the overall survey sample. The only major difference was that upgrades to reduce sewer faults received the highest level of support, whereas it was mid-table in the overall survey sample. 13% of financially vulnerable customers do not support 'more spending' on any of the decisions/strategies. 51% support 'more spending' on 6 or more decisions/strategies and 4% support 'more spending' on all decisions/strategies.

Figure 4.6.2.1 Summary of sentiment by financially vulnerable customers towards the various investment decisions and strategies from the quantitative customer survey

Support for investment decisions and strategies – financially vulnerable customers (%) (n=238)

*Please note that figures in charts may not always add to 100% due to rounding

4.6.3 Willingness To Pay Modelling

Participants in the **quantitative customer survey** (n=2,645) were asked to undertake a Willingness-To-Pay (WTP) exercise, using a technique called Contingent Valuation. The survey established the average yearly amount they would be willing to pay for a set of specific investment decisions. The analysis undertaken and report produced by Frontier Economics and Gillespie Economics is provided in Appendix E.

4.6.3.1 Overview

Participants were shown three investment scenarios as outlined below. The order in which they were shown was randomized, with a randomly selected price point for each decision (either $5, $10, $20, $50, or $100) to cover all possible price point combinations across the sample. They were asked if they accepted or rejected paying for the price point of each scenario and were given opportunities to review and change their answers once they were aware of the financial impact of the decisions they had made. The specific investment decisions tested were as follows.

1. ***Increasing the level of service for water supply system maintenance***
    - Those living in a suburbs at a **higher risk** of a water supply outage were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency with which they might experience a water supply outage from once every 5 years to once every 10 years.
    - Those living in suburbs at a **lower risk** of a water supply outage were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency which 8,000 other properties on the Icon Water supply network might experience a water supply outage.
2. ***Increasing the level of service for wastewater system maintenance***
    - Those living in a suburbs at a **higher risk** of a wastewater overflow were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency with which they might experience an overflow from once every 5 years to once every 10 years.
    - Those living in suburbs at a **lower risk** of a wastewater overflow were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency which 16,000 other properties on the Icon Water supply network might experience an overflow.
3. ***The installation of digital meters***

Participants were asked to accept or reject a yearly amount (for a 5-year period) to have a digital meter installed at their property.

The results are summarised in Table 4.6.3.4.1, Table 4.6.3.4.2 and Figure 4.6.9

Table 4.6.3.1 Median estimates for residential customer willingness to pay each year over five years

Log-logistic model	Yearly amount over a 5-year period		
	50% WTP (median)	60% WTP (+median)	70% WTP (+median)
To have a digital meter installed at their property	$53.09	$27.01	$12.93
To have an improved level of service for their wastewater system	$29.13	$16.09	$8.43
To have an improved level of service for their water supply	$24.00	$11.99	$5.63
TOTAL SPEND	**$106.22**	**$55.09**	**$26.99**

4.6.3.2 Introduction

Following the comprehensive qualitative research program examining a range of Icon Water's current services and future service ideas, a focused, large scale quantitative survey was conducted to explore three key potential service improvements (investment scenarios), and the Willingness To Pay (WTP) for these services by the general community.

The investment scenarios tested in the quantitative study were:

1. Investment in water supply system (WSS) maintenance to reduce the risk of supply disruptions, enabling severely impacted customers (8,000 properties) achieve a water supply disruption frequency of once every 10 years (instead of once every 5 years).
2. Investment in wastewater system (WWS) maintenance to reduce the risk of disruption, enabling severely impacted customers (15,000 properties) achieve a wastewater blockage or overflow frequency of once every 10 years (instead of once every 5 years).
3. Investment to install digital water meters (DWM) at properties across the Icon Water supply network to enable households monitor their water use more closely, put measures in place to reduce consumption and identify leaks more quickly to avoid bill shock.

SEC Newgate Research engaged Frontier Economics to assist with the study, in collaboration with Dr Rob Gillespie (Gillespie Economic), an expert in carrying out WTP studies.

WTP studies are used by regulators and businesses to estimate the value of non-market goods or services, for which there is no active market to determine a market price that customers would be willing to pay for the good or service.

Given the nature in which the specific investment scenarios were being framed, this study utilised the contingent valuation approach to elicit respondents' WTP for the investments, with the questionnaire designed so that the WTP estimates could be interpreted as the WTP either for a single investment or combined across investments.

4.6.3.3 Methodology

Survey Coverage

A 20-minute online survey was conducted with a cross-section of Icon Water's residential customers. Fieldwork was conducted between 26th November and 10th December 2021. The survey was hosted by established Australian online fieldwork supplier CanvasU. The survey measured:

- awareness, knowledge of and sentiment towards Icon Water;
- support for spend (more, less or same) on each of the investment decisions when presented at a broad (statement) level;
- communications channel preferences for different types of customer enquiry;
- reasons for perceptions held; and
- WTP for three specific investment decisions, tested through Contingent Valuation Modelling (see overleaf). This was the final exercise in the survey.

In addition to these main areas of questioning, we collected demographic characteristics from participants including age, gender, working status, postcode and suburb, household size, property type, quarterly bill amount, household income and financial vulnerability (self-ascribed rating of the ability of the household to cover living expenses and make ends meet). Under this definition, n=238 participants were classified as financially vulnerable.

Survey Sample and Recruitment

A total of 30,643 survey invitations were sent out by SEC Newgate to Icon Water's customer base on behalf of Icon Water and n=2,645 customers completed the survey. This was an 8.6% response rate, which is good for an unsolicited survey where response rates are typically closer to 4%.

Customers were incentivised to complete a survey by provision of a prize draw – with a total prize pool of AUD $2,000, comprising 12 prizes between $100 and $500.

To participate, all participants needed to reside in the ACT for at least 6 months of the year and to have sole or shared responsibility for paying their household's water bill. Quotas were set on age, gender and property postcode and suburb to provide a cross-section of customer opinion by location, ensuring sufficiently robust sample was obtained in specific areas at a lower or higher risk of wastewater and water supply disruptions:

- Properties in areas at a higher risk of a water supply outage (i.e. once every 5 years);
- Properties in areas at a higher risk of a wastewater overflow (i.e. once every 5 years); and
- Properties at a lower risk of either of these issues.

The final sample for each 'risk' area was as follows.

	Total sample	**High risk of water supply outage**, low risk wastewater overflow	**High risk of wastewater overflow**, low risk of water supply outage	**High risk of both** wastewater overflow and water supply outage	**Low risk of both** wastewater overflow and water supply outage
Sample size: n=	2,645	629	989	312	715
Accuracy (margin of error for reporting findings)	+/- 1.86%	+/- 3.88%	+/- 3.09%	+/- 5.54%	+/- 3.68%

Data Treatment

This data was weighted at the analysis stage to ensure that findings were representative of ACT population statistics at an overall sample level in terms of age, gender and risk area.

	Count	Unweighted %	Weighted %
TOTAL SAMPLE	**2,645**	**100%**	**100%**
Male*	1,496	57%	48%
Female*	1,145	43%	52%
18-34	254	10%	35%
35-44	432	16%	16%
45-54	523	20%	19%
55-64	596	23%	13%
65+	840	32%	17%
High risk of water supply outage	629	24%	9%
High risk of wastewater overflow	989	37%	17%
High risk both	312	12%	7%
Low risk both	715	27%	67%

Survey Design

A Contingent Valuation approach was used to calculate customer WTP. This technique was selected because of its role in the valuation of non-market resources (i.e. constructs that do not have a market price) with the modelling delivered in partnership with SEC Newgate, Frontier Economics and Gillespie Consulting.

Three investment decision scenarios were tested with each survey participant:

1. increasing the level of service for the water supply system through increased maintenance;
2. increasing the level of service for the wastewater system, through increased maintenance; and
3. the installation of a digital meter at their property.

Each participant was shown detailed background information for each of the three scenarios (please see Appendix E for the information shown). The order in which information about each scenario was shown was randomised across the sample.

Each participant was then shown a WTP question for each of the three scenarios (three questions in total). The question wording depended on where the participant's property was located, whether their property was in a high or low risk area for water supply outages and/or wastewater overflows. The question wording is shown overpage. Similarly, the order in which the three questions were presented to participants was randomised across the sample.

Broadly, each question asked the participant if they accepted or rejected paying a specific yearly amount for a period of five years in relation to the scenario tested. The specific yearly amount shown to each participant for each scenario was randomised across the sample either $5, $10, $20, $50, or $100 per service. This ensured all possible price point combinations were tested an equal number of times across the sample. A total of 250 price point combinations were generated and each was tested either 10 or 11 times in total.

*While non-binary participants were not excluded from the study, no-one selected this option when presented in the survey.

After the three scenario questions had been answered, the participant was shown the total annual price increase they would pay as a result of their choice. They were then given the opportunity to revise their acceptance or rejection of the price point for each scenario until they reached a total annual price increase that they were happy with. They were also able to choose a WTP value of $0 if they preferred.

Contingent Valuation scenarios

The scenarios presented to survey participants for the Contingent Valuation exercise were as follows.

1. Increasing the level of service for water supply system through increased maintenance.
    - Those living in a suburbs at a **higher risk** of a water supply outage were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency with which they might experience a water supply outage from once every 5 years to once every 10 years.

        Q *Would you be willing to pay an extra (rotate $5, $10, $20, $50, $100) per year on your water rates for the next 5 years to reduce the water supply disruption frequency at your property (and other severely impacted properties – 8,000 in total) from once every 5 years to once every 10 years?*
    - Those living in suburbs at a **lower risk** of a water supply outage were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency which 8,000 properties on the Icon Water supply network might experience a water supply outage.

        Q *Would you be willing to pay an extra (rotate $5, $10, $20, $50, $100) per year on your water rates for the next 5 years to help severely impacted customers (8,000 properties) reduce their water supply disruption frequency from once every 5 years to once every 10 years?*
2. Increasing the level of service for wastewater system through increased maintenance.
    - Those living in a suburbs at a **higher risk** of a wastewater overflow were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency with which they might experience an overflow from once every 5 years to once every 10 years.

        Q *Would you be willing to pay an extra (rotate $5, $10, $20, $50, $100) per year on your water rates for the next 5 years to reduce wastewater blockages or overflow frequency at your property (and other severely impacted properties – 16,000 in total) from once every 5 years to once every 10 years?*
    - Those living in suburbs at a **lower risk** of a wastewater overflow were asked to accept or reject a yearly amount (for a 5-year period) to reduce the frequency which 16,000 properties on the Icon Water supply network might experience an overflow.

        Q *Would you be willing to pay an extra (rotate $5, $10, $20, $50, $100) per year on your water rates for the next 5 years to help severely impacted customers (16,000 properties) reduce their wastewater blockage or overflow frequency from once every 5 years to once every 10 years?*
3. The installation of a digital meter at their property.
    - Participants were asked to accept or reject a yearly amount (for a 5-year period) to have a digital meter installed at their property.

        Q *Would you be willing to pay an extra (rotate $5, $10, $20, $50, $100) per year on your water rates for the next 5 years to have a digital water meter installed at your property?*

4.6.3.4 Analytical approach and results

Estimation methods and statistical analysis

When undertaking economic welfare analysis of potential investments, the appropriate measure to use is for the expected value of WTP is the mean or average WTP.

However, in the present context, estimates of mean WTP are extremely sensitive to assumptions made about the WTP of respondents at the higher end of the WTP distribution.

An alternative measure of WTP commonly used is the median WTP. The median is the increase in charges that 50 percent of customers are willing to pay to fund a program and 50 percent are not willing to pay. The median is not sensitive to assumptions made about the WTP at the higher end of the WTP distribution. As a result, we have recommended the use of median values for understanding WTP in this study.

There are a number of different potential approaches to estimate customers' WTP from the responses in this Contingent Valuation study. These can be broken down into two categories:

- **Parametric methods:** Estimate an appropriate non-linear regression model for the dichotomous "yes" or "no" choices, and then derive average and/or median WTP from the estimated model parameters.

  One advantage of the parametric approach is that it enables hypotheses to be tested about differences in WTP between different segments of the population.

- **Non-parametric methods:** Approaches that are free from distributional assumptions. These approaches make few assumptions about the distribution of WTP in the population and are hence more robust to specification error. However, they have a limited capacity for undertaking statistical hypothesis testing.

In this study we estimated WTP by both a parametric method and a non-parametric method. In particular, we used a parametric log-logistic model and a non-parametric method developed by Turnbull (1976). SEC Newgate recommend the log-logistic model be used because, across the three investment options, it obtained the best fit for the data over other commonly used models for binary responses (for method details and rationale see Appendix E).

Results

Our findings showed that customers who were at a higher risk of service interruption were willing to pay more to improve that service (see Table 4.6.3.4.1, Table 4.6.3.4.2 and Figure 4.6.9).

In particular, customers in the "High risk" wastewater and "High risk both" groups were willing to pay more for improved wastewater services than the "Lower risk" and "High risk water" groups.

Similarly, customers who were in the "High risk water" and "High risk both" groups were willing to pay more for improved water services than the "Lower risk" and "High risk wastewater" groups. These differences were statistically significant.

By contrast, the WTP estimates for digital meters were much closer in value across all risk groups, and the differences were not statistically significant.

Turnbull, B. (1976), The empirical distribution function with arbitrary grouped, censored, and truncated data, Journal of the Royal Statistical Society, Series B, 38, 290–295.

Considerations in using the median in WTP estimates

The median 50th percentile is the industry standard approach and these results are shown in the figure overpage.

From a utility's perspective, a more conservative measure of WTP may be appropriate since a proposed program to improve a service may not be considered viable if the bill increase required to fund the program is supported by only 50 percent of customers.

A regulator will likely want to be assured that a greater of customers are willing to pay for a program to improve a service. The estimates of the 50th, 60th and 70th percentile WTP values for the three investment topics and risk groups are shown below.

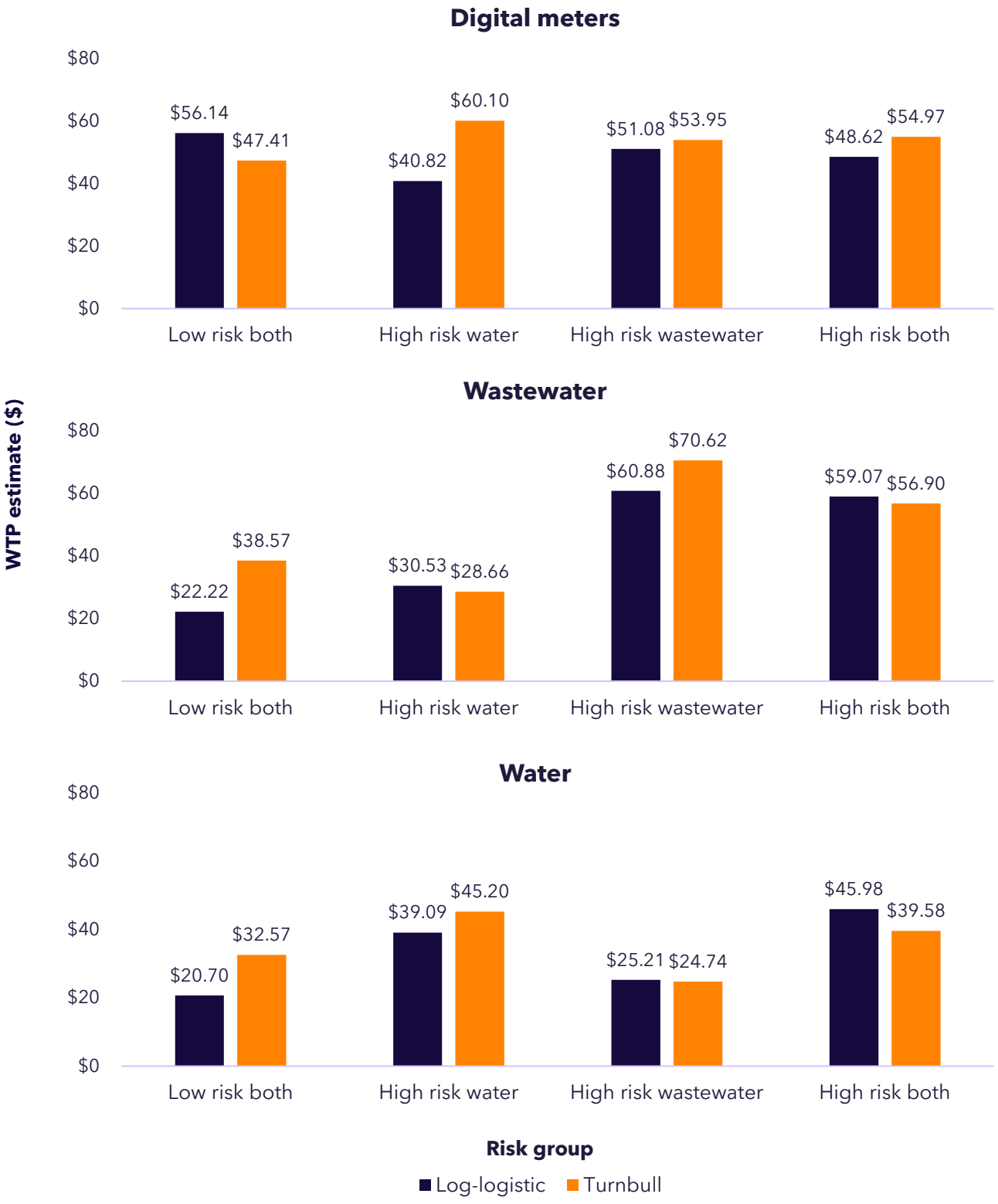
Table 4.6.3.4.1 50%, 60% and 70% Median estimates for people's willingness to pay each year over five years (all data)

	Log-logistic			Turnbull		
	70% (+median)	*60% (+median)*	*50% (median)*	*70% (+median)*	*60% (+median)*	*50% (median)*
Digital meters	$12.93	$27.01	$53.09	$9.69	$28.02	$49.77
Wastewater	$8.43	$16.09	$29.13	$7.85	$28.90	$43.42
Water	$5.63	$11.99	$24.00	$5.75	$9.79	$34.31

Table 4.6.3.4.2 50%, 60% and 70% Median amounts that people are willing to pay each year over five years by risk group

	Log-logistic			Turnbull		
	70% (+median)	*60% (+median)*	*50% (median)*	*70% (+median)*	*60% (+median)*	*50% (median)*
Digital meters						
Low risk both	$13.68	$28.56	$56.14	$8.90	$27.20	$47.41
High risk water	$9.94	$20.77	$40.82	$11.51	$19.15	$60.10
High risk wastewater	$12.44	$25.99	$51.08	$15.50	$29.33	$53.95
High risk both	$11.84	$24.74	$48.62	$19.13	$35.11	$54.97
Wastewater						
Low risk both	$6.43	$12.27	$22.22	$5.66	$25.01	$38.57
High risk water	$8.83	$16.86	$30.53	$10.14	$16.18	$28.66
High risk wastewater	$17.61	$33.62	$60.88	$17.82	$49.07	$70.62
High risk both	$17.08	$32.63	$59.07	$26.23	$39.96	$56.90
Water						
Low risk both	$4.86	$10.34	$20.70	$5.12	$9.06	$32.57
High risk water	$9.17	$19.53	$39.09	$6.93	$31.99	$45.20
High risk wastewater	$5.92	$12.60	$25.21	$7.09	$14.38	$24.74
High risk both	$10.79	$22.98	$45.98	$9.44	$23.33	$39.58

Figure 4.6.9 Risk group 50th median WTP amounts for each service



4.6.3.5 Interpretation of the willingness to pay findings

From an economic efficiency perspective, it is not sufficient to just demonstrate customer WTP for a program, that is that there is a benefit to the community. A program is only justified if all the benefits of that program to the specified community are greater than the costs in present value terms, and there is an economic surplus. The method used to make this assessment is benefit cost analysis.

When applying these results to assess the viability of an investment option in a benefit cost analysis, it is important to consider several factors.

Sizes of the customer segments that are likely to benefit directly from the increased level of investment

The first revolves around the respective sizes of the customer segments that are likely to benefit directly from the increased level of investment. For Icon Water, the customer segment with a low risk for both water and wastewater disruptions is the largest segment comprising 67% of the customer base. While customers at higher risk of disruption have a relatively high WTP to reduce the risk of a disruption compared to customers at a lower risk of such disruptions, differential pricing for utility services by risk category is not a generally accepted practice in Australia. Hence, the estimates of median WTP across all risk groups in Table 4.6.3.4.1 or the estimates of median WTP for the low-risk groups in Table 4.6.3.4.2 should be given more weight than the relatively high estimates of WTP for the higher risk groups.

Adopting a higher percent point than the median

Similarly, a more conservative measure of WTP may be considered preferential to increase the proportion of the customer base that state that specific value as a desirable WTP amount.

As stated previously, such an approach may also provide important context to the regulator tasked with assessing whether an increase in charges is justified and acceptable to the community. To assist Icon Water in this process, both the 60th and 70th percentile WTP values are included as comparative WTP values for all the potential investment topics and risk groups.

Community education

Lastly but no less important is the consideration of educating customers about Icon Water services and investment options. In WTP studies, it is common for people to support greater investment in services as their familiarity with them and the associated benefits increases. This pattern is particularly important to keep in mind when interpreting results from these studies.

Surprise increases in utility charges without an effective communications campaign is unlikely to achieve the same WTP values seen within this study. For this reason, SEC Newgate recommends that any increase in customer bills is accompanied by a prominent communications campaign on who Icon Water is, what the changes in the bill entails and how any changes will positively affect the community.

4.6.3.6 Profiling of those not willing to pay

It is important to understand who rejected the prices that they were presented with, that is, those that were not willing to pay in the **quantitative residential customer survey**.

A sample of n=466 customers – 18% of the sample for the study - rejected the prices they were shown for all three scenarios. Although they did not all see the same WTP dollar values for the services they were considering in the survey, there is value in profiling this group given they all chose to reject further investment for these three services.

The information provided below aims to profile these participants from a demographic and attitudinal perspective through highlighting of significant differences compared to the n=2,179 customers who accepted the price for at least one scenario.

Participants not willing to pay anything were more likely to:

1. **Live in an area at lower risk** of water supply outages and wastewater overflows (72% vs. 65% of those who were willing to pay for at least one scenario).
2. **Have a more negative sentiment towards Icon Water** – being more likely to rate their sentiment as 6 or lower out of 10 (55% vs. 39% of those who were willing to pay for at least one scenario).
3. **Be less satisfied with Icon Water's responsiveness** to an issue or enquiry they had raised – being more likely to rate their satisfaction as 6 or lower out of 10 (49% vs. 28% of those who were willing to pay for at least one scenario).
4. **Live in a smaller house, townhouse or apartment** (53% vs. 40% of those who were willing to pay for at least one scenario).
5. **Did not have a lawn at their home** (47% vs. 36% of those who were willing to pay for at least one scenario).
6. **Already be paying a quarterly water bill of $400 or more** (26% vs. 17% of those who were willing to pay for at least one scenario).
7. **Be financially vulnerable** – that is, they have had some difficulty making ends meet or have had a lot of difficulty covering basic living expenses (21% vs. 8% of those who were willing to pay for at least one scenario).

In sum, those not willing to pay were paying a relatively high amount for their water already (despite not having a large house or lawn), were not in areas at higher risk of water or wastewater issues, had issues with Icon Water's service previously and were financially vulnerable.

No differences were observed by age, gender or self-ascribed knowledge of Icon Water and its services.

4.6.3.7 Responses by vulnerable customers to the WTP scenarios

Almost one-in-ten (n=238) customers in the **quantitative residential customer survey** were classified as financially vulnerable, in that they either had some difficulty making ends meet or were having a lot of difficulty covering basic living expenses.

The remaining 2,193 customers classified themselves as doing OK and making ends meet or doing well and feeling comfortable. A further 214 participants preferred not to answer this question.

The following page shows bar charts that compare the level of acceptance that financially vulnerable customers have for each price point for each scenario to the broader (non-financially vulnerable) sample.

A similar cross-section of total price combinations were tested with financially vulnerable and with non-financially vulnerable customers. No significant differences were observed in the spread of total price combinations tested with each audience (either mean, median, upper quartile or lower quartile measures).

Table 4.6.3.4.2 Comparison of the spread of price point combinations tested with financially vulnerable and non-financially vulnerable customers: No significant differences observed

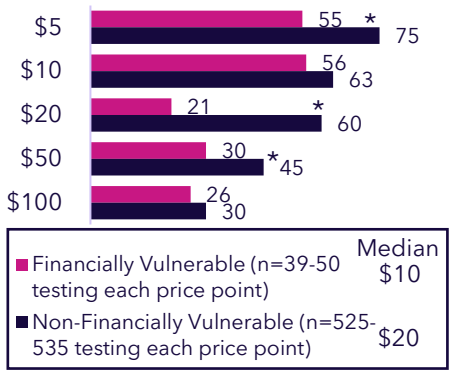
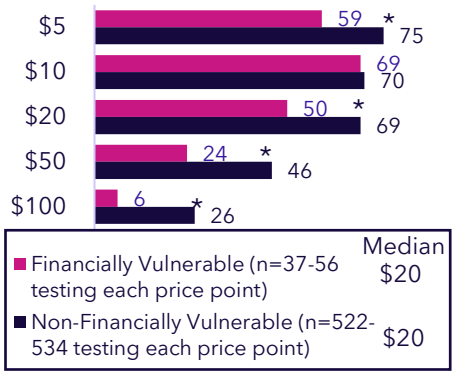
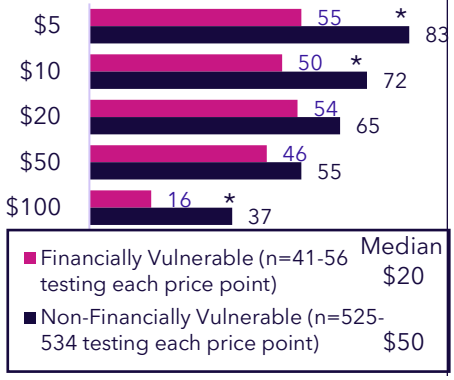
	Financially Vulnerable	Non-Financially Vulnerable
Sample size: n=	238	2,193
Range of total price combinations tested	$15-$250	$15-$250
Mean total price combination tested	$121	$111
Median total price combination tested	$125	$120
Lower quartile	$70	$65
Upper quartile	$155	$155

Findings

Although the participant numbers are too small to enable modelling for willingness to pay, we can see notable differences when examining how financially vulnerable customers answered the survey questions. Comparisons between the raw level of acceptance for each price point tested between financially vulnerable and non-financially vulnerable customers for each scenario is shown below.

The majority were willing to pay for at least one of the scenarios tested (61%). However, a significantly higher proportion said they were not willing to pay for any of the scenarios tested compared to customers who did not classify themselves as financially vulnerable (39% compared to 16%). Financially vulnerable customers have a lower acceptable price range for each scenario.

Table 4.6.3.4.3 Level of acceptance for each price point tested between financially vulnerable and non-financially vulnerable customers. Significant differences have been asterisked

Water supply LoS scenario	Wastewater LoS scenario	Digital meter installation
% willing to pay at each price point tested:	% willing to pay at each price point tested:	% willing to pay at each price point tested:
		
Financially Vulnerable (n=39-50 testing each price point) Median $10 Non-Financially Vulnerable (n=525-535 testing each price point) $20	Financially Vulnerable (n=37-56 testing each price point) Median $20 Non-Financially Vulnerable (n=522-534 testing each price point) $20	Financially Vulnerable (n=41-56 testing each price point) Median $20 Non-Financially Vulnerable (n=525-534 testing each price point) $50
Financially vulnerable participants were significantly less likely to accept most price points and fewer than half would pay over $10, compared to $20 for non-financially vulnerable customers.	Financially vulnerable participants were significantly less likely to accept price points above $10. Fewer than half would pay over $2 which is similar to non-financially vulnerable customers.	Financially vulnerable participants were significantly less likely to accept price points above $50 and less than $20. Fewer than half would pay over $20, compared to $50 for other customers.

*Significant difference @ 95% level of confidence between financially vulnerable customers and the other customers surveyed.

Around 90% of participants did not wish to review their initial price acceptance/rejections. There was no significant difference in the opinions of financial vulnerable and non-financially vulnerable customers in this respect (91% vs. 87%).

5.

Advice on future customer and community messages

5.1 Feedback on future community messages

Participants were asked in the final phase of the **deliberative deep dive process** to imagine what they would tell their family or friends about the investment decisions Icon Water is considering, to advise Icon Water on how best to get campaign messages out to Canberrans and to assess what the key message should be for the five key customer personas.

A selection of responses follows:

- *"Hey did you know Icon Water has a plan to have net zero emissions by possibly 2041, they are actually really innovative they are changing meters to digital to conserve water from leaks and give them more transparency on usage. And I also love that they are branching out into other recycling to help improve our soil.. as a company they really are doing some interesting things."*
- *"I would tell my friend that Icon Water has a big impact in our daily life and currently working to improve Canberra."*
- *"I was surprised to recently learn that Icon Water is investing in many worthwhile initiatives for Canberra in the next five years which will make it more liveable, sustainable and, to some degree, profitable as a city. Until recently, I thought that IW only dealt with water supply and maintenance of infrastructure but it's involved in local initiatives such as community education, innovation to improve water supply and ambitious projects that could lead to advances in technology that could be sold/rolled out to other jurisdictions. / Cynic: Yeah. So how much is that gonna cost us? / Me: It depends. From nothing to up to around $100 extra per year. Most of projects they're implementing are surprisingly low cost. I think that's a small price to pay to minimise the impact of climate change, isn't it? / Cynic: I suppose so. What about digital water meters? I hear they're going to slug us for the installation and upkeep of those. I'm happy with my old meter. / Me: What if you could monitor your daily usage, have more accurate billing and know if there's a leak in your supply so you don't get slugged with extra charges?"*
- *"The standout areas for me were their efforts in water security to ensure that there is water supply and wastewater management for all. There were some interesting thoughts about the decisions on costs and working on response times and managing how regular the maintenance was. Interesting that damage is more likely in certain areas due to the different soil texture. The other thing that really stood out for me was that for a cost of less than $1 per customer annually, Icon water is able to move to net-zero before 2045. I was also really pleased to hear that they are looking to install digital meters. It would be great as a customer to have easier access to what water you are using."*

5.2 Feedback on useful channels

Suggested ways to get the word out about the price reset in broad order of mention:

- Information on the bill
- Approach local politicians to get the word out
- Media outlets – City News, Canberra, News.com.au
- Social media – Instagram, FB, Twitter, Pinterest (to share ideas and progress)
- Website updates – summary of plans and information, infographics and videos about projects
- Radio – ABC
- Community groups – HerCanberra, Riotact
- Recruit some IW community ambassadors to spread the work in the community – such as local businesspeople or community leaders

5.3 Advice to our engagement personas

In Stage 3 of the deliberative deep-dive process, participants were asked which messages about the investment decisions and strategies each of the five customer personas might find most interesting. This feedback is summarised below and could be used to help inform messaging about the price review and projects underway.

Celia *(low residential water user, lower income)*

Participants commented that, while supportive of many of Icon Water's investment decisions, Celia would potentially prefer to have **no further impact on her bill** and to benefit from a **lower ($6) supply charge**.

Investments that **demonstrate** clear water security and sustainability outcomes, while returning lower bills over the longer-term would potentially be of appeal.

Some participants noted that education for Celia to help her save water and potentially to **reward Celia for reduced water use**, particularly once she gets a digital meter (although some think this should be subsidised for her as a single person and as a low water user).

The Andersons *(larger family, higher residential water use)*

There was a sense that the Andersons would be potentially tipping into tier 2 usage charges and would be feeling slightly penalised for their current use. This may make them **less accommodating of the bill increases** that some of the investment decisions would require.

Participants mentioned a need for **clear, directional education** for the Andersons to help them save water.

Several participants strongly recommended a **digital meter** for the Andersons, particularly as the kids could monitor it to gamify the challenge.

Some thought a **greywater system** would also help, due to their high water use in the home (laundry, showers etc.) and water needs in the garden.

John, Football Club *(large water user, not-for-profit)*

Aligning with participant opinions shared in relation to tariffs and charges, there was widespread support for a tariff structure for John that would not penalise him for providing a necessary community service.

Most comments focused on providing John with **subsidised water use or water tanks**, and the provision of **innovative water reuse technology** (e.g. capturing greywater from the showers to use on the playing field).

Others felt that Icon Water should run workshops or provide advisory services to help educate people like John on initiatives they could implement to reduce water use.

Figure 5.3.1 Advice to the engagement personas from the deliberative deep-dive

Kevin, Bean Brew Coffee Shop *(small business owner, not a high water user, but water is essential to the running of his business)*

As a small business owner who is working in and on his business, several participants commented that Kevin would be looking for **reliable service and quick resolutions** to any issues from Icon Water. Potentially paying a slight premium via supply charges to access priority service.

Quick access to Icon Water support in case of issues were the most appealing solutions offered – potentially via webchat to enable Kevin to keep going on with his day whilst resolving his issue. **Provision of water saving tips** to help Kevin reduce his water use was also considered important.

A few participants also saw Kevin as a **potential Icon Water ambassador** due to his community involvement – informing locals about the initiatives underway and imparting water conservation messages (potentially via information leaflets or posters provided by Icon Water).

Ashlee, Blooms Garden Centre *(large water using business)*

As a customer for whom high water use is essential to the viability of her business, most participants assume that Ashlee is suffering from high water bills and that a **higher supply charge** would probably be beneficial to her business.

Beyond the reduction of usage charges, several participants felt that Ashlee would value **advice and assistance from Icon Water** to assist with establishing water saving practices, such as the **capture and recycling** of water in her business.

Some felt this support should extend to education about technology to assist in reducing the amount of water required to irrigate the plants (e.g. soil probes to record the moisture level in soil).

Some felt a **digital meter** would also be beneficial to help Ashlee monitor her water use.

6.

Evaluation of the Engagement Process

6.1 Feedback on the process

Customer Advocacy Forum

Participants were requested after each forum to provide feedback on the program's overall process and their meeting.

At the first meeting, members developed their own set of criteria against which Icon Water was to measure the success of each meeting (shown below). At the final meeting, members were asked to use this same criteria to evaluate the whole program. Responses were given based on a 1-5 agreement rating scale. The average results of the five members who completed this final exercise are shown below.

- **3.6/5** I had clarity of purpose and scope
- **3.6/5** I feel supported to consult with community and stakeholders
- **3.8/5** I received the right information to make informed decisions
- **4/5** We have considered the inclusion of the right groups
- **3.8/5** I had the ability to participate constructively
- **4/5** I was heard and recorded accurately
- **3.5/5** The forum encouraged equity and diversity

Throughout the project, members offered suggestions for ways Icon Water could better engage with their networks. These suggestions either led to one-on-one briefings with member groups or to new contacts for the program to reach out to.

At the beginning of the program, the forum's feedback on the open community survey was adopted; language around age groups was changed and the ordering of some questions was reconsidered.

A forum member attended the deliberative forum on behalf of the group to ensure transparency and to report back to the group. They:

- noted that they appreciated the opportunity to be involved and was pleasantly surprised by the diversity of participants.
- noted that workshops did not include a lot of debate and that the next steps could be to hold more focussed discussions or debate on the delivery of the identified prioritised investment areas.
- recommended that reporting on the process be as transparent as possible, including where views and opinions shifted.

"It was a good learning process (the deliberative forums) along the way"

"Great to have scenarios to help get an idea of impacts of different choices among different households and businesses"

"[The] diversity of people that you got to engage in the process (the deliberative deep-dive forums) and the level of engagement people had was pleasantly surprising"

ACT Community Councils

Similarly to the Customer Advocacy Forum, Community Council participants were asked what they thought of the program and how Icon Water could better engage with their community. Overall feedback on the engagement program and presentation was positive. Suggestions included:

- offering pop-up venues (noting this activity could not be completed in ACT lockdown).
- the further use of social media.
- mentioning the engagement program in community publications.

"Important feedback piece"

"Very interesting talk and presentation"

"This piece will give people an opportunity to feedback on"

"Interesting to hear the issues"

Water Expert Panel

Members of the panel who completed the evaluation survey noted it was easy to participate in and contribute to the meeting, including using the interactive polling tools. At the conclusion of the meeting, participants thanked the Icon Water team for reconvening the group. Similar to the Customer Advocacy Forum, it was recommended that focussed discussions or debate on the delivery of the identified prioritised investment areas as a next step.

"While it is appreciated that the questions needed to be the same as those used with other forums, in some ways they were 'Dorothy dixers' for (the) Expert Panel. The workshop might have been improved by using the same questions but then having follow up questions that delved more into each of the topics"

The deliberative deep-dive process

Following **Stage 2 and 3**, participants were requested to provide feedback on the content, presenters and facilitators, and the workshop set-up.

- 12 participants from the first Stage 2 workshop who completed the form gave an average rating of 7 out of 10.
- 13 participants from the second Stage 2 workshop gave an average rating of 8 out of 10.

Participants' feedback in response to the open-response questions from both Stage 2 workshops was:

- The sessions were well organised and well facilitated.
- Presentations and discussions were interesting and informative.
- There was a lot of content and detail to cover in the allocated time. A longer workshop would have been beneficial to help participants absorb the information and not feel rushed in the breakout discussions.

- Some topics lacked the level of detail needed for participants to discuss [the topic] thoroughly. Some saw inconsistencies in information between topics and felt some topics were not being covered completely.
- Alternatively, some topics, including the discussion on tariffs, presented significant detail and several price options which meant some participants felt it was difficult to consider and absorb all the information and assume a position.

At the conclusion of Stage 3, participants were asked to share final comments. Most took this as an opportunity to provide feedback on the process and to thank Icon Water. Participants primarily praised:

- The opportunity to be involved in what most saw as an important process.
- The ability to interact with and hear from others.
- The detailed information offered by Icon Water describing the initiatives they are involved in beyond water and wastewater supply. Participants would welcome further information on these.

Other feedback included:

- Those who were both residential and business users would have benefited from being able to answer questions from both perspectives.
- Renters felt slightly limited in their participation as non-bill payers.
- Some topics could have benefitted from further information in order for participants to provide feedback or their support.

Feedback comments are shown below.

"Thanks for the opportunity. It was an effective way to engage in such an important process"

"This has been very entertaining, informative and interesting…"

"Thank you for the opportunity to discuss and put our views and thoughts out there. It is so appreciative to know that the organisation so big, loves to know what its consumers think its plan should be and how/where their interests are vested so the organisation can pursue if feasible"

"Thank you for allowing me to participate and its been really wonderful expanding my knowledge"

"Follow advice"

"This has been a really informative and interesting process. I found that during the process I changed my mind on a few things, once I heard some of the arguments from others in the group"

"Thanks for the opportunity to engage in this process. There was a lot to cover (all important) and think about, and definitely some areas where I'd still need further information to provide more definitive responses as to preferences and priorities and willingness to pay"

The quantitative customer survey

At the end of the survey, 2,645 survey participants were asked for any further feedback they wanted to provide on the survey and/or the topics covered:

- 87% of participants provided no further comment
- 4% of participants provided positive feedback about Icon Water and/or about the survey
- 1% of participants provided negative feedback about Icon Water and/or about the survey
- 8% of participants provided other comments, including feedback on bills and affordability (saying bills are high/unaffordable) and saying that initiatives such as digital meters, water conservation measures (such as more infrastructure and community education) and recycling are a good ideas.

6.2 Project Evaluation – *how did we do?*

There were number of engagement objectives and principles for the Project, including Framework principles established by the International Association for Public Participation (IAP2) framework described in Section 2.

With each activity, the engagement team worked to ensure how, when, what they were communicating satisfied best practice engagement principles and met Icon Water's Price Reset objectives, in Figure 6.2.1 below.

Figure 6.2.1 Evaluation criteria established for Icon Water and the engagement project

Some lessons learnt.

- Strive for accessible engagement tools

Following online forums and discussions, a small number of participants felt that the activities were sometimes difficult to access or follow. The accessibility of online tools is an important consideration, particularly as hybrid engagement (online and face-to-face) will be the new normal practice in a post-pandemic context. The team examined tools for interactivity closely and user experiences.

- Allow as much time as possible for discussion

For some, it was felt the time allotted for discussion and activities across forums was not enough to discuss the complexity of the issues. Holding an additional opportunity for debate of the key issues was a suggestion offered.

- Provide a diversity of activities

To maintain people's interest and focus levels, particularly in longer deliberative processes, a greater mix of participant activities would have been welcomed.

An explanation of how this project satisfied each objective follows.

- Engage in a meaningful way

Engagement sought to consistently provide relevant and tailored information across each customer, stakeholder and community group. This included:

- members of Icon Water's technical team in extensive discussions considering community issues and questions, levels of topic understanding, and previous engagements. This included clear explanation of the decisions that were being considered for the next price review period and those where Icon Water was only seeking a gauge on sentiment, for possible consideration in the following price review period.
- offering one-on-one meetings with groups and individuals
- tailored presentations to a wide range of groups
- operating as flexibly as possible to ensure no one was excluded from the process.

Engagement techniques included a range of interactive tools so that community and stakeholders felt they had an appropriate opportunity for input but to also help maintain people's involvement in an online setting.

- Have informed, timely and transparent conversations

The engagement team and Icon Water were committed to regular and flexible engagement over the course of this project. Customer, stakeholder and community groups were proactively reached out to, and many were offered options on how they could participate in this project. It was important to capture as many perspectives as possible, so a timely and flexible approach was required.

Icon Water expanded on the topics as questions arose or price points were debated by participants. Icon Water responded to these deliberations with the reframing of information or coming back to the participants with clarifying information (for example the Customer Advocacy Forum, Deliberative Deep Dive).

It was communicated in all conversations how the feedback was going to be collated and used by Icon Water. Icon Water has committed to releasing this report and providing transparency about its findings.

- Use insights to inform decisions

Insights gathered throughout the project at times resulted in changes or additions to the engagement. This was often the case when stakeholders would suggest other communication channels or people to speak to. Such insights were valuable and resulted in a more robust discussion.

Icon Water was committed to seeking and capturing the views representative of the whole ACT community through this project to inform their 2023-28 Price Proposal. This report clearly outlines each group spoken to and their individual and collective priorities for the financial investment and strategy decisions presented to them, including vulnerable groups.

This report provides Icon Water with an accurate and reflective foundation on which to develop the Price Proposal.

In addition to meeting Icon Water's Price Reset objectives, it was critical that the engagement program also meet the objectives of the Independent Competition Regulatory Commission, particularly to *increase community awareness and understanding of issues related to the ACT water business.*

Feedback received from both customers and stakeholders often included comments and praise for the level of information presented, with many keen to understand more about how their water and wastewater is supplied to them and how this service is charged.

Participants saw a stronger role for Icon Water as an educator and were pleasantly surprised to learn about the varying aspects of Icon Water's business that related to managing water and wastewater sustainably for the future.

We achieved the overarching objective – the community and customers walked in Icon Water's shoes and reached conclusions about decisions for the future.

Appendices

Appendix A - Flyer

We want to hear from you

Icon Water is Canberra's supplier of essential water and wastewater (sewerage) services; proudly serving our community for over 100 years.

Help us understand what you need, value, and expect from us. Do you have suggestions about how we could improve our services for the community? ***Let's talk!***

Your input will help shape the future of our water and wastewater services.

Tell us your ideas, we will be listening closely.

Stay informed and be involved

Scan the QR code to access our website and fill our short survey.

There will be plenty of opportunities this year to get involved and have your say - we want to talk with you!

1. **Take our survey** - it's five short questions and a little about you. You can access the survey at our website below
2. **Check out our socials** - we'll be posting information and seeking your input
3. **Visit us at a community event** - the event dates will be posted on our website

Visit the channels below to get in touch:

- LetsTalk.IconWater.com.au
- Facebook: iconwatercbr
- Twitter: @iconwater

A bit more about us

Icon Water's vision is to be a valued partner in the community. We work to ensure long-term water security, allowing us to support the growing Capital region. We also manage Canberra's wastewater to maintain a clean and healthy community.

Our core purpose is to sustain and enhance quality of life while protecting our environment for the generations to come.

Appendix B - EDM

As your local water and wastewater (sewerage) service provider, **we want to hear directly from you** about how we can improve our services in your area.

We have started a new initiative called Let's Talk Water and Wastewater. This is an online community where Canberrans can share what they need, value, and expect from us and provide feedback on a range of Icon Water projects.

We are currently seeking feedback and input on our new price proposal for the 2023 to 2028 period, for consideration by the Independent Competition and Regulatory Commission.

The price proposal will inform not just prices, but the priorities and investments required for the next five years to deliver quality and affordable water and wastewater services to the ACT community.

So, let's talk!

If you want to have a say, head to letstalk.iconwater.com.au and take our survey. You'll not only be in the running for a $200 Eftpos gift card, but your input will help ensure our business strategies reflect the priorities and expectations of the whole ACT community.

Take the survey here

Kind regards,
The Icon Water Let's Talk Water and Wastewater Team

Appendix C – Open Community Survey

Let's Talk
WATER AND WASTEWATER

ICON WATER COMMUNITY SURVEY 2021

Icon Water is the ACT's supplier of essential water and wastewater (sewerage) services; proudly serving the community for over 100 years.

We review our prices every five years and are currently in the process of developing our new price proposal for the 2023 to 2028 period.

Your input is critical to ensure our proposal reflects the views of all the ACT community.

Thank you for taking the time to complete this survey! It's five quick questions and a little bit about you. You won't be identified in any way.

We're running a prize draw for anyone who completes a survey.

Q1: On a scale of 0 to 10, where 0 is very dissatisfied and 10 is very satisfied, how satisfied do you feel with the current water and wastewater services provided in your area?

0	1	2	3	4	5	6	7	8	9	10	Don't know
Very dissatisfied										*Very satisfied*	

Please tell us why you gave the above rating:

icon
WATER

Let's Talk WATER AND WASTEWATER

Q2: From what you know, have heard or suspect, do you feel that Icon Water's current customer service meets, exceeds, or falls below your expectations?

Exceeds Meets Falls below Don't know

Please tell us why you think that:

Q3: How do you feel about the idea of higher bill amounts to individual customers if it meant higher quality Icon Water services and new initiatives that could benefit customers and the ACT community?

For example, Icon Water investing in technology that could help you to more closely track your water usage and identify leaks, make it easier for you to reach us, increase sustainability, or to improve service delivery more broadly?

Very positive Fairly positive Neutral Fairly negative Very negative

Please tell us what sorts of services you would like to see Icon Water deliver:

icon WATER

Let's Talk
WATER AND WASTEWATER

Q4: How do you feel about the following potential ways Icon Water could improve how it provides water and wastewater services? Please rate how you feel about each.

[SELECT ONE OPTION FOR EACH STATEMENT]

	Very positive	**Fairly positive**	**Neutral**	**Fairly negative**	**Very negative**
Investing in measures to speed Icon Water's transition to net zero emissions - ahead of the ACT's 2045 target.	1	2	3	4	5
Investing in treatment processes and infrastructure to secure future drinking water supply options (e.g. groundwater, purified recycled water).	1	2	3	4	5
Investing in new infrastructure to enable recycled water to be used to water our green spaces.	1	2	3	4	5
Planning for droughts by imposing water restrictions earlier (potentially reducing the severity of later water restrictions).	1	2	3	4	5
Rolling out digital meters to Canberra homes and businesses to provide people with their water usage daily.	1	2	3	4	5
Investing in innovations in water supply, wastewater treatment, resource recovery or greenhouse gas reduction (through research and development).	1	2	3	4	5
Investing in customer service and website improvements to make it easier to raise and track connection enquires and to see where outages are that may affect your area.	1	2	3	4	5
Investing in upgrades that aim to reduce the duration, frequency and impacts of future water and wastewater faults and maintenance.	1	2	3	4	5

icon
WATER

Let's Talk WATER AND WASTEWATER

Q5: Icon Water's vision is to be a valued partner in our community. To help achieve this vision, we are exploring ways we could improve liveability in the ACT.

For example, we could invest in improving how some of our infrastructure looks, river health, community water literacy, or preserving our heritage assets.

How big a role do you think Icon Water should have in improving liveability in the ACT?

No role Minimal role Somewhat of a role Significant role

What are some of your ideas of how Icon Water could help improve life here in Canberra?

icon WATER

Let's Talk
WATER AND WASTEWATER

About you

Q6: What is your gender? [select the one that best applies to you]

Male | Female | Non-binary | Other | Prefer not to say

Q7: What is your age group?

I'm under 30 | I'm aged 60+ | I'm aged in between! | I'd prefer not to say

Q8: Where do you live? Please provide your postcode here:

_____

Q9: Do you speak a language other than English at home with friends or family? IF YES – what do you speak?

_____

Q10: And, would you describe yourself as having Aboriginal or Torres Strait Islander heritage?

Yes | No | Prefer not to say

THANK YOU!

PLEASE TEAR HERE

Have your chance to win a prize!

To go into the draw to win an $80 Eftpos voucher, leave your preferred contact details below. The winner will be announced once the survey closes in October.

_____

icon WATER

Appendix D – Quantitative Customer Survey

Icon Water – Contingent Valuation Survey

Residential Questionnaire (NGR 2103011) – FINAL VERSION

Introduction

Thank you very much for your interest in this important survey for Icon Water. Please give your feedback openly and honestly, and be assured it will be treated confidentially.

It should take you up to 20 minutes to complete, depending on your responses.

Everyone submitting a completed survey will have the opportunity to enter a prize draw to win one prize from a total prize pool of $2,000:

- ***One prize of $500,***
- ***One of two prizes of $200,***
- ***One of four prizes of $150, or***
- ***One of five prizes of $100.***

Use your mouse to 'click' the relevant circles or boxes and mark your selections. Some questions require you to type your answers in the space provided.

Please remember:

- We are conducting the survey with a random sample of people across Canberra. The survey is undertaken in accordance with the Privacy Act, which means we must keep your responses strictly confidential.
- None of the responses you give will ever be linked to you as an individual. They are used for statistical purposes only.
- To see the privacy statement, click the link at the bottom of the screen.
- If you need to return to the survey later, click the 'Next' button and close the webpage. The next time you click on the invite link, it will automatically take you back to the question you were up to.

Screening / qualifier questions

Before we begin, please note that this survey contains a particular set of questions that could be potentially difficult to complete on a phone.

If you are using your phone and can do it on a computer or tablet instead, please close this link and re-open it on your computer/tablet.

First, a few questions about you to make sure we're hearing from a good mix of people.

S1. Thinking about a typical year, how many months do you live full-time in the ACT?

S2. We need a mix of participants in this survey. Do you or does anyone in your immediate family work in any of the following industries or sectors?

	Select all that apply
Advertising, marketing, PR, media or journalism	☐
Market or social research	☐
Water industry/ in a technical role that relates to water	☐
Accommodation or hospitality	☐
Energy sector (e.g. generation, transmission, retail)	☐
Finance, banking or insurance	☐
Education or training (e.g. schools, TAFE, universities)	☐
None of the above	☐

S3. Who in your household usually pays the water bill?

I do	☐
I share this jointly with someone else	☐
Someone else pays it	☐
We don't get a water bill	☐

S4. What is your postcode?

S5. What suburb do you live in?

S6. What is your gender?

Male	☐
Female	☐
Non-binary, or another descriptor	☐
Prefer not to answer	☐

S7. Which of the following age groups are you in?

Under 18 years	☐
18-24 years	☐
25-34 years	☐
35-44 years	☐
45-54 years	☐
55-64 years	☐
65-74 years	☐
75+ years	☐
Prefer not to answer	☐

Knowledge and attitudes towards water

Great, now let's get on to the main survey. Today we will be talking about water and wastewater related services.

To start…

Q1. How much do you feel you know about the topic of water?

Know nothing at all										Know a lot	Don't know
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q2. You may be aware that your water bill goes towards funding drinking water and wastewater-related services for the ACT. Some of the investments, processes and activities undertaken as part of these services have the potential to improve or provide benefits to the wider community.

Reflecting on this, in principle, would you support an increased or decreased level of spending to invest in each of the following?

a) Rolling out digital meters to homes and businesses across Canberra to enable customers to monitor their water usage daily if they wish, enabling quick identification of water wastage and hidden leaks.

b) Investing in new infrastructure to enable recycled water to be used to water green spaces, such as parks and ovals.

c) Investing in projects to explore the feasibility of different options to increase Canberra's future water security (e.g. capture, reuse and recycling of water, new sources etc).

d) Investing in further community education and support to increase the water conservation behaviours of Canberrans.

e) Investing in driving targeted innovation in water supply, wastewater treatment, resource recovery and greenhouse gas reduction (through research and development).

f) Imposing temporary water restrictions earlier than currently to help conserve water in dry spells (potentially reducing the severity of later restrictions). This will incur costs for community education and enforcement activities.

g) Investing in measures to speed up transition to net zero emissions within the water industry ahead of the ACT government's 2045 target.

h) Expanding ability to recover resources from waste, for example, to process wastewater and green waste together to generate energy and soil improvement products.

i) Investing in maintenance upgrades that aim to reduce the frequency and impacts of future water supply disruptions, interruptions and bursts.

j) Investing in maintenance upgrades that aim to reduce the frequency of future sewer faults, blockages and overflows.

k) Investing in customer service improvements to make it easier to raise and track enquires and applications

l) Investing in website improvements to enable real-time mapping of outages across Canberra.

m) Investing in projects that improve community liveability, such as painting murals on Icon Water assets like storage tanks, pumping stations or water treatment buildings, and increasing access to open space on and around Icon Water assets, such as on top of underground storages and alongside pipes.

	Select for each statement
Much more spending	☐
Slightly more spending	☐
No change	☐
Slightly less spending	☐
Much less spending	☐
Don't know	☐

Q3. In the ACT, water supply and wastewater services and assets are managed and provided by Icon Water.

Before today, how would you rate your knowledge of Icon Water and what it does?

Never heard of it before today										I'm an expert	Don't know
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q4. Based on what you know, have heard, or suspect, how do you feel about Icon Water?

Extremely negative										Extremely positive	Don't know
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5. **ASK ONLY IF Q4=0-10**

Why did you rate your sentiment towards Icon Water as [INSERT Q4 RATING] out of 10?

Q6. As part of its work, Icon Water undertakes a number of services, activities and initiatives.

To what extent were you aware of Icon Water's work in each of the following areas?

a) Managing Canberra's network of dams, water treatment plants, reservoirs, water pumping stations, pipes and other related infrastructure to provide drinking water

b) Managing Canberra's network of sewage treatment plans, sewage pumping stations, pipes and other related infrastructure to provide wastewater services

c) Supporting the growth and economic development of Canberra through planning, construction and development approval processes

d) Delivering a K-12 education program on the topics of the water cycle, protecting waterways and environmental studies

e) Delivering general community education programs on Canberra's water and sewerage system, including guided tours of key sites

f) Sponsoring a range of local community, cultural, education, sporting and fundraising activities across the ACT

g) Collaborating with local businesses and the water industry on innovation, environmental and sustainability research and development initiatives

Not aware at all										Fully aware	Don't know
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q7. Have you ever needed to contact Icon Water to raise an enquiry or resolve any issues with your water supply or wastewater services?

Yes	☐
No	☐
Not sure / can't remember	☐

Q8. **ASK ONLY IF Q7=1 ('YES')**

How satisfied were you with Icon Water's responsiveness in responding to and resolving the enquiry or issue?

Not satisfied at all										Extremely satisfied	Don't know
0	1	2	3	4	5	6	7	8	9	10	
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q9. **ASK ONLY IF Q8=0-10**

Why did you rate Icon Water's responsiveness as [INSERT Q8 RATING] out of 10? Please be as detailed as you can in your answer in terms of their approach, timeliness and the extent to which you were kept in the loop.

Q10. How would you most prefer to be able to contact Icon Water for the following topics?

	For urgent issues such as a water main burst, supply disruption or wastewater pipe overflow	For less urgent issues such as a water leak, water colour/taste or water pressure issue	For a billing or payment enquiry	For a more general enquiry or application
	Select all that apply for each topic			
Telephone	☐	☐	☐	☐
Online webform	☐	☐	☐	☐
Email	☐	☐	☐	☐
Social media – e.g. on Icon Water's Facebook or Instagram page	☐	☐	☐	☐
Facebook Messenger or WhatsApp message	☐	☐	☐	☐
Webchat on the Icon Water website	☐	☐	☐	☐
None of these options	☐	☐	☐	☐

Contingent Valuation exercise

You may be aware that utilities such as electricity and water companies need to put a submission to their pricing regulator every few years.

These submissions outline the types of projects and initiatives the organisation wants to invest in over the next 5-year period, and what it is proposing to charge customers over the same period to achieve its objectives.

Icon Water is currently conducting a program of research and engagement with residents, businesses, and organisations across the ACT to put together its next pricing submission for the period 2023-2028.

As someone who lives in the ACT and pays an Icon Water bill, you are an important stakeholder in the process. Icon Water would like to hear from you about what projects and initiatives you think it should and shouldn't be investing in.

Icon Water is considering increased investment in three program areas:

1. ***Maintenance of the water supply system.*** *The pipes that supply water degrade over time or can burst. This can potentially cause a disruption to the water supply of properties.*

   Icon Water attends the fault within one hour to start repairs and typically a water supply disruption is resolved within 6 hours. However, customers within the vicinity of an unplanned disruption will be without drinking water for this time and may experience discoloured water coming through their taps for a few hours after the disruption has been rectified. Severely impacted properties may experience multiple water supply disruptions and may experience flooding and property damage.

   Based on the characteristics of the soil containing the water pipes, 8,000 properties (of a total of 190,000 properties) will experience a severe water supply disruption every five years over the next 15 years.

To help decrease the risk of a water supply disruption occurring, Icon Water currently undertakes a planned program of maintenance of the water supply network. This involves repair and replacement of pipes in parts of the network that are potentially at a higher-than-average risk of water supply disruption.

If Icon Water were to double its maintenance activities across the water supply network, it would help severely impacted customers (8,000 properties) achieve a water supply disruption frequency of once every 10 years (instead of once every 5 years).

2. ***Maintenance of the wastewater system.*** *The pipes that take wastewater away from your property can degrade over time or can become blocked causing a fault. A wastewater fault can potentially cause an overflow of sewage from manholes and waste openings in your yard and around your property. In severe events it may sometimes overflow inside your property from your toilet or floor wastes.*

   Icon Water will attend to your fault within one hour and typically a wastewater fault is resolved within 6 hours. However, a sewer overflow in the vicinity of your property can cause damage to your property and its contents.

   Based on the characteristics of the soil containing the sewer pipes, 16,000 properties (out of a total of 190,000 properties) will experience a severe wastewater blockage or overflow every five years over the next 15 years.

   To help decrease the risk of a sewer fault occurring, Icon Water currently undertakes a planned program of maintenance of the wastewater network. This involves the inspection, cleaning, repair, and replacement of pipes in parts of the network that are potentially at a higher-than-average risk of blockage or overflow.

   If Icon Water were to double its maintenance and renewal activities across the wastewater network, it would help severely impacted customers (16,000 properties) achieve a wastewater blockage or overflow frequency of once every 10 years (instead of once every 5 years).

3. ***Digital water meters.*** *Your water use is currently measured by a mechanical meter.*

   Mechanical meters need to be read in person and if the meter reader cannot access the meter, the reading is estimated, potentially leading to an inaccurate bill, which will be corrected once the meter can be read. The meters are typically read once a quarter (every three months) which means that leaks and accidental overuse of water can go unnoticed for an extended period (three months or longer) because the leak may not be visible and may be absorbed underground.

   If you have an unidentified water leak, the first you may know about it is when you receive your quarterly water bill. The water bill after an unidentified water leak is about $1,500 on average but can rise to as much as $8,000, or even $15,000 in a few cases. Icon Water does work with impacted customers to reduce their bill shock, but significant out of pocket expenses do occur.

   In the last financial year, unidentified leaks at residential customer properties accounted for 65,200kL of water lost from the network (the equivalent of a years' worth of water use by 320 properties).

   Currently, each year 150 to 200 residential properties (of a total of 190,000 properties) experience an unidentified leak. This means the chances of your property experiencing a leak in any given year is 0.1%.

To resolve issues with mechanical meters and to provide benefits such as eliminating water usage estimations, bill shock and having water consumption information easily accessible in real-time, Icon Water is proposing upgrading your water meter to a digital meter.

Digital meters would automatically record water use several times a day and send this information to Icon Water and to you - the customer - directly. This enables you to monitor water use at your property more closely so that you can put measures in place to reduce your consumption and avoid bill shock. It also enables you to quickly identify leaks. It is important to note that the likelihood of you experiencing a leak in any given year will not change (i.e. it will remain at 0.1%). Receiving alerts from the digital meter will mean you can identify and fix the leak faster and minimise the water wastage.

Digital meters across the water supply network will help Icon Water reduce water loss from the system through early detection of unidentified leaks.

Each of these increased investments would require you to pay extra in your water bill for the 2023-2028 period. Each investment would only proceed if more than 50% of households are willing to pay for it. If the investments are made, the extra payment for the next 5 years would be compulsory for all households.

When thinking about whether you are in favour of each investment, keep in mind your available income and all the other things you have to spend money on. It is also possible that other utility and environmental projects may one day cost you additional money through increases in rates, levies, and taxes.

According to your suburb, you live in a property that is at [LOW/HIGH] risk of being severely impacted by water supply disruptions and at [**LOW/HIGH**] risk of being severely impacted by a wastewater blockage or overflow.

Please answer yes or no for each of the following three questions

Select one answer for each option.	Yes	No
Q11. **SHOW ONLY TO LOW RISK FOR WATER SUPPLY:** *Would you be willing to pay an extra **(rotate $5, $10, $20, $50, $100)** per year on your water rates for the next 5 years to help severely impacted customers (8,000 properties) reduce their water supply disruption frequency from once every 5 years to once every 10 years?* **SHOW ONLY TO HIGH RISK FOR WATER SUPPLY:** *Would you be willing to pay an extra (**rotate $5, $10, $20, $50, $100)** per year on your water rates for the next 5 years to reduce the water supply disruption frequency at your property (and other severely impacted properties – 8,000 in total) from once every 5 years to once every 10 years?*	☐	☐
Q12. **SHOW ONLY TO LOW RISK FOR WASTEWATER:** *Would you be willing to pay an extra **(rotate $5, $10, $20, $50, $100)** per year on your water rates for the next 5 years to help severely impacted customers (16,000 properties) reduce their wastewater blockage or overflow frequency from once every 5 years to once every 10 years?* **SHOW ONLY TO HIGH RISK FOR WASTEWATER:** *Would you be willing to pay an extra **(rotate $5, $10, $20, $50, $100)** per year on your water rates for the next 5 years to reduce wastewater blockages or overflow*	☐	☐

frequency at your property (and other severely impacted properties – 16,000 in total) from once every 5 years to once every 10 years?		
Q13. *Would you be willing to pay an extra **(rotate $5, $10, $20, $50, $100)** per year on your water rates for the next 5 years to have a digital water meter installed at your property?*	☐	☐

In answering the above questions, you have indicated you are willing to pay an extra **$[Total from the participant's 'yes 'answers to the 3 scenario price points tested]** a year for the next 5 years on your water bill.

Q14. Would you like to review your answers?

Demographics

Finally, a few questions about you to help us understand the views of different people within the community.

D1. What sort of home do you currently live in?

A larger house (e.g. with a garden and/or swimming pool)	☐
A smaller house (e.g. terrace, townhouse, semi-detached)	☐
An apartment or unit	☐
Other property (please specify)	☐
Prefer not to say	☐

D2. Which of the following best describes your current living situation?

I own my home outright	☐
I own my home with a mortgage	☐
I rent my home	☐
I live in a share house	☐
I live at home with my parents	☐
Other (please specify)	☐
Prefer not to say	☐

D3. How many people typically live in your household (including you)?

	Drop-down selection
Adults	1, 2, 3, 4, 5, 6, More than 6
Children aged 0-5	1, 2, 3, 4, 5, 6, More than 6
Children aged 6-11	1, 2, 3, 4, 5, 6, More than 6
Children aged 12-17	1, 2, 3, 4, 5, 6, More than 6

SECNewgate Research

D4. Which of the following apply to you?

	Yes	No
I have at least one parent born overseas	☐	☐
I speak a language other than English with friends or family	☐	☐
I identify as Aboriginal or Torres Strait Islander	☐	☐
I have a house with a lawn	☐	☐
I have a house with a swimming pool	☐	☐
I have a university degree	☐	☐

D5. To the best of your knowledge, which range does your quarterly water and wastewater bill typically fall into?

$200 or less	☐
$201 - $300	☐
$301 - $400	☐
$401 - $500	☐
$501 - $600	☐
$601 - $700	☐
$701 - $800	☐
$801 - $900	☐
$551 - $600	☐
$901 - $1,000	☐
$1,001 or more	☐
Don't know	☐

D6. What is your current employment status?

Employed full-time (or equivalent hours)	☐
Employed part-time (or equivalent hours)	☐
Employed casually	☐
Self-employed / business owner	☐
Unemployed / looking for work	☐
Home duties / homemaker	☐
Studying full time	☐
Retired	☐
Other situation (please specify)	☐
Prefer not to say	☐

D7. What is your approximate annual household income before tax, including any pensions or other government sources?

If you live in a share house, please just count your own income.

No income	☐
Under $60,000	☐
$60,000 - $79.999	☐
$80,000 - $99.999	☐
$100,000 - $119.999	☐
$120,000 - $149.999	☐
$150,000 - $199,999	☐

$200,000 - $249,999	☐
$250,000 - $299,999	☐
$300,000 - $349,999	☐
$350,000+	☐
Prefer not to say	☐

D8. How would you describe the current financial situation of yourself and the immediate family you live with? Would you say you are…?

Having a lot of difficulty covering basic living expenses	☐
Having some difficulty but just making ends meet	☐
Doing okay and making ends meet	☐
Doing well and feeling comfortable	☐
Prefer not to say	☐

Closing

Thank you for taking part in this important study. Our price proposal will be submitted to the regulator in June 2022. If you would like to stay informed about how your feedback has been used and be involved in providing your feedback in future engagement activities go to our Let's Talk Water and Wastewater portal at iconwater.com.au

Please feel free to leave any final comments about this survey here. You may also leave this blank.

Everyone submitting a completed survey will have the opportunity to enter a prize draw to win one prize from a total prize pool of $2,000:

- ***One prize of $500,***
- ***One of two prizes of $200,***
- ***One of four prizes of $150, or***
- ***One of five prizes of $100.***

Please enter your name and email address below to enter the prize draw:

YOUR NAME_____

YOUR EMAIL ADDRESS _____

Your identity will not be linked to the responses you provide.

To submit your survey, please click on the 'SUBMIT' button below.

Appendix E - WTP Analysis from Frontier Economics

frontier economics

Willingness to pay of Icon Water customers

A study prepared in collaboration with Gillespie Economics for SEC Newgate Research | 28 January 2022

Disclaimer

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1 Executive summary

Background

Icon Water is preparing for the Regulated Water and Sewerage Services Prices 2023-28 review by the Independent Competition and Regulatory Commission (ICRC). In preparation for this review, Icon Water is investigating the possibility of additional investment in three areas:

- investment in the water supply system to reduce the risk of supply disruptions to help severely impacted customers (8,000 properties) achieve a water supply disruption frequency of once every 10 years (instead of once every 5 years).
- investment in the wastewater system to reduce the risk of disruptions to wastewater disposal to help severely impacted customers (15,000 properties) achieve a wastewater blockage or overflow frequency of once every 10 years (instead of once every 5 years).
- investment in digital water meters to enable households to monitor their water use more closely so that they can put measures in place to reduce consumption and identify leaks more quickly and so avoid bill shock.

Icon Water engaged SEC Newgate Research to undertake a study to estimate customers' willingness to pay for these three investments to inform their submission to the ICRC. SEC Newgate Research engaged Frontier Economics to assist with the study. This study was carried out in collaboration with Dr Rob Gillespie, an expert in carrying our willingness to pay studies.

Willingness to pay (WTP) studies are used by regulators and businesses to estimate the value of non-market goods or services, for which there is no active market to determine a market price that customers would be willing to pay for the good or service.

The present study utilised the contingent valuation approach to elicit respondents' WTP for the investments. The questionnaire was designed so that the WTP estimates can be interpreted as the WTP either for a single investment, or combined across investments.

When undertaking economic welfare analysis of potential investments, the expected value of WTP, i.e. the mean or average WTP, is the appropriate measure to use. However, in the present context, estimates of mean WTP are extremely sensitive to assumptions made about the WTP of respondents at the higher end of the WTP distribution. An alternative measure of WTP commonly used is the median WTP. The median is the increase in the bill that 50% of customers are willing to pay to fund a program and 50% are not willing to pay. The median is not sensitive to assumptions made about the WTP at the higher end of the WTP distribution; hence, in this study we have used the median WTP.

From a utility's perspective, a more conservative measure of WTP may be appropriate since a proposed program to improve a service may not be considered viable if the bill increase required to fund the program is supported by only 50% of customers. A regulator may also want to be assured that a supermajority of customers are willing to pay for a program to improve a service. Hence we also provide estimates of the bill increases for each investment option that would be supported by 60% and 70% of customers.

Estimation methods

Estimates of the median WTP and the 60th and 70th percentiles on the WTP distribution were obtained using two different approaches: a parametric method and a non-parametric method. Parametric methods involve more assumptions about the distribution of WTP values across respondents, and hence may be more prone to misspecification error. Non-parametric methods have the advantage of being distribution free, but do not allow statistical testing of hypotheses, e.g. whether the difference in WTP between two sub-groups of customers is statistically significant.

The parametric estimates of WTP were obtained using the log-logistic model; the non-parametric estimates were obtained using the Turnbull method. Both approaches are commonly used in contingent valuation studies to estimate WTP.

The sample

The sample used in the analysis consists of 2,645 respondents. The survey respondents were stratified by gender and age group, as well as by risk group. The risk groups separate customers on basis of whether they live in a high or low risk area for disruptions to the water supply, and whether they live in a high or low risk area for disruptions to wastewater disposal. It is likely that customers who are at a higher risk of having their water or wastewater services interrupted are willing to pay more to improve reliability for that service.

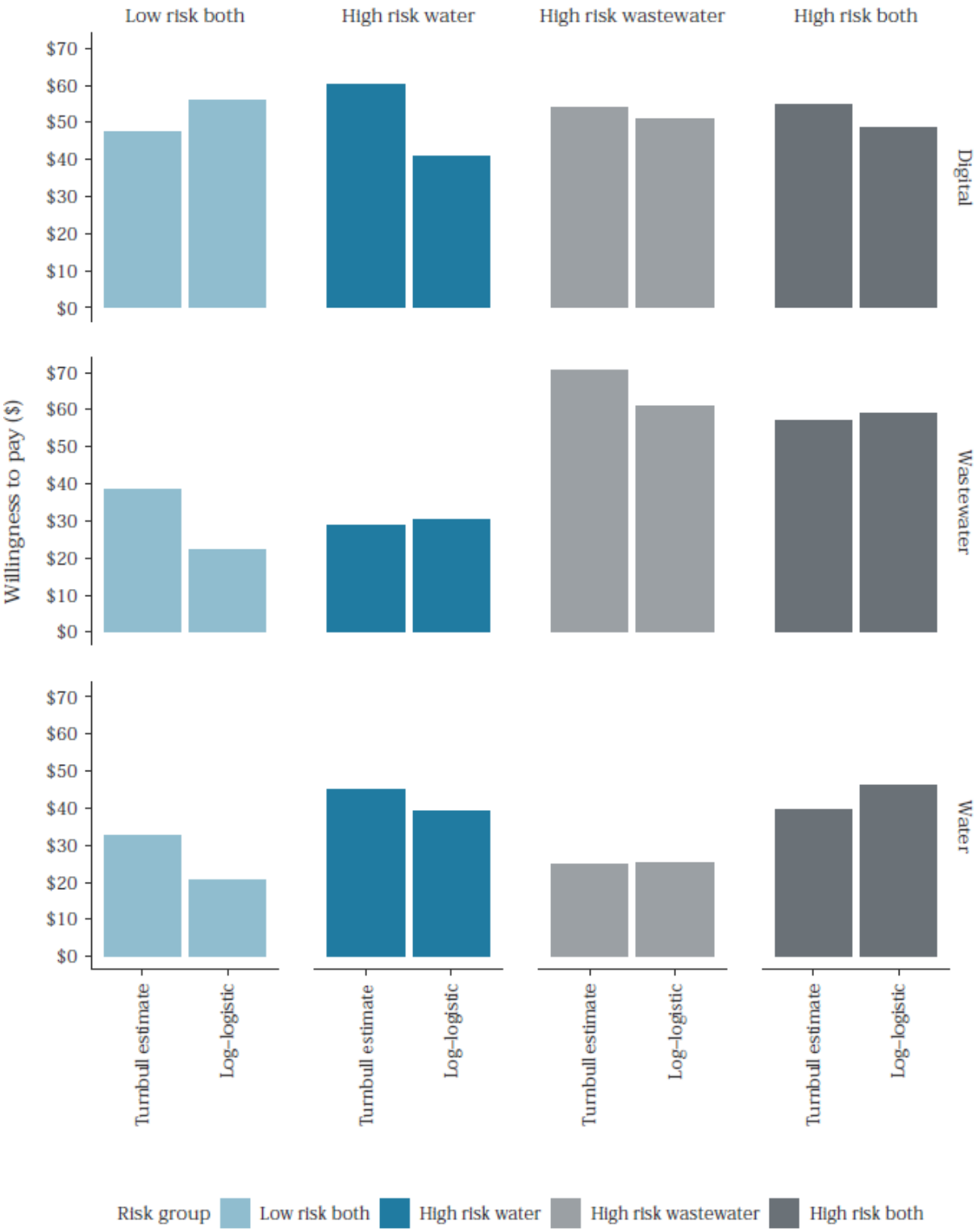
Icon Water's customers were assigned to four risk groups:

- low risk for both water supply and wastewater (Low risk both)
- high risk water for water supply, but low risk for wastewater (High risk water)
- high risk for wastewater, but low risk for water supply (High risk wastewater), and
- high risk for both water supply and wastewater (High risk both).

Results and conclusion

The estimates of median WTP by risk group are shown in **Figure 1** for each of the two estimation methods. As expected, people who are at a higher risk of a service interruption are willing to pay more to improve that service. In particular, people who are in the "High risk wastewater" and "High risk both" groups are willing to pay more for improved wastewater services than the "Low risk both" and "High risk water" groups. Similarly, people who are in the "High risk water" and "High risk both" groups are willing to pay more for improved water services than the "Low risk both" and "High risk wastewater" groups. These differences are statistically significant. By contrast, the WTP estimates for digital meters are much closer in value across risk groups, and the differences are not statistically significant.

Figure 1: Median WTP estimates by risk group

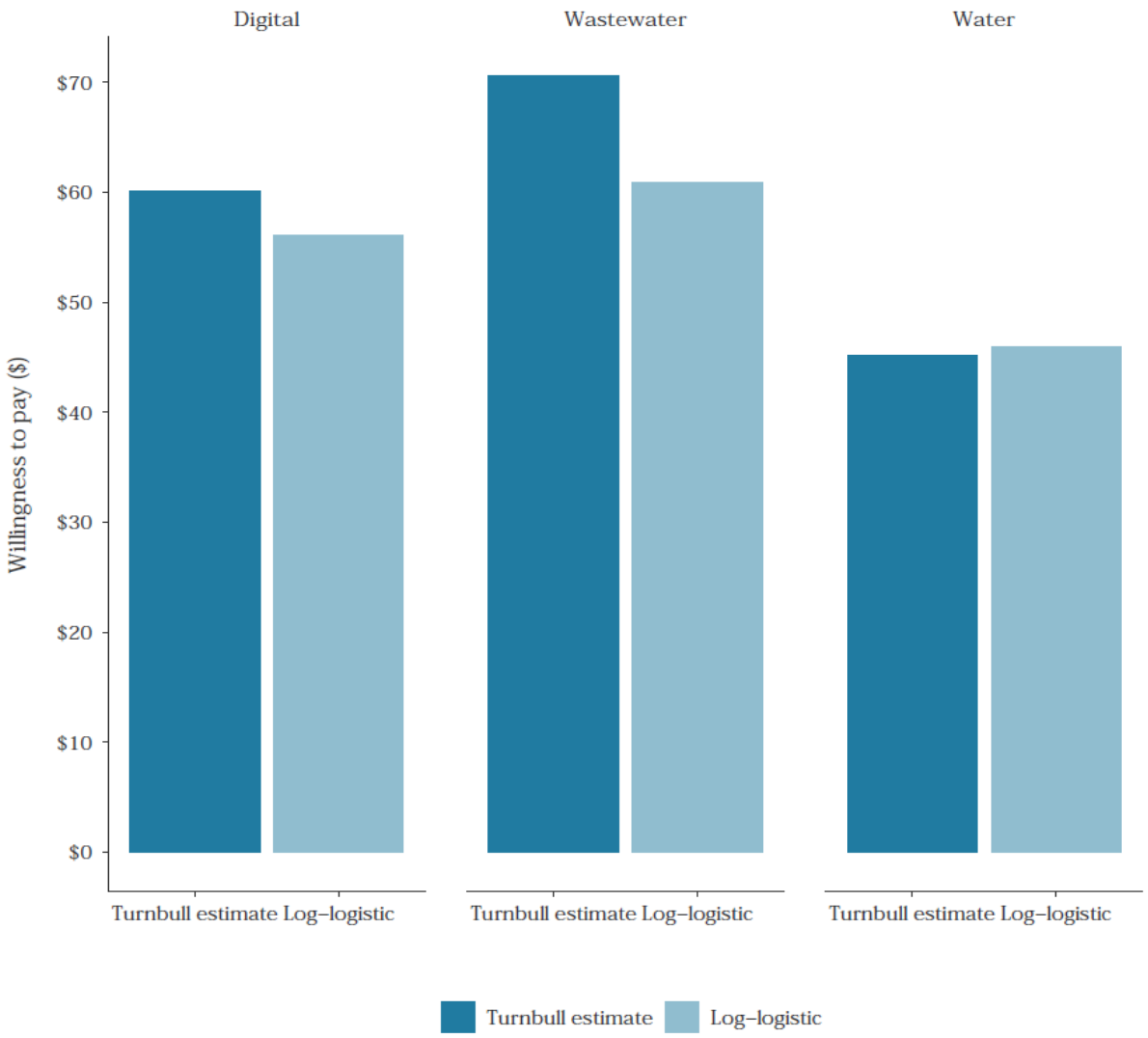


Source: Frontier Economics

The median WTP estimates for the entire population of customers are shown in **Figure 2**. For digital meters, the estimates of the median WTP produced by the parametric method and the non-parametric Turnbull method are very close at $53 and $50, respectively, with an average of

$51. This is the highest WTP for any of the investment options. Inspection of **Figure 1** shows that, for the digital meter investment option, the average WTP across the parametric and the non-parametric methods is almost constant across the four risk groups, ranging from $50 to $53.

Figure 2: Median WTP estimates for the total population of customers



Source: Frontier Economics

For the wastewater and water investment options, **Figure 2** shows that there are larger differences between the estimation methods than for the digital meter investment option. However, the results in **Figure 1** show that these differences between the estimation methods are driven largely by differences in the estimates for the median WTP in the "Low risk both" risk group which has low risk of disruptions for both water supply and wastewater removal. For the other risk groups, the estimates produced by the two methods are much closer, and they are also consistent with prior expectations.

Specifically, for the wastewater investment option, the estimates of WTP in the two risk groups with a high risk of wastewater disruptions have much higher WTP for investment to reduce that risk than the other two risk groups; approximately $60 for the high risk groups versus approximately $30 for the low risk groups. Statistical tests using the parametric model indicate

that the difference in WTP between the high risk groups and low risk groups is highly statistically significant.

For the water supply investment option, the WTP is somewhat lower, with the two groups with a high risk of a disruption willing to pay about $42 for investment to reduce the risk, while the two groups with a low risk of a disruption are willing to pay about $25 to reduce the risk. Statistical tests using the parametric model indicate that the difference in WTP between the high risk groups and low risk groups is highly statistically significant.

From an economic efficiency perspective, it is not sufficient to just demonstrate customer WTP for a program, i.e. that there is a benefit to the community. A program is only justified if all the benefits of that program to the specified community are greater than the costs in present value terms, i.e. that there is an economic surplus. The method used to make this assessment is benefit cost analysis.

When applying these results to assess the viability of an investment option in a benefit cost analysis, it is important to take into account that the customer segment with a low risk for both water and wastewater disruptions is by far the largest segment, comprising 67% of the customer base. While customers at higher risk of disruption have a relatively high WTP to reduce the risk of a disruption compared to customers at a lower risk of such disruptions, differential pricing for utility services by risk category is not a generally accepted practice in Australia. Hence, the estimates of median WTP across risk groups in **Figure 2**, or the estimates of median WTP for the low risk groups in **Figure 1** should be given more weight than the relatively high estimates of WTP for the higher risk groups.The estimated 60th percentile WTP values obtained using the log-logistic model are about half the median WTP estimates. Similarly, the 70th percentile estimates obtained using the log-logistic model are again about half the 60th percentile estimates. This relationship does not hold as closely for the Turnbull method; however, for each investment there is again a large decrease in WTP between the median and 60th percentile, and between the 60th percentile and the 70th percentile.

Table 1 summarises the estimated WTP for the three proposed investment programs at different percentiles, with the median being the 50th percentile. The estimated 60th percentile WTP values obtained using the log-logistic model are about half the median WTP estimates. Similarly, the 70th percentile estimates obtained using the log-logistic model are again about half the 60th percentile estimates. This relationship does not hold as closely for the Turnbull method; however, for each investment there is again a large decrease in WTP between the median and 60th percentile, and between the 60th percentile and the 70th percentile.

Table 1: Estimates of WTP at different percentiles

	Log-logistic			Turnbull		
	70%	60%	50%	70%	60%	50%
Digital	$12.93	$27.01	$53.09	$9.69	$28.02	$49.77
Wastewater	$8.43	$16.09	$29.13	$7.85	$28.90	$43.42
Water	$5.63	$11.99	$24.00	$5.75	$9.79	$34.31

Source: Frontier Economics

2 Background

Icon Water is a water utility business regulated by the Independent Competition and Regulatory Commission (ICRC), and is preparing for the Regulated Water and Sewerage Services Prices 2023-28 review. In preparation for this review, Icon Water engaged SEC Newgate Research to perform a willingness to pay study to inform their submission. SEC Newgate Research engaged Frontier Economics to assist with the study.

2.1 Willingness to pay studies

Willingness to pay (WTP) studies are commonly used to estimate the value of non-market goods or services, for which there is no active market to determine a market price that customers would be willing to pay for the good or service. WTP studies have been used to estimate the value of a vast range of goods and services such as protecting certain environmental areas, cleaning up rivers to make them swimmable, building new road tunnels and estimating the demand for electric or hydrogen vehicles. Estimates of customers' WTP enables the benefit of these goods or services to be included in further analysis, like benefit cost analysis or business case studies.

In WTP studies, the respondent is typically given a description of a good or service and the proposed changes to it, and the questionnaire then elicits the respondents' WTP for such a change. The estimated WTP reflects the respondents' stated preferences which may differ from their real preferences. Care is required in the design of WTP surveys to mitigate any discrepancies between the respondents' stated preferences and revealed preferences. Frontier Economics engaged the services of Dr Rob Gillespie, an expert in conducting WTP studies, to assist in conducting the present study.

The present study investigated the WTP of Icon Water's customers for three different potential investments:

- investment in the water supply system to reduce the risk of supply disruptions i.e. Icon Water doubling its maintenance activities across the water supply network, to help severely impacted customers (8,000 properties) achieve a water supply disruption frequency of once every 10 years (instead of once every 5 years).
- investment in the wastewater system to reduce the risk of disruptions to wastewater disposal i.e. Icon Water doubling its maintenance and renewal activities across the wastewater network, to help severely impacted customers (15,000 properties) achieve a wastewater blockage or overflow frequency of once every 10 years (instead of once every 5 years).
- investment in digital water meters i.e. to enable households to monitor their water use more closely so that they can put measures in place to reduce consumption and identify leaks more quickly and so avoid bill shock.

2.2 Contingent valuation method

Questionnaire design

In the present study, a contingent valuation (CV) approach was used to elicit respondents' WTP for each of the three potential investments. For each investment, each respondent was given a

hypothetical dollar amount by which their annual bill would increase if this investment were to go ahead; the respondent was then asked whether they would be willing to pay that extra amount. This approach, known as single-bounded dichotomous choice, is attractive because it is similar to normal purchase decisions; the respondent is presented with a price associated with the proposed investment and merely has to decide whether to take it or leave it. We opted for the single-bounded approach to minimise the cognitive load on the respondents given that they were asked to provide responses to three investments options rather than just a single investment.

In line with standard practice in CV studies, the hypothetical bill increases ($5, $10, $20, $50, $100 per annum for five years) were varied randomly between respondents and between investments. The price points for the bill increases were determined by SEC Newgate Research following preliminary market research.

The questionnaire was framed in the context of Icon Water making additional investments in three potential program areas. Respondents were asked their WTP for each program area individually, after which they were reminded of their total expressed WTP across all three program areas. Consequently, both WTP for individual programs and total WTP across the three program areas have been elicited.

An important element of the questionnaire design was the inclusion of a provision rule aimed at making the questionnaire consequential from the point of view of the respondent and providing an incentive to reveal their true WTP. The provision rule included in the questionnaire stated:

"Each of these increased investments would require you to pay extra in your water bill for the next 5 years, and each investment would only proceed if more than 50% of households are willing to pay for it."

Estimation methods

There are a number of different approaches to estimate customers' WTP from the responses to the CV questionnaire. These can be broken down into two categories:

- **Parametric methods:** Estimate an appropriate non-linear regression model for the dichotomous "yes" or "no" choices, and then derive average and/or median WTP from the estimated model parameters. One advantage of the parametric approach is that it enables hypotheses to be tested about differences in WTP between different segments of the population.
- **Non-parametric methods:** Approaches which are free from distributional assumptions. These approaches make few assumptions about the distribution of WTP in the population and are hence more robust to specification error. However, they have more limited capacity for undertaking statistical hypothesis testing.

In this study we estimate WTP via both a parametric method and a non-parametric method. In particular, we use a parametric log-logistic model and a non-parametric method developed by Turnbull.[1] We chose the log-logistic model because, across the three investment options, it fitted the data better than other commonly used models for binary responses. The details of these methods are explained in sections 3 and 4.

[1] Turnbull, B. (1976), The empirical distribution function with arbitrary grouped, censored, and truncated data, *Journal of the Royal Statistical Society, Series B*, 38, 290–295.

2.3 Stratification of the population

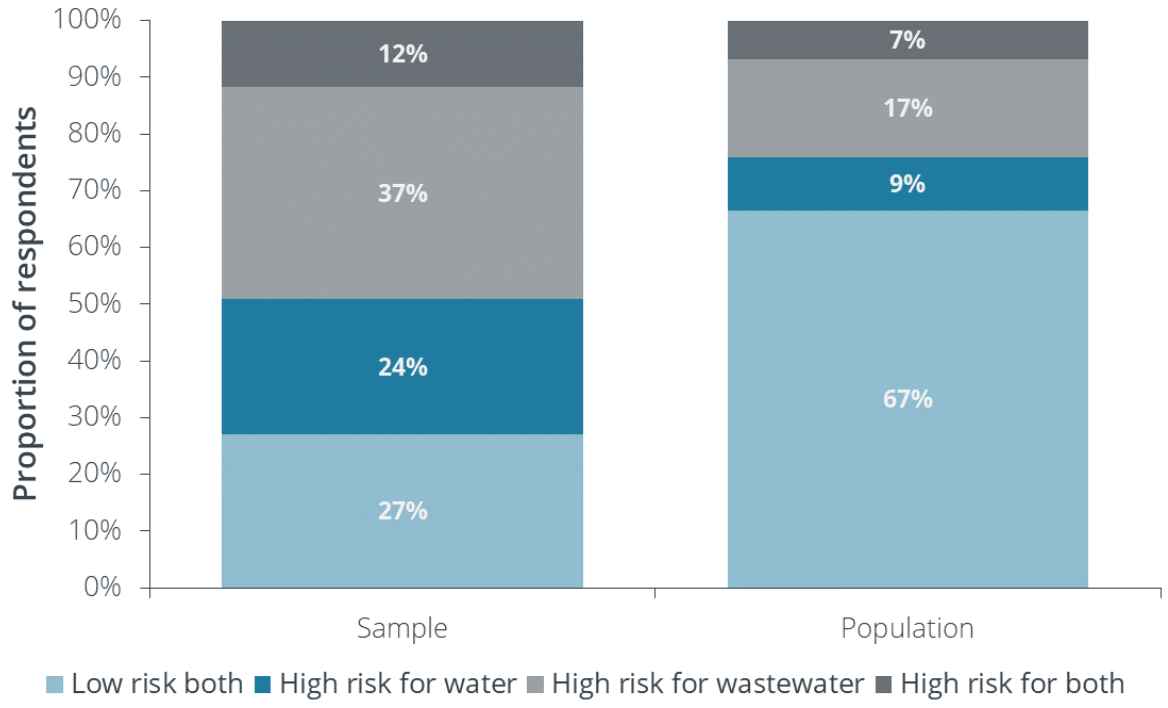
Risk groups

The total sample used in the estimation of WTP consisted of 2,645 respondents. However, not all of Icon Water's customers are equally exposed to the risk of interruptions to their water supply or wastewater disposal. Some areas are at much higher risk of having an outage than others for both services. It is likely the respondents' WTP for reducing the risk of an outage to their water supply or wastewater disposal is highly dependent upon whether they are in a high or low risk area for such an outage. To account for these likely differences in WTP, Icon Water's customers were classified into four risk groups:

- low risk for both water supply and wastewater
- high risk for wastewater, but low risk for water supply
- high risk water for water supply, but low risk for wastewater, and
- high risk for both water supply and wastewater.

Each of these four risk groups was sampled separately. **Figure 3** shows the percentage of each risk group in the sample compared with the percentage of each risk group in total population of Icon Water's customers. By far the largest risk group in the population is the group with low risk for both services, which accounts for 67% of Icon Water's population of customers; the groups with a high risk of disruption to either or both water and wastewater services are much smaller.

Figure 3: Sample and population proportions of different risk groups



Source: Frontier Economics analysis of data provided by SEC Newgate Research

Table 2: Sample sizes of each risk group

Risk group	Sample size
Low risk both	715
High risk for water	629
High risk for wastewater	989
High risk for Both	312
Total sample	**2,645**

Source: Frontier Economics analysis of data provided by SEC Newgate Research

Demographic stratification

In surveys of this kind, it is common that the demographic profile of the respondents in the sample often do not match the demographic profile in the population. For example, the sample might contain a higher proportion of older people than in the population. If there are differences in the WTP of different segments in the population, this lack of correspondence between the demographic profiles of the sample and the population would lead to biased estimates of the WTP in the population.

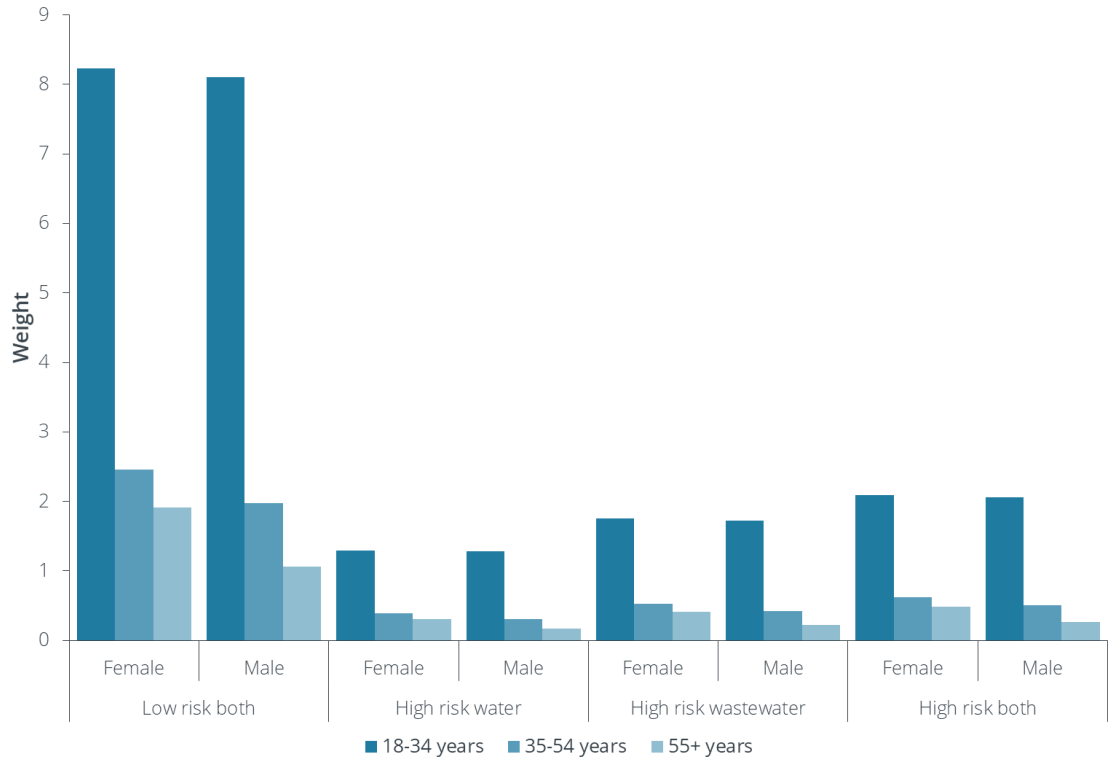
To mitigate such bias, the survey data provided by SEC Newgate Research was stratified by gender and age group. There are two groups for gender (male and "female"[2]) and three age groups (18 to 34, 35 to 54, and 55 and over) resulting in six strata. Each of the six strata has a unique weight attached which is assigned to all respondents in that stratum. These weights enable the sample to be re-balanced to produce WTP estimates that reflect the gender and age profile in the ACT population.

The weights also differ by risk group to reflect the fact that the low-low risk group is under-sampled and the other risk groups are over-sampled.

Figure 4 presents the weights for gender by risk group and age group. We can see that, for the most part, the female weights are very similar to the male weights. By contrast, **Figure 5**, which presents the weights for different age groups by risk group and gender, shows that the weights differ far more between different age groups. For example, females in the high-high risk group aged 18 to 34 have a weight close to 2, while females in the same risk group, but in the 35 to 54 age group, have a weight closer to 0.5. This means that it is much more important to take account of potentially different WTP by age group than by gender.

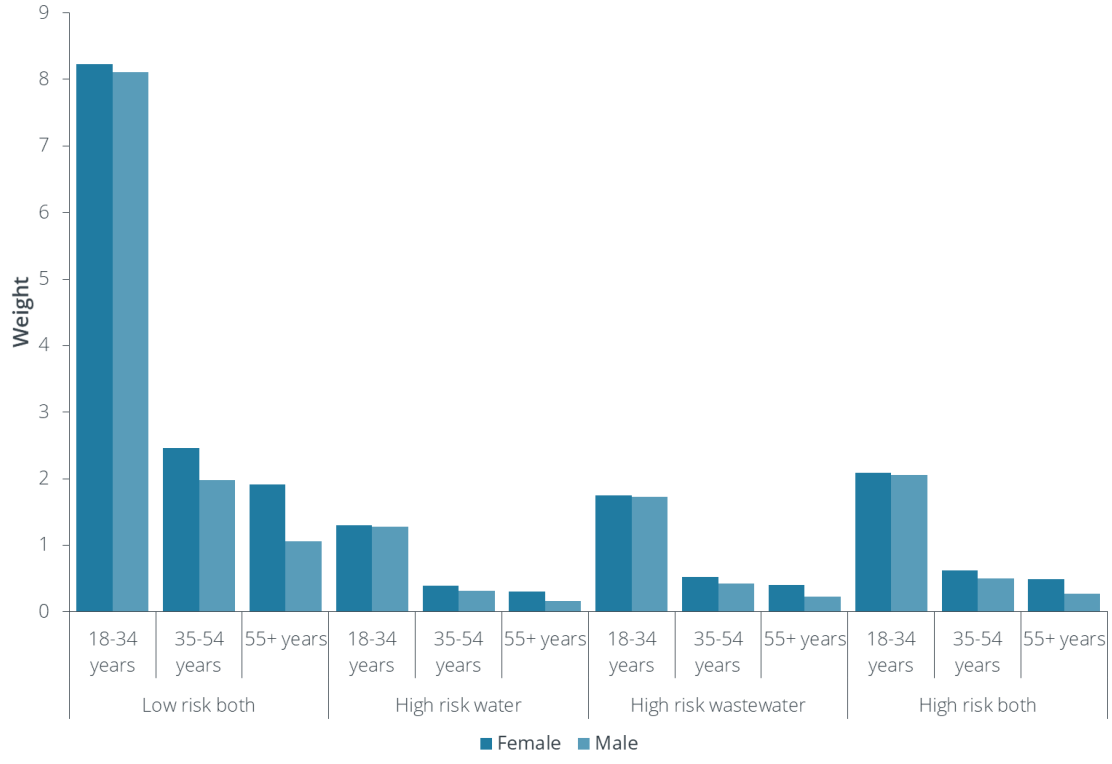
[2] Four respondents out of the total sample of 2,645 identified as non-binary or other. These were assigned to the same gender group as females. For brevity we will refer to this class as "female" rather than "female and other".

Figure 4: Weights of genders by risk group and age group



Source: Frontier Economics analysis of data provided by SEC Newgate Research

Figure 5: Weights of age groups by risk group and gender



Source: Frontier Economics analysis of data provided by SEC Newgate Research

2.4 Measures of willingness to pay

There are two WTP measures that are commonly reported in analyses of WTP, the mean WTP and the median WTP. When undertaking economic welfare analysis to determine the expected economic benefit of a good or service, the expected value of WTP, i.e. the mean or average WTP, is the appropriate measure to use. The median WTP is also a useful concept since it is the WTP value for which half the population is willing to pay at least that value and the other half is not. If a regulator were to allow a business to impose a charge based on this value, they know that 50% of the population are happy with this decision since it would increase their utility.

For some parametric models the estimates of the mean and median WTP are identical since the assumed distribution for WTP specified in the econometric model is symmetric. However, for distributions which are not symmetric there can be a large difference between the mean and median WTP.

In the present study, the WTP distribution that fits the data best is not symmetric. Unless some restrictive assumptions are made about the upper tail of WTP, the mean WTP is almost always larger than the median WTP. If the mean WTP is larger than the median WTP, we know that less than half the population is willing to pay the mean WTP. For example, in our analysis we found that for the low risk group and 55+ age group, only 36% of people would be willing to pay the estimated mean WTP for improved water services. It is highly unlikely that a regulator would approve a bill increase that more than 50% of customers would find unacceptable.

Moreover, the mean WTP is extremely sensitive to assumptions made about the WTP of respondents at the higher end of the WTP distribution. The median is not sensitive to assumptions made about the WTP at the higher end of the WTP distribution. For these reasons, in this study we report the median WTP as the measure of the centre of the WTP distribution.

From a utility's perspective, a more conservative measure of WTP may be appropriate since a proposed program to improve a service may not be considered viable if the bill increase required to fund the program is supported by only 50% of customers. A regulator may also want to be assured that a supermajority of customers are willing to pay for a program to improve a service. Hence we also provide estimates of the bill increases for each investment option that would be supported by 60% and 70% of customers.

2.5 Non-respondents

The total sample used in the estimation of WTP consisted of 2,645 respondents. There was also information on 78 respondents who completed part of the survey questionnaire but did not answer the WTP questions. This comprises 2.9% of the total sample of 2,723 respondents. This is a small percentage and any assumptions made about the WTP of the 78 non-respondents will have negligible impact on the results presented in this report.

There are also customers who were invited to take part in the survey and opted not to do so. We have no information about these customers and we have not made any allowance for them in our analysis.

3 Parametric estimation

3.1 Introduction

A parametric model for estimating WTP from a CV survey is a model that explains a respondent's "yes" or "no" answer to the question whether they would accept an increase in their bill by a specific amount for a particular investment. Models that model this type of data are called binary response models and they model the probability that a respondent says "yes" as a function of the factors that could influence that decision.[3] A key factor that influences that decision is the hypothetical bill increase presented to the respondent if the investment were to go ahead. Other factors that could influence the decision are the respondent's risk group and socio-demographic characteristics.

The economic model that underpins our parametric analysis of the survey responses was developed by Cameron and James (1987).[4] This model specifies an individual's WTP for a good or service as a non-linear function of socio-demographic explanatory variables. The respondent is assumed to answer "yes" to the question about a particular investment if the WTP exceeds the price point for the bill increase shown to the respondent, and "no" if the WTP falls below the price point.

The approach developed by Cameron and James differs from the commonly cited Random Utility Model (RUM) developed by McFadden and popularised for CV studies by Hanemann (1984).[5] The RUM compares the indirect conditional utility functions for the situation where the investment is undertaken versus the situation where it is not undertaken. The respondent is assumed to answer "yes" if the utility of the investment scenario exceeds the utility of no investment.

The estimating equations derived from the two approaches are identical, but the interpretation of the parameters is different. The Cameron and James approach is more straightforward and more directly related to WTP rather than the utility function.

Different versions of the binary response model are obtained by making different assumptions about the disturbance term in the model. The most commonly used assumptions are that the disturbance term has either a logistic or normal distribution leading to the logit and probit models. If the WTP and the bill increase are specified in logarithms, the models are referred to as the log-normal and log-logistic models.

Specifying the model in logs has the benefit that it assumes that 100% of people are willing to pay at least zero dollars to receive the benefit of the good, whereas in the logit and probit models a negative WTP for a good or service is theoretically possible. If a good or service has a positive

3 Most econometric textbooks provide details of binary response models. See, for example, Wooldridge, J.M. (2019), *Introductory Econometrics: A Modern Approach, 7th edition*, Ch. 17.

4 Cameron, T.A. & James, M.D. (1987), Efficient estimation methods for "closed-ended" contingent valuation surveys, *Review of Economics and Statistics*, 69, 269-276; also see Cameron, T.A. (1988), A new paradigm for valuing non-market good using referendum data: Maximum likelihood estimation by censored logistic regression, *Journal of Environmental Economics and Management*, 15, 355-379.

5 Hanemann, W.M. (1984), Welfare evaluations in contingent valuation experiments with discrete responses, *American Journal of Agricultural Economics*, 66, 332-341.

benefit to the customer, then it is rational to assume that everyone is willing to pay at least zero dollars for this benefit. The log versions of the models are consistent with this assumption.[6]

3.2 Model specification

We estimated a separate model for each investment option and tested four different functional forms to fit the data. These were the logit and probit models, and the log-logistic and log-normal models. These models differ in the assumed distribution for the disturbance term in the WTP equation. Based on the AIC and BIC criteria, the log versions of the models were much better than their linear counterparts. We also found that the log-normal and log-logistic specifications fitted the data almost equally well for the water and digital meter models, but the log-logistic provided the better fit for the model for the wastewater investment. Hence, to maintain comparability across the three investment options, we chose the log-logistic model for all three investment options. The differences in the estimated WTP between the two models are quite small.

We have also included variables in the model that capture potential differences in WTP between age groups, gender and risk groups. Using the log-logistic model specification, the predicted probability of a "yes" response is:

$$Prob(response = "yes") = \frac{1}{1 + \exp(-z)}$$

where

$$z = b_0 + b_1 * dummy_{age\ group\ 35\ to\ 54} + b_2 * dummy_{age\ group\ 55+} + b_3 * dummy_{gender\ Male} + b_4 * dummy_{High\ risk\ wastewater} + b_5 * dummy_{High\ risk\ water} + b_6 * dummy_{Low\ risk\ both} + b_7 * \ln(bid).$$

In this equation:

- *bid* is the price point the respondent was shown for the relevant potential investment. We expect the coefficient b_3 to be negative, since this is consistent with the probability of a "yes" decreasing as the bid price point increases
- $dummy_{age\ group\ 35\ to\ 54}$ is a binary variable, taking the value 1 if the respondent is aged between 35 to 54, and is zero otherwise
- $dummy_{age\ group\ 55+}$ is a binary variable, taking the value 1 if the respondent is aged 55 or over, and is zero otherwise
- $dummy_{gender\ Male}$ is a binary variable, taking the value 1 if the respondent is male, and is zero otherwise
- $dummy_{High\ risk\ wastewater}$ is a binary variable, taking the value 1 if the respondent is in the high risk wastewater risk group, and is zero otherwise
- $dummy_{High\ risk\ water}$ is a binary variable, taking the value 1 if the respondent is in the high risk water risk group, and is zero otherwise
- $dummy_{Low\ risk\ both}$ is a binary variable, taking the value 1 if the respondent is in the low risk group for both water and wastewater, and is zero otherwise

[6] See Carson, R.T. and Hanemann, W.M. (2005), Contingent valuation, in Mäler, K-G & Vincent, J.R. (eds), *Handbook of Environmental Economics, Volume 2,* Ch. 17.

The base groups are:

- **Age group:** 18 to 34 years old
- **Gender:** Female
- **Risk group:** High risk for both water and wastewater.

The coefficients on the dummy variables in the model provide an indication of how much the WTP of the subset of the population corresponding to a dummy variable differs from the base group's WTP.

The median WTP for our model is given by:

$$medianWTP = exp\left[\left(\frac{-1}{b_7}\right)\left(b_0 + b_1 * dummy_{age\ group\ 35\ to\ 54} + b_2 * dummy_{age\ group\ 55+} + b_3 * dummy_{gender\ Male} + b_4 * dummy_{High\ risk\ wastewater} + b_5 * dummy_{High\ risk\ water} + b_6 * dummy_{Low\ risk\ both}\right)\right]$$

The median WTP for different groups of customers can be derived by evaluating this equation for different values of the explanatory variables. For example, by setting the dummy for risk group 2 equal to 1 and the other risk group dummy variables equal to 0 and replacing the dummy variables for the age and gender dummy variables at their population proportions, we can derive an estimate for the WTP by customers in risk group 2. To derive estimates of WTP across all risk groups, we replace the dummy for the risk groups by the population proportions for the risk groups shown in **Figure 3**.[7]

To calculate the 60th and 70th percentile of the WTP distribution, the above equation is modified by subtracting, respectively, the 60th and 70th percentile of the standard logistic distribution from the b_0 term.

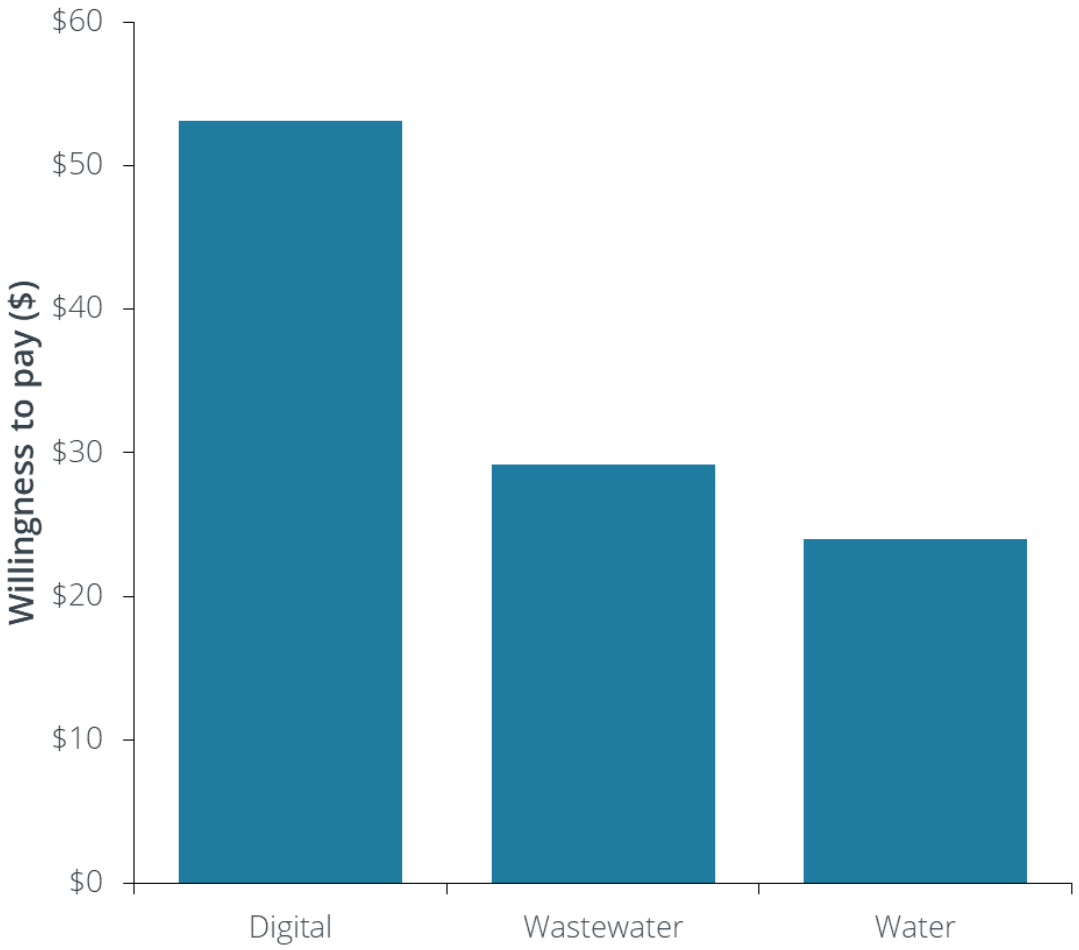
3.3 Results

A separate model was fitted for each of the three investment options using maximum likelihood estimation. **Figure 6** and **Table 3** present the estimated median WTP for the population of Icon Water's customers for each of the three investment options. Using this measure for the WTP, the highest WTP is for a digital meter, at $53. This is followed by the WTP to reduce wastewater disposal disruptions at $29, and the WTP to reduce water supply disruptions at $24. As noted in section 2.2, the design of the CV questionnaire, enables these estimates to be interpreted both as the WTP for individual investment programs and to be combined as an estimate of the WTP across the three investment options.

Table 4 presents the estimated WTP at different percentiles of the WTP distribution. The conclusions that can be drawn about the ordering of customers' WTP for different investment programs are broadly the same as for the median WTP summarised above, but the amounts customers are willing to pay decrease sharply as the percentage of customers willing to pay that amount increases from 50% to 60% and from 60% to 70%.

[7] The population proportion for the male dummy is 0.48, and for the two age group dummies the proportions are 0.35 and 0.30 respectively.

Figure 6: Median WTP across risk groups for each potential investment



Source: Frontier Economics

Table 3: Median WTP estimates using the parametric method with a 95% confidence interval

	Estimated median WTP	Lower bound	Upper bound
Digital	$53.09	$42.86	$70.03
Wastewater	$29.13	$24.06	$35.31
Water	$24.00	$19.54	$29.96

Source: Frontier Economics

Table 4: Estimated WTP at different percentiles using the parametric method

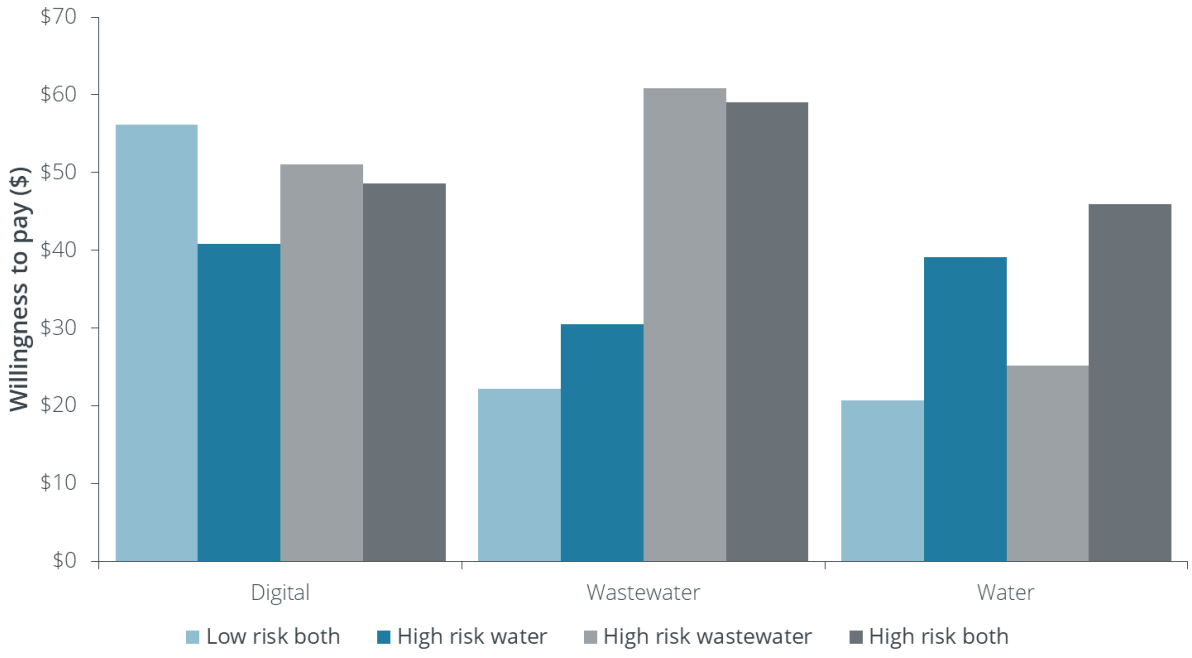
	Percentile		
	70%	60%	50%
Digital	$12.93	$27.01	$53.09
Wastewater	$8.43	$16.09	$29.13
Water	$5.63	$11.99	$24.00

Source: Frontier Economics

A breakdown of the WTP for each investment option by risk group is shown in **Figure 7** and **Table 5**. For digital meters, one might expect the WTP to be the same for all risk groups. While the figure and table show some differences in WTP between the risk groups, statistical testing indicates that these differences are not statistically significant (with a prob value of 0.40).

For the wastewater investment option, one would expect respondents in the high risk groups for wastewater (high risk wastewater and high risk both) to have a higher WTP than the respondents in the other two risk groups. This is confirmed in **Table 5** and evident in **Figure 7**, where the second and fourth bars in the wastewater panel are higher than the two other bars. Statistical testing indicates that the differences in WTP between the four risk groups are statistically highly significant; but the difference in WTP between the two wastewater high risk groups is not statistically significant at the 5% level of significance, and the difference in WTP between the two wastewater low risk groups is also not statistically significant.

Figure 7: Median WTP for each potential investment by risk group



Source: Frontier Economics

Similarly, for the water supply investment option, one would expect respondents in the high risk groups for water (high risk water and high risk both) to have a higher WTP than the respondents in the other two risk groups. This is confirmed in **Table 5** and evident in **Figure 7**, where the third and fourth bars in the water panel are higher than the other bars. As with wastewater, statistical testing indicates that the differences in WTP between the four risk groups are statistically highly significant; but the difference in WTP between the two water supply high risk groups is not statistically significant, and the difference in WTP between the two water supply low risk groups is also not statistically significant.

Table 5: Willingness to pay estimates by risk group using the parametric method with a 95% confidence interval

	Median estimate	Lower bound	Upper bound
Digital			
Low risk both	$56.14	$41.83	$76.73
High risk water	$40.82	$29.94	$57.09
High risk wastewater	$51.08	$38.98	$69.32
High risk both	$48.62	$33.00	$73.88
Wastewater			
Low risk both	$22.22	$17.34	$28.61
High risk water	$30.53	$23.60	$40.10
High risk wastewater	$60.88	$47.51	$80.08
High risk both	$59.07	$41.81	$87.51
Water			
Low risk both	$20.70	$15.31	$26.59
High risk water	$39.09	$28.83	$54.44
High risk wastewater	$25.21	$19.31	$32.99
High risk both	$45.98	$29.43	$72.27

Source: Frontier Economics

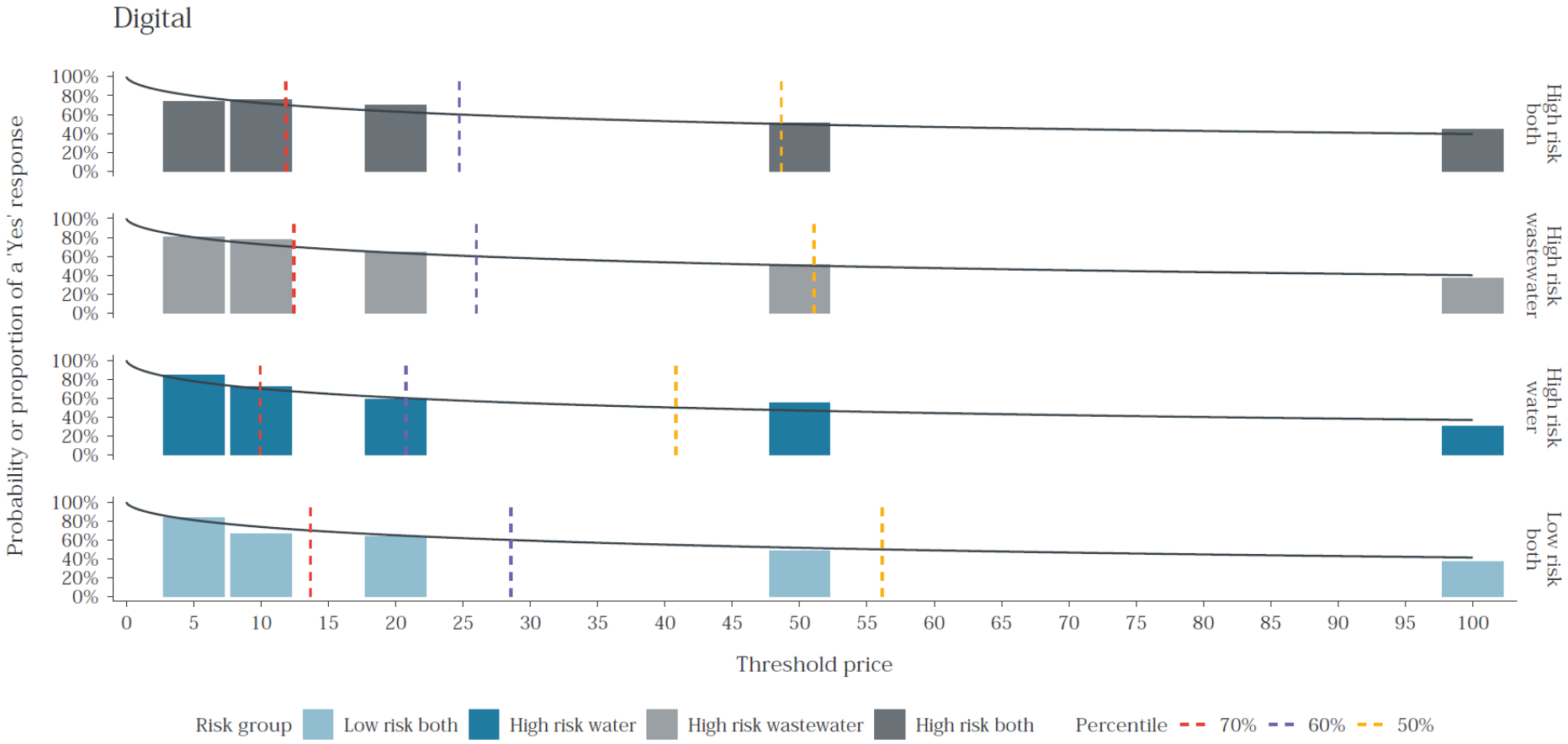
The fit to the observed responses for each model is shown in **Figure 8** to **Figure 10**. The light blue bars located at each price point used in the survey are the weighted proportion of

respondents who responded "yes" at that price point.[8] The smooth black lines show the fit of the log-logistic model to the observed responses. The vertical dashed lines in each figure indicate the location of the log-logistic model's estimates of the median WTP and the 60th and 70th percentile WTP for each potential investment program. The exact amounts of the percentile WTP estimates are presented in **Table 12** in the Conclusion.

As expected, as the price increases, the proportion of people willing to pay at least that price decreases. Note, however, that the bars do not always decrease as the price increases; sometimes there is a very slight increase in the proportion of respondents saying "yes" as the price increases. For example, in **Figure 9** a larger proportion of respondents are willing to pay at least $10 than $5 for the investment to reduce wastewater outages. This is due to inherent randomness in the survey responses. By contrast, the log-logistic function fitted to the data is, by definition, monotonically decreasing, starting at 100% for the $0 price point.

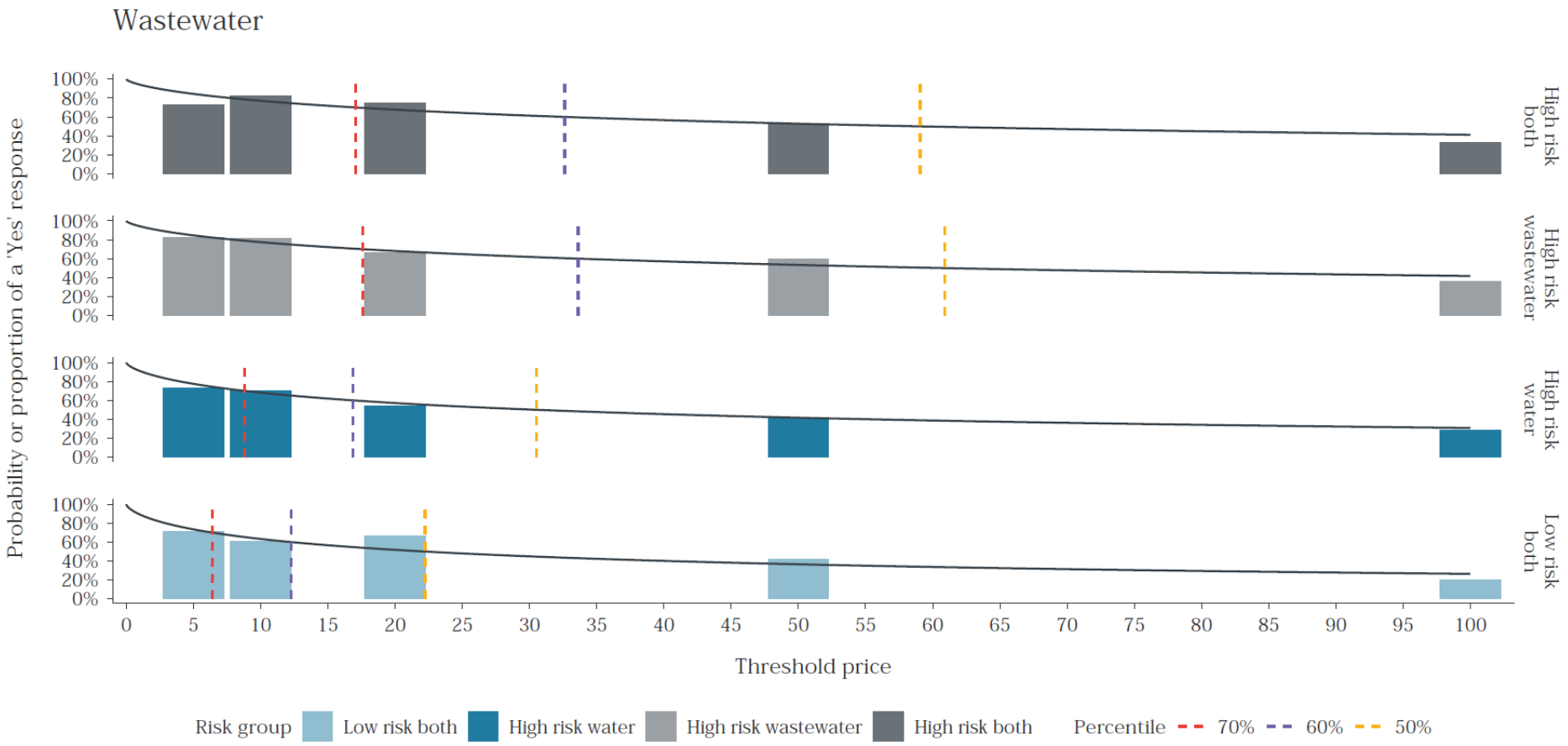
[8] The weighting ensures that the estimated proportions reflect the proportions for the population demographic profile, rather than for the sample profile. The weights used are the stratum weights provided by SEC Newgate Research.

Figure 8: Log-logistic fit for probability of respondents saying "yes" to digital meter investment at different price points for bill increase



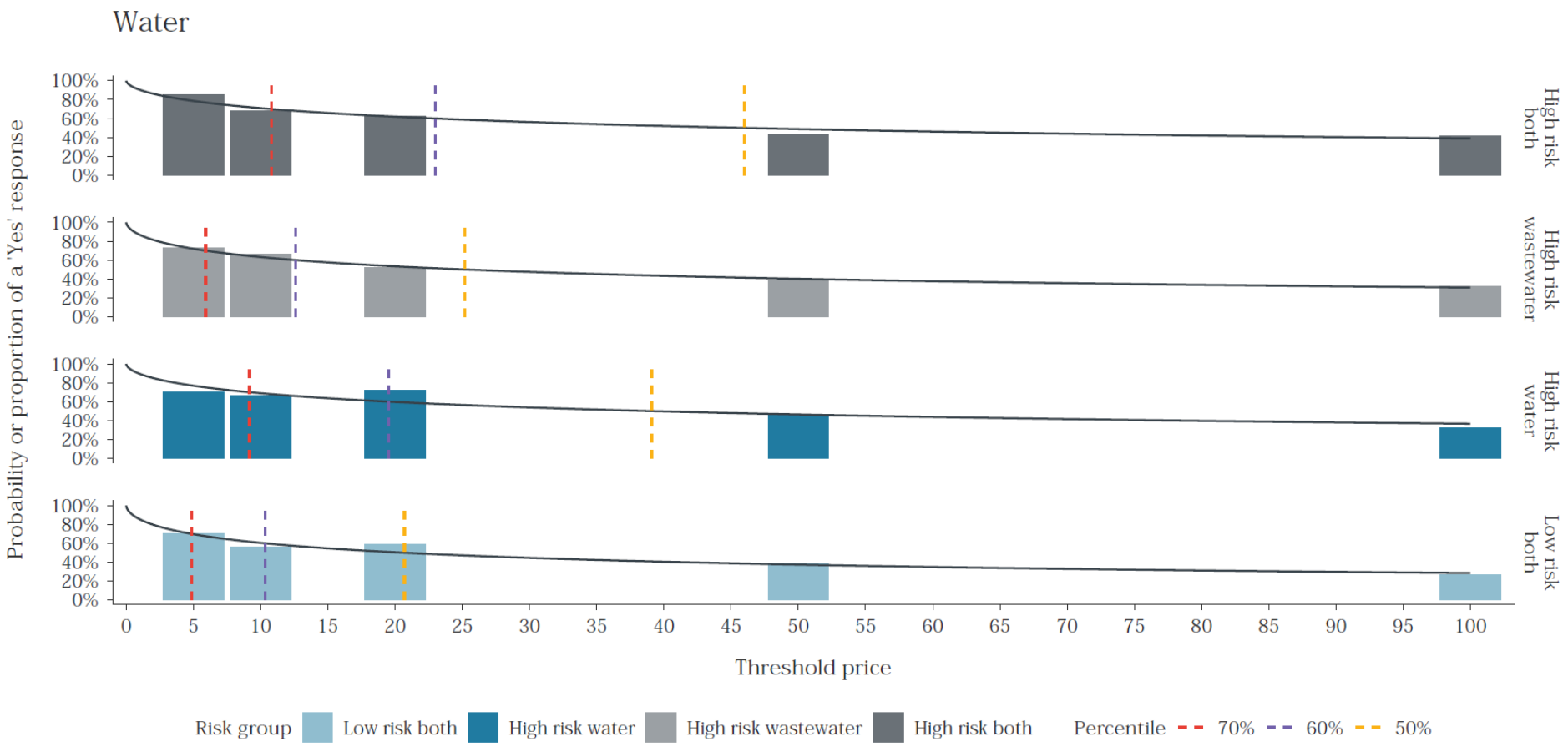
Source: Frontier Economics

Figure 9: Log-logistic fit for probability of respondents saying "yes" to wastewater investment at different price points for bill increase



Source: Frontier Economics

Figure 10: Log-logistic fit for probability of respondents saying "yes" to water supply investment at different price points for bill increase



Source: Frontier Economics

4 Non-parametric estimation

4.1 Introduction

One of the downfalls of using parametric methods is that a very specific functional form has to be assumed for the probability of saying "yes" as the price increases. If this functional form is misspecified, estimates of WTP may be biased. The estimated mean WTP is particularly sensitive to such misspecification, the median far less so.

As an alternative, we decided to estimate WTP using a non-parametric approach as well. While non-parametric methods do not make any assumptions about the underlying distribution, the estimation of mean WTP is still highly sensitive to the assumption made about the WTP of respondents who were willing to pay at least $100 for any investment option. Hence, we again focus on estimating the median WTP.

The most commonly used non-parametric estimator of WTP it the Kaplan-Meier-Turnbull estimator, popularly referred to as the Turnbull estimator or method. This is a relatively simple estimator, which calculates the percentage of respondents who responded "yes" at each bid estimator. In the present case, we have applied the demographic stratum weights provided by SEC Newgate Research to calculate these percentages, which results in the light blue bars shown in **Figure 8** to **Figure 10**. The Turnbull method also imposes the constraint that the fitted points are monotonically non-increasing (people are not more likely to be willing to pay a higher amount). This is done by taking the average of the percentages across price points if a higher price has a higher percentage of people willing to pay that price.

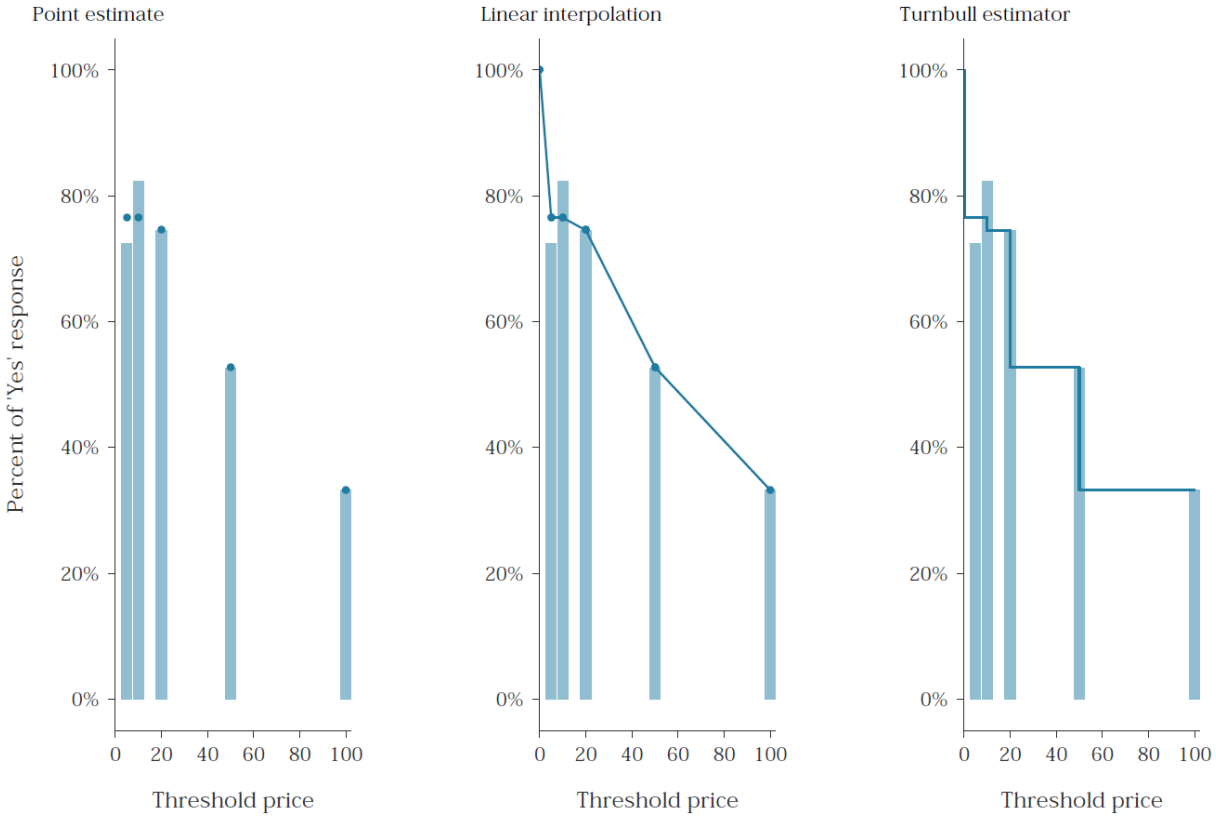
One restriction of the Turnbull method is that it is only defined at the discrete observed price points. This means that the probability of saying "yes" is only defined at the bill increase price points of $5, $10, $20, $50 and $100. If one wants to estimate the percentage of respondents willing to pay values different from this, then we have to interpolate between these price points. Interpolation is also required if we wish to find the median WTP, which is likely to fall between these specific price points.

In **Figure 11** we illustrate different approaches to interpolation using a set of hypothetical data. The first panel shows the data and the Turnbull estimate at each price point as a blue dot. The Turnbull estimate generally coincides with the percentage of respondents who said "yes" at each price point. However, for the first two price points, the Turnbull method averages the percentages to ensure that the estimates are monotonicity non-increasing as the price increases.

The next two panels in **Figure 11** illustrate two different methods of interpolation, a linear interpolation in the second panel and the Turnbull interpolation method in the third panel. The linear interpolation method allows one to estimate a unique price for the median WTP, which is where a horizontal line at the 50% mark intersects the interpolated line. The Turnbull interpolation method is very conservative; it assumes that there are no respondents willing to pay any amount between the discrete price points, i.e. that the WTP function is a discrete function with changes in WTP only occurring at the price points used in the survey. The Turnbull interpolation method also does not allow one to calculate a unique median WTP; instead, it gives a range in which the median is located.

There are other methods of interpolation, for example, one can take a smoothed estimator using a kernel function to smooth values between the discrete price points. However, there are many ways of obtaining a smooth interpolation between the discrete price points with no clear guidance as to which is the preferred approach. For simplicity, we have chosen to use the Turnbull estimates for the proportion of the population's WTP at the discrete price points and used linear interpolation to obtain estimates of WTP between the discrete price points.

Figure 11: Comparison of simple non-parametric estimators



Source: Frontier Economics

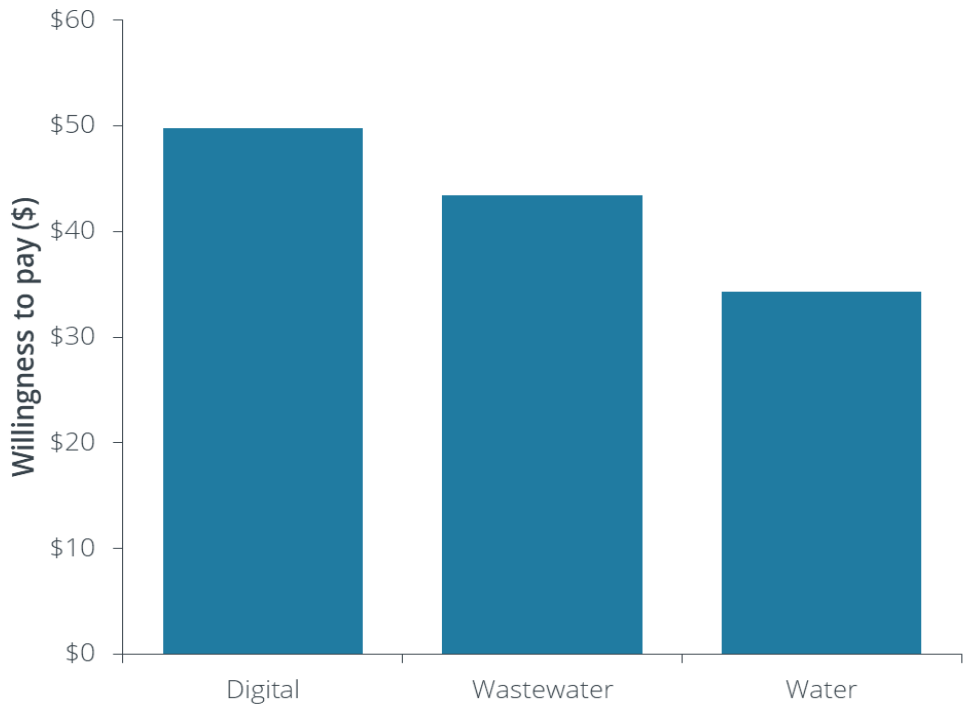
4.2 Results

We have used the approach described in the previous section to estimate a non-parametric WTP distribution for each of the risk groups and investment options. The Turnbull estimator was used to determine the point estimates of the proportion of the population willing to pay the amounts at the discrete price points, and linear interpolation to derive the proportion of the population willing to pay amounts between the discrete price points. We can determine the estimated median WTP by selecting the 50% point on the Y-axis and finding the corresponding value on the X-axis.

The estimated median WTPs for each potential investment option obtained using this approach are presented in **Figure 12** and **Table 6**. The ordering of the WTP for the different investment options is the same as obtained using the parametric analysis. The highest WTP is for a digital

meter, at $50. This is followed by the WTP to reduce wastewater disposal disruptions at $43, and the WTP to reduce water supply disruptions at $34.[9]

Figure 12: Median WTP estimates for each potential investment



Source: Frontier Economics

Table 6: Median WTP estimates using the Turnbull method

Investment option	Estimated median WTP
Digital	$49.77
Wastewater	$43.42
Water	$34.31

Source: Frontier Economics

Table 7 presents the estimated WTP at different percentiles of the WTP distribution. The conclusions that can be drawn about the ordering of customers' WTP for different investment programs are broadly the same as for the median WTP summarised above, but the amounts

[9] We have not included confidence intervals for the non-parametric median WTP estimates, since there is no statistical code readily available that provides reliable estimates of such confidence intervals for stratified data. While we have estimated confidence intervals using two different approximation methods, in our view these approximate approaches underestimate the width of the confidence intervals. Instead, we suggest that a guide to the width of the confidence interval around an estimated median WTP can be obtained by inspecting the confidence interval for the corresponding parametric estimate of the WTP.

customers are willing to pay decrease sharply as the percentage of customers willing to pay that amount increases from 50% to 60% and from 60% to 70%.

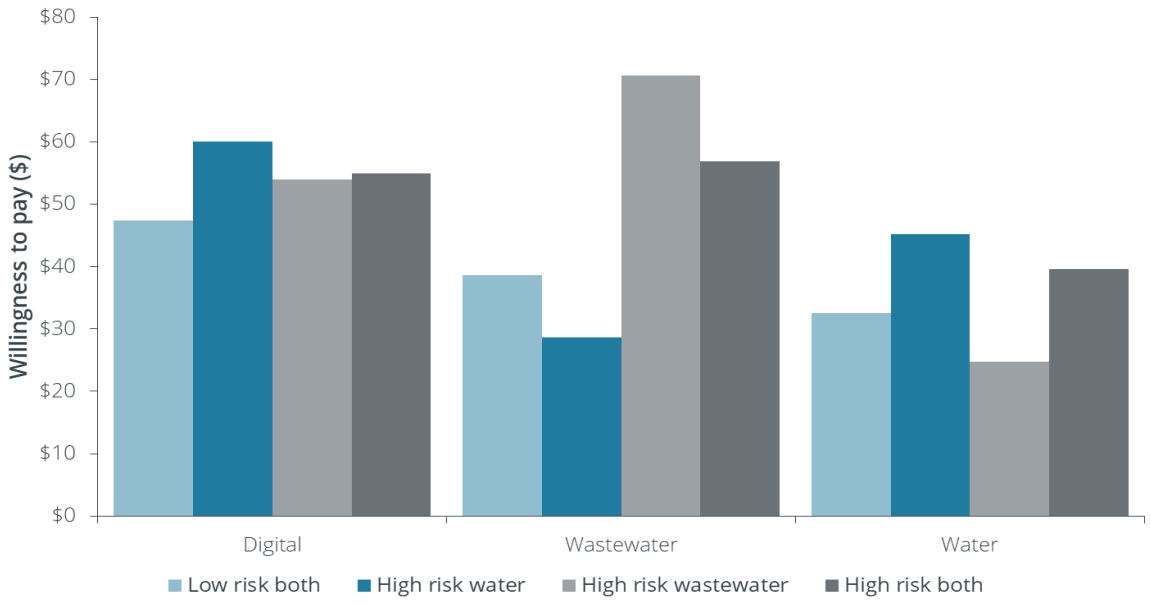
Table 7: Estimated of WTP using the Turnbull method at different percentiles

	Percentile		
Investment option	**70%**	**60%**	**50%**
Digital	$9.69	$28.02	$49.77
Wastewater	$7.85	$28.90	$43.42
Water	$5.75	$9.79	$34.31

Source: Frontier Economics

The breakdown of median WTP estimates for each potential investment option by risk group is presented in **Figure 13** and **Table 8**. In the non-parametric approach, it is more complex to test whether there are significant differences in WTP between risk groups, particularly when the data are weighted by stratum, and we have not done such tests. But we note that, overall, the results are qualitatively similar to the results obtained using the parametric approach.

Figure 13: Median WTP estimates for each investment option by risk group



Source: Frontier Economics

We again find some differences in the median WTP for digital meters between risk groups, but we found in the parametric approach that these differences in WTP between risk groups are, in fact, not statistically significant.

For the wastewater investment option, we again find that respondents in the high risk groups for wastewater (high risk wastewater and high risk both, i.e. the second and fourth bars in the

wastewater panel) have a higher estimated median WTP than the respondents in the other two risk groups.

Similarly, for the water supply investment option, we again find that respondents in the high risk groups for water supply (high risk water and high risk both, i.e. the third and fourth bars in the water panel) have a higher estimated WTP than the respondents in the other two risk groups.

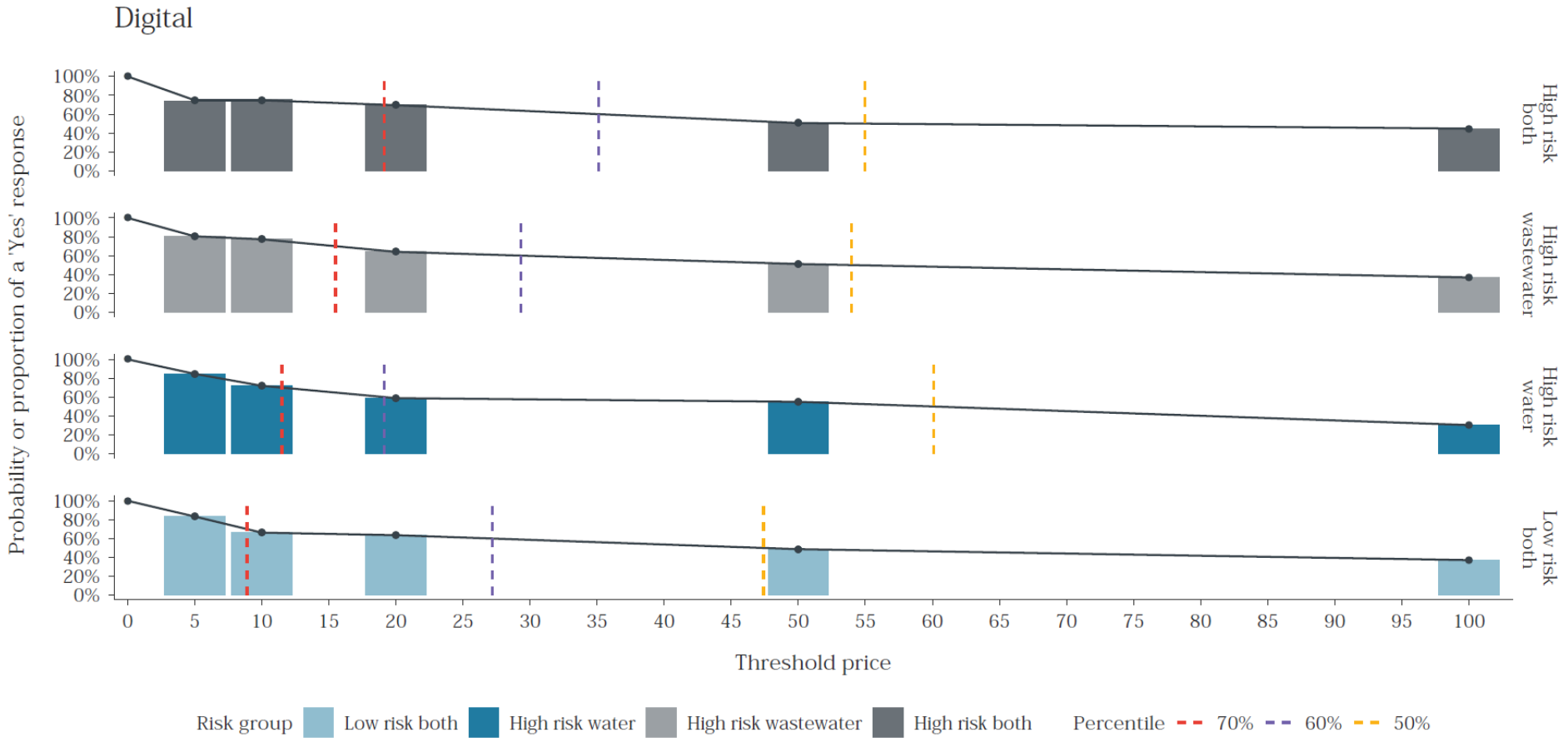
Table 8: Median WTP estimates by risk group using the Turnbull method

Investment option and risk group	Median WTP estimate
Digital	
Low risk both	$47.41
High risk water	$60.10
High risk wastewater	$53.95
High risk both	$54.97
Wastewater	
Low risk both	$38.57
High risk water	$28.66
High risk wastewater	$70.62
High risk both	$56.90
Water	
Low risk both	$32.57
High risk water	$45.20
High risk wastewater	$24.74
High risk both	$39.58

Source: Frontier Economics

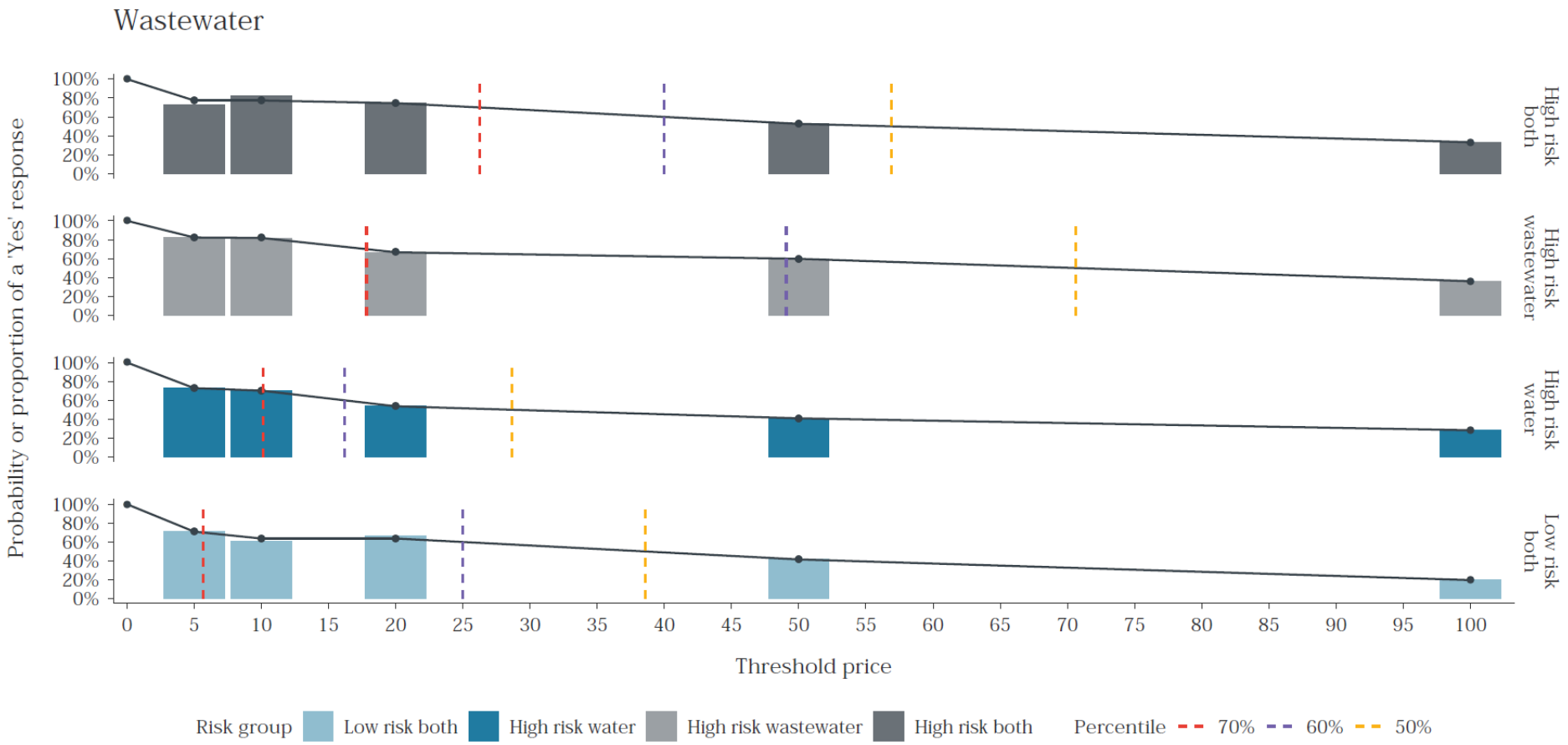
Figure 14 to **Figure 16**, show the fit of our non-parametric approach to the survey data. The light blue bars show the stratum-weighted percentage of respondents who responded "yes" to that price point for a bill increase. The black dots show the Turnbull estimates at each discrete price point, which are monotonically non-increasing. The black lines show the linear interpolation between the discrete price points. The vertical dashed lines in each figure indicate the location of the log-logistic model's estimates of the median WTP and the 60th and 70th percentile WTP for each potential investment program. The exact amounts of the percentile WTP estimates are presented in **Table 12** in the Conclusion.

Figure 14: Linear interpolation of Turnbull point estimates for willingness to pay for digital meters



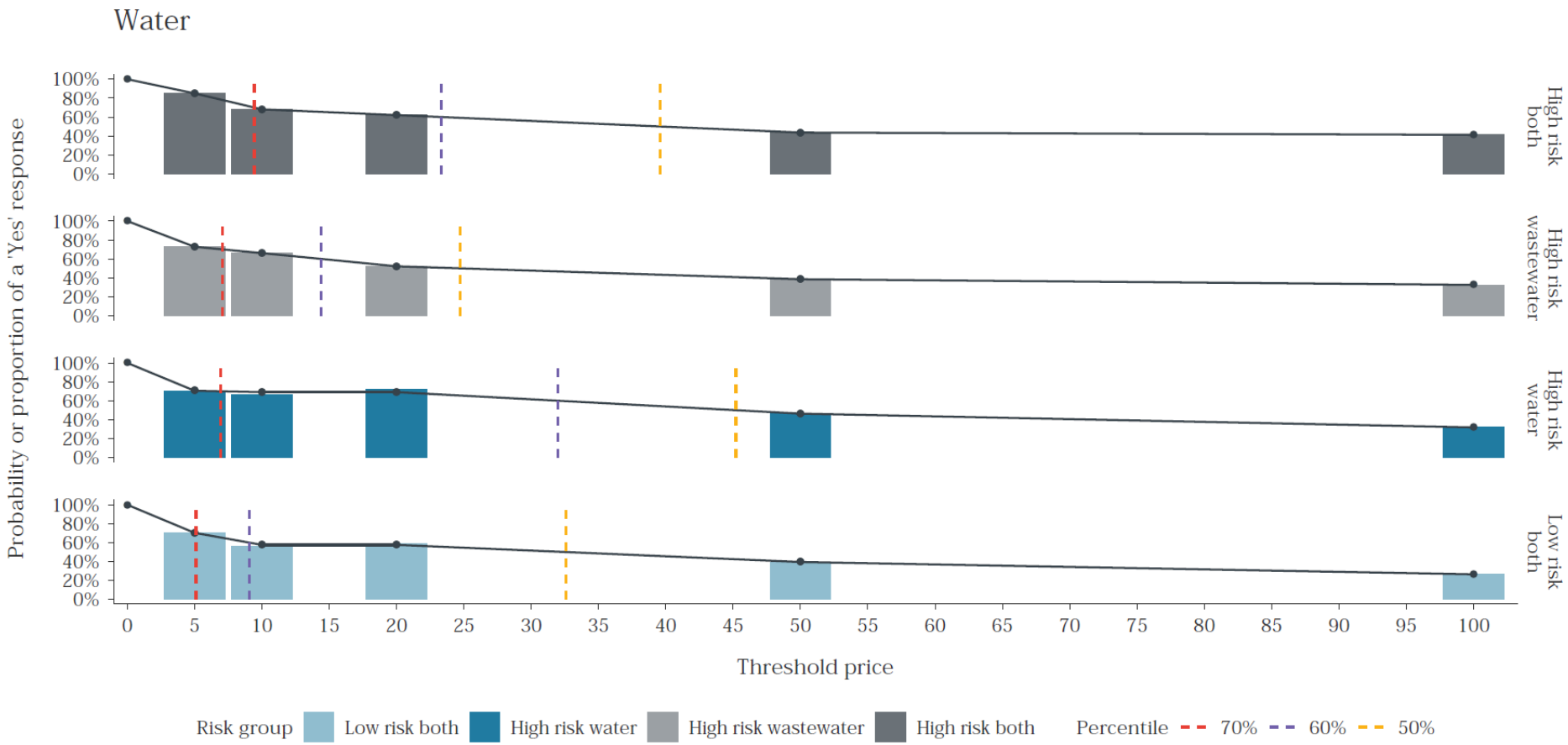
Source: Frontier Economics

Figure 15: Linear interpolation of Turnbull point estimates for willingness to pay for reduced wastewater outages



Source: Frontier Economics

Figure 16: Linear interpolation of Turnbull point estimates for willingness to pay for reduced water outages



Source: Frontier Economics

5 Conclusion

Our estimates of the median WTP using both the parametric method and the non-parametric Turnbull method are summarised in **Table 9**.

For digital meters, the estimates of the median WTP produced by the parametric method and the non-parametric Turnbull method are very close at $53.09 and $49.77, respectively, with an average of $51.43. This is the highest WTP for any of the investment options. Inspection of **Table 10** shows that, for the digital meter investment option, the average WTP across the parametric and the non-parametric methods is almost constant across the four risk groups, ranging from $50.46 to $52.52.

The lowest estimate of median WTP for this investment is the parametric estimate of $40.82 for the customer segment at high risk of having both water and wastewater disruptions. However, this is by far the smallest of the risk groups in the population. Hence, on balance, our analysis indicates that about 50% of customers would be willing to pay an extra $50 or more in their annual bills over the next five years, and this WTP is spread fairly evenly across the different risk groups.

Table 9: Median WTP estimates using different estimation methods

	Log-logistic	Turnbull estimate	Average*
Digital	$53.09	$49.77	$51.43
Wastewater	$29.13	$43.42	$36.27
Water	$24.00	$34.31	$29.15

Source: Frontier Economics

*Note: *The numbers in the 'Average" column are the average of the log-logistic and the Turnbull estimates*

For the wastewater and water investment options **Table 9** shows that there are larger differences between the estimation methods than for the digital meter investment option. However, the results in **Table 10** show that these differences between the estimation methods are driven largely by differences in the estimates for the median WTP in the low risk of disruptions for both water supply and wastewater removal. For the other risk groups, the estimates produced by the two methods are much closer, and they are also consistent with prior expectations.

Specifically, for the wastewater investment option, the estimates of WTP in the two risk groups with a high risk of wastewater disruptions have much higher WTP for investment to reduce that risk than the other two risk groups; approximately $60 for the high risk groups versus approximately $30 for the low risk groups. Statistical tests using the parametric model indicate that the difference in WTP between the high risk groups and low risk groups is highly statistically significant.

For the water supply investment option, the WTP is somewhat lower, with the two groups with a high risk of a disruption willing to pay about $42 for investment to reduce the risk, while the two

group with a low risk of a disruption are willing to pay about $25 to reduce the risk. Statistical tests using the parametric model indicate that the difference in WTP between the high risk groups and low risk groups is highly statistically significant.

Table 10: Median WTP estimates using different estimation methods by risk group

	Log-logistic	Turnbull estimate	Average*
Digital			
Low risk both	$56.14	$47.41	$51.78
High risk water	$40.82	$60.10	$50.46
High risk wastewater	$51.08	$53.95	$52.52
High risk both	$48.62	$54.97	$51.80
Wastewater			
Low risk both	$22.22	$38.57	$30.40
High risk water	$30.53	$28.66	$29.60
High risk wastewater	$60.88	$70.62	$65.75
High risk both	$59.07	$56.90	$57.99
Water			
Low risk both	$20.70	$32.57	$26.64
High risk water	$39.09	$45.20	$42.15
High risk wastewater	$25.21	$24.74	$24.98
High risk both	$45.98	$39.58	$42.78

Source: Frontier Economics

*Note: *The numbers in the 'Average" column are the average of the log-logistic and the Turnbull estimates*

From an economic efficiency perspective, it is not sufficient to just demonstrate customer WTP for a program, i.e. that there is a benefit to the community. A program is only justified if all the benefits of that program to the specified community are greater than the costs in present value terms, i.e. that there is an economic surplus. The method used to make this assessment is benefit cost analysis.

When applying these results to assess the viability of an investment option in a benefit cost analysis, it is important to take into account that the customer segment with a low risk for both water and wastewater disruptions is by far the largest segment, comprising 67% of the customer base. While customers at higher risk of disruption have a relatively high WTP to reduce the risk of a disruption compared to customers at a lower risk of such disruptions,

differential pricing for utility services by risk category is not a generally accepted practice in Australia. Hence, the estimates of median WTP across risk groups in **Table 9**, or the estimates of median WTP for the low risk groups in **Table 10** should be given more weight than the relatively high estimates of WTP for the higher risk groups.

From a utility's perspective, a more conservative measure of WTP may be appropriate since a proposed program to improve a service may not be considered viable if the bill increase required to fund the program is supported by only 50% of customers. A regulator may also want to be assured that a supermajority of customers, say 60% or 70%, are willing to pay for a program to improve a service. Hence, in **Table 11** and **Table 12** we also present estimates of the 60th and 70th percentile WTP values for each potential investment programs and risk group.

The estimated 60th percentile WTP values obtained using the log-logistic model are about half the median WTP estimates. Similarly, the 70th percentile estimates obtained using the log-logistic model are again about half the 60th percentile estimates. This relationship does not hold as closely for the Turnbull method; however, for each investment there is again a large decrease in WTP between the median and 60th percentile, and between the 60th percentile and the 70th percentile.

Table 11: Estimates of WTP at different percentiles

	Log-logistic			Turnbull		
	70%	**60%**	**50%**	**70%**	**60%**	**50%**
Digital	$12.93	$27.01	$53.09	$9.69	$28.02	$49.77
Wastewater	$8.43	$16.09	$29.13	$7.85	$28.90	$43.42
Water	$5.63	$11.99	$24.00	$5.75	$9.79	$34.31

Source: Frontier Economics

Table 12: Estimates of WTP at different percentiles by risk group

	Log-logistic			Turnbull		
	70%	60%	50%	70%	60%	50%
Digital						
Low risk both	$13.68	$28.56	$56.14	$8.90	$27.20	$47.41
High risk water	$9.94	$20.77	$40.82	$11.51	$19.15	$60.10
High risk wastewater	$12.44	$25.99	$51.08	$15.50	$29.33	$53.95
High risk both	$11.84	$24.74	$48.62	$19.13	$35.11	$54.97
Wastewater						
Low risk both	$6.43	$12.27	$22.22	$5.66	$25.01	$38.57
High risk water	$8.83	$16.86	$30.53	$10.14	$16.18	$28.66
High risk wastewater	$17.61	$33.62	$60.88	$17.82	$49.07	$70.62
High risk both	$17.08	$32.63	$59.07	$26.23	$39.96	$56.90
Water						
Low risk both	$4.86	$10.34	$20.70	$5.12	$9.06	$32.57
High risk water	$9.17	$19.53	$39.09	$6.93	$31.99	$45.20
High risk wastewater	$5.92	$12.60	$25.21	$7.09	$14.38	$24.74
High risk both	$10.79	$22.98	$45.98	$9.44	$23.33	$39.58

Source: Frontier Economics

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