

Customer perceptions of climate change and willingness to pay for climate change programs

As a result of its largest ever residential customer survey in 2018, Hunter Water has robust evidence of the role customers want it to play in a low carbon future. More than 90% of customers support taking action now to address climate change, and around 75% are willing to pay \$1 or more annually on their water and wastewater bills to reduce Hunter Water’s greenhouse gas emissions.

CLIMATE THEMES ADDRESSED



NET ZERO EMISSIONS



ENERGY MANAGEMENT



CUSTOMERS + COMMUNITY



REGULATORY OBLIGATIONS



RENEWABLE ENERGY



CARBON OFFSETS



WILLINGNESS TO PAY



EDUCATION

Background

Hunter Water is making a concerted effort to engage broadly and deeply with its customers to develop a strong understanding of their values, preferences and priorities so that the findings can be reflected in its activities and services. In parallel, Hunter Water has recognised the need to build more sustainable and resilient water and wastewater systems. Among other benefits, resilient systems would have the flexibility to help address climate change risk exposures, contributing to emissions neutrality targets in the NSW Government Climate Change Policy Framework and achieving consistency with global aspirations supported by Australia.

In support of these objectives, Hunter Water undertook its largest ever willingness to pay survey in which it sought customer views on its role in delivering non-mandated environmental outcomes, such as climate change action, and obtained evidence in support of delivering those outcomes through regulated expenditure allowed for in regulated prices.

The online customer survey primarily involved a modified contingent valuation method approach to measure customer capacity and willingness to pay, with supplementary questions aimed to gauge sentiment and cross-check results.

The carbon footprint question described the current situation whereby Hunter Water makes carbon savings through energy efficiency projects that are implemented if they reduce electricity costs and therefore help keep water bills low. Continuing this approach would see Hunter Water’s carbon footprint increase, due to servicing a growing population and more energy-intensive treatment plant technology, but would not change customers’ bills. Customers could choose to continue the current approach or select from three ‘do more’ options in which Hunter Water’s carbon footprint is reduced. The carbon footprint reduction options ranged from a little to a lot and each option showed the additional amount the respondent would need to pay in their bills, in dollar terms, to fund the environmental outcome.

Examples were given of the types of projects that Hunter Water could deliver to achieve the carbon reductions.

The reduction amounts and associated costs were based on forward looking maximum and minimum estimates of what could realistically be delivered within the five years. Both were listed as ranges, which meant that survey respondents understood that there was some uncertainty in the final level of service that would be provided in the period, and the final cost to the household.

At the end of the survey, respondents were shown a detailed estimate of the impact of their choices on their future water bill and corresponding environmental outcomes that would be provided. An example is shown in Figure 50. A feedback loop allowed survey respondents to change the level of each environmental service they wanted until the respondent was comfortable with the bill impacts.

Several design features were included to make the survey more user friendly and robust. The carbon footprint question included a combination of text and images to

account for different customer preferences for digesting information. The emissions impact that each option would have on the environment was described by reference to how many equivalent cars could be considered to have been "taken off the road" during the period.

This approach was taken to address feedback during focus group testing which indicated that it was difficult for respondents to gauge the magnitude of the more technically accurate measure (CO₂ equivalents).

FIGURE 50 Example of bill impact including estimates of 2025 water and sewerage charge.

Summary of your choices

Based on the options you have chosen, an estimate of your annual water bill for 2020-25 is shown below. Your annual water bill estimate is based on your most recent year of water use, so it's our best estimate of what your bill will look like in the future.

Your water and sewer service charge, Environmental Improvement Charge, stormwater drainage charge and water usage charge are shown so you can see what your bill might look like in the future. You cannot change these charges in this survey.

Hunter Water customers pay 3 water bills each year. To show you what a water bill will look like we show you an average bill. We also show you how much you might pay a year in total from 2020 to 2025.

If you want to change any of your options for how much stormwater, carbon, wastewater recycling, and water conservation Hunter Water provides during 2020-25, you can go back to the question and change your answers. [Click here to see how you can go back and change your answer.](#)

If you are willing to pay the amounts shown as "Total payable by you" in the bill estimate below please click NEXT to finish off the survey.

Residential water charges	How much you will pay each year	Additional service that Hunter Water will provide during 2020-25	Your estimated Maximum annual bill 2020-25	Your estimated trimester bill 2020-25
Water service charge	\$95.0		\$95.0	\$31.67
Sewer service charge	\$620.0		\$620.0	\$206.67
Environmental Improvement Charge	\$39.0		\$39.0	\$13.0
Stormwater drainage charge	\$0.0		\$0.0	\$0.0
Water usage charge	\$976.0	kL consumed by household	\$976.0	\$325.33
Subtotal before additional charges	\$1730.0		\$1730.0	\$576.67
Bankwork and landscaping of Hunter Water's open stormwater drains	\$0.0-50.0 per year for 2020-25	0.0-6.0 kilometers naturalised	\$50.0	\$16.67
Increasing Hunter Water's carbon footprint	\$0.2-3.0 per year for 2020-25	0.0-2000.0 cars off roads	\$3.0	\$1.0
Increasing Hunter Water's stormwater harvesting	\$1.0-4.0 per year for 2020-25	40.0-150.0 ML harvested	\$4.0	\$1.33
Increasing Hunter Water's wastewater recycling for business and industry	\$0.0-30.0 per year for 2020-25	1000.0-1800.0 ML recycled	\$30.0	\$10.0
Increasing Hunter Water's wastewater recycling for irrigation	\$0.5-5.0 per year for 2020-25	248.0-400.0 ML recycled	\$5.0	\$1.67
Increasing Hunter Water's water conservation programs	\$1.0-1.5 per year for 2020-25	30000.0-50000.0 household supported	\$1.5	\$0.5
Wallend Flood Levy	\$10.0-15.0 per year for 2020-25		\$15.0	\$5.0
Subtotal after additional charges			\$1838.5	\$612.83
Pensioner rebate - water			\$0.0	\$0.0
Pensioner rebate - wastewater			\$0.0	\$0.0
Total payable by you			\$1838.5	\$612.83

Benefits to the utility, and to climate-related outcomes

Customers were very engaged with Hunter Water's survey, as shown by the number of responses (680 households) and high completion ratio (93%). Customers also indicated that they appreciated the opportunity to provide input into shaping future activities, particularly environmental services.

Around 75% of respondents were willing to pay \$1 or more towards reducing carbon emissions and approximately half said they were willing to pay an extra \$6 on bills each year (see Figure 51). This amount would be a very small percentage increase to a typical household's water bill. The findings are compelling because they require customers to prioritise carbon reduction against other environmental outcomes and personal budget constraints.

The responses to the sentiment questions aligned with the willingness to pay findings. For example, 89% of respondents supported taking action now to address climate change and 94% supported using renewable energy (see Figure 52). This alignment provides additional confidence in the reliability of the results.

By conducting the survey Hunter Water has piqued customer curiosity and gained robust insights. It can confidently continue to investigate and implement carbon reduction initiatives knowing it has a mandate from customers and robust evidence to support recovery of the costs through regulated prices.

FIGURE 51 Willingness to pay results – carbon footprint

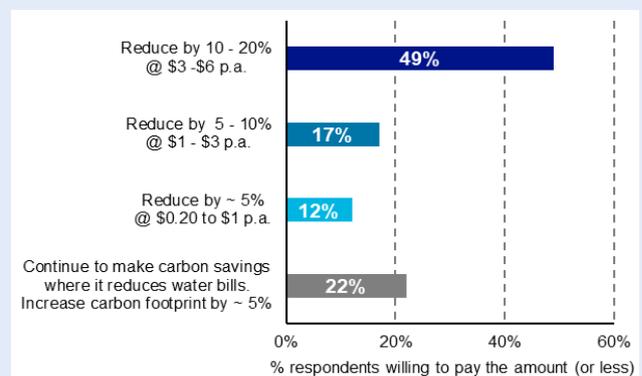


FIGURE 52 Results from sentiment questions

