ICRC
independent competition and regulatory commission

Update to estimated water abstraction charges

Executive Summary

As requested by the Treasury and EPSDD, this brief is to provide an update on water abstraction charges based on the commission's recommended approach and/or alternative inputs provided by the Office of Water (OoW).

We recommended that the WAC comprises of two components, being:

- a water sustainability charge, reflecting the estimated economic value of water and negative environmental externalities associated with extracting water for consumptive purposes
- a water planning and management (WPM) charge, reflecting the costs associated with planning and managing water and catchment areas in the ACT.

The WPM is consistent across our recommended approach and the OoW alternatives. This charge has increased significantly (i.e. by 26% for 2024-25) since our last submission through updates to inputs.

OoW supplied a range of scenarios for costing of the sustainability charge. Overall, the OoW approach results in the lower WAC estimates compared with our approach. The main point of comparison with our recommendation is OoW's Scenario 1 (S1), which represents high net extraction and a medium cost of water recovery.

For the period 2024-25 to 2027-28 total WAC revenue (potable water) under S1 (OoW) would be 33% lower than it under the current approach and 9% lower under S2 (ICRC).

The impact on customer bills is less than the impact on water prices, because the change to water abstraction charges only impacts the water component of customer's bills while not impacting sewerage service costs.

- In 2024-25, the estimated reduction in the water and sewerage bill for an average residential customer is 1.4% under S1 (OoW) and 0.3% under S2 (ICRC), respectively. This reduction will increase to 5.5% under S1 and 1.6% under S2 by 2027-28.

Background

On 21 February 2024, the commission submitted to the ACT Government its report on the ACT's water abstraction charge (WAC) pricing methodology review. We recommended that the WAC comprises of two components, being:

- a water sustainability charge, reflecting the estimated economic value of water and negative environmental externalities associated with extracting water for consumptive purposes
- a water planning and management (WPM) charge, reflecting the costs associated with planning and managing water and catchment areas in the ACT.

Based on our recommended methodology and data available at that time, we estimated the charges for 2023-24 to 2027-28.

In November 2024, the Treasury requested us to provide updated WAC figures for 2024-25 to 2027-28 based on the most up to date information using the commission's recommended methodology. In addition,

we were asked to calculate the WAC figures using alternative inputs recommended by the OoW in estimating water sustainability charge. This includes:

- measuring net extractions as a percentage of total extractions and total flows out of the ACT, ranging between 1.83% and 36.55%
- using actual costs associated with water recovery for estimating environmental externalities, ranging between $3,798/ML and $9,245/ML.

In addition, the OoW provided actual capital and operating costs for 2023-24 for all WPM activities and additional cost estimates for a range of projects for inclusion over the forecast period.

WPM charge update

We re-calculated the WPM charge based on our recommended methodology outlined in the report and recent available data below:

- actual capital and operating costs for 2023-24, and any additional costs identified by OoW
- updated cost of debt and inflation forecast

Detailed information and calculation are in Attachment A. Table 1 presents the estimated WPM charges for 2024-25 to 2027-28. These are significantly higher than our previous estimates mainly reflecting higher operating expenditure forecast recently provided by OoW.

Table 1 Estimated WPM charges, cents per kL, nominal

	2024-25	2025-26	2026-27	2027-28
WPM charge	29.2	36.3	37.6	39.5

Source: our calculation based on OoW data.

Water sustainability charge update[1]

Water scarcity values and environmental externalities are difficult to identify and accurately estimate. Our recommended approach is forward-looking, which is seeking to approximate a value for environmental externalities relevant to the current regulatory period. Our aim is to provide a price signal to consumers about the scarcity of the water resource and its importance to sustaining the environment. We consider the cost of recovering water via efficiency projects is an appropriate approximation of negative environmental externalities at this point in time.

OoW recommended using the historic costs associated with water recovery for estimating environmental externalities. We note that majority of historic water purchases occurred prior to 2013 and the cost of permanent water entitlements has increased significantly since that time. Therefore, we do not consider

[1] We proposed calculating the economic value of water using the forecast price of water allocations in the Southern MDB published by ABARES each year. However, ABARES advised that they don't have a plan to publish its forecast average allocation prices for 2024-25; therefore, we used the midpoint between the average and dry condition price forecasts for 2023-24 and adjusted for CPI in our model.

the use of historic water purchases to be a good indicator to provide efficiencies into the future. However, as requested, we estimated water sustainability charges based on OoW's preferred inputs.

Table 2 lists the estimated water sustainability charges for 2024-25 under different assumptions.

Table 2 Estimated water sustainability charges for 2024-25, cents per kL

Scenario	Assumptions	2024-25
S1	OoW - High net extraction (36.55%), medium cost of water recovery ($6,522/ML)	13.8
S2	ICRC – net abstraction of 40%, cost of water recovery of $16,794/ML ($2023-24)	30.6
S3	OoW - High net extraction (36.55%), high cost of water recovery ($9,245/ML)	17.6
S4	OoW - High net extraction (36.55%), low cost of water recovery ($3,798/ML)	10.1
S5	OoW - Low net extraction (1.83%), high cost of water recovery ($9,245/ML)	0.89
S6	OoW - Low net extraction (1.83%), medium cost of water recovery ($6,522/ML)	0.69
S7	OoW - Low net extraction (1.83%), low cost of water recovery ($3,798/ML)	0.51

Note: OoW agreed to assuming costs they provided are in $2023-24.
Source: our calculation.

Estimated WACs for 2024-25 to 2027-28

As per our recommended approach, both WPM charge and the water sustainability charge apply to potable water, while only the water sustainability charge applies to non-potable water (surface water and groundwater). This results in a total notional WAC charge for 2024-25 of:

- 43.1c per kL for potable water (39.4% lower than the current rate), and 13.8c per kL for non-potable water (59.8% lower) – Scenario 1 (OoW)
- 59.8c per kL for potable water (15.7% lower) and 30.6c per kL for non-potable water (11% lower) – Scenario 2 (ICRC).

We estimate WAC rates for 2025-26 to 2027-28 by using our forecasts for the WPM charge and applying forecast CPI to the sustainability charge. Table 3 presents estimated WACs under the key scenarios (S1 and S2).

Table 3 Estimated WACs for 2024-25 to 2027-28, cents per kL

	Potable water			Non-potable water		
	Current approach	S1 - OoW	S2 - ICRC	Current approach	S1 - OoW	S2 - ICRC
2024-25	71.1	43.1	59.8	35.4	13.8	30.6
2025-26	73.2	50.5	67.8	35.4	14.2	31.5
2026-27	75.4	52.2	69.9	36.5	14.6	32.3
2027-28	77.7	54.5	72.8	37.6	15.0	33.2

Note: indexation value of 3% applied to calculate WAC rates under current approach since 2025-26.
Source: our calculation.

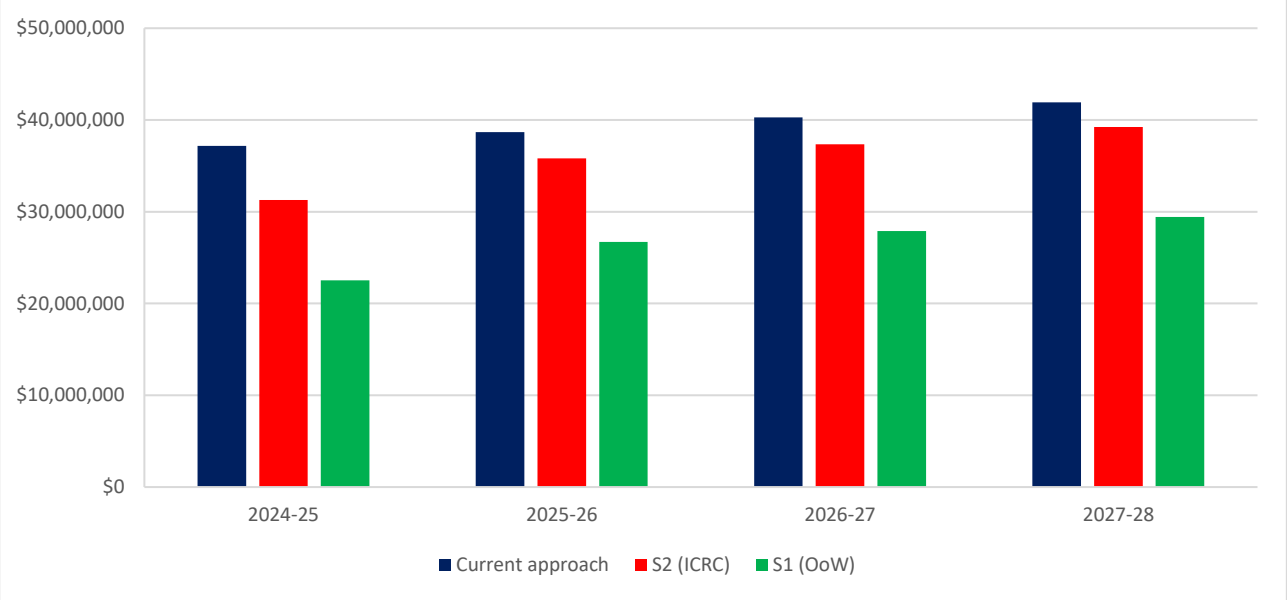
Attachment B presents estimated WACs and their impacts under other scenarios.

Financial impacts

We assessed the financial impacts of the estimated WAC rates under key scenarios on consumers of potable water by examining the indicative bill impacts at the average consumption level.

Figure 1 shows that over the period 2024-25 to 2027-28 total WAC revenue (potable water) under S1 (OoW) would be 33% lower than it under the current approach and 9% lower under S2 (ICRC).

Figure 1 Estimated WAC revenue, nominal

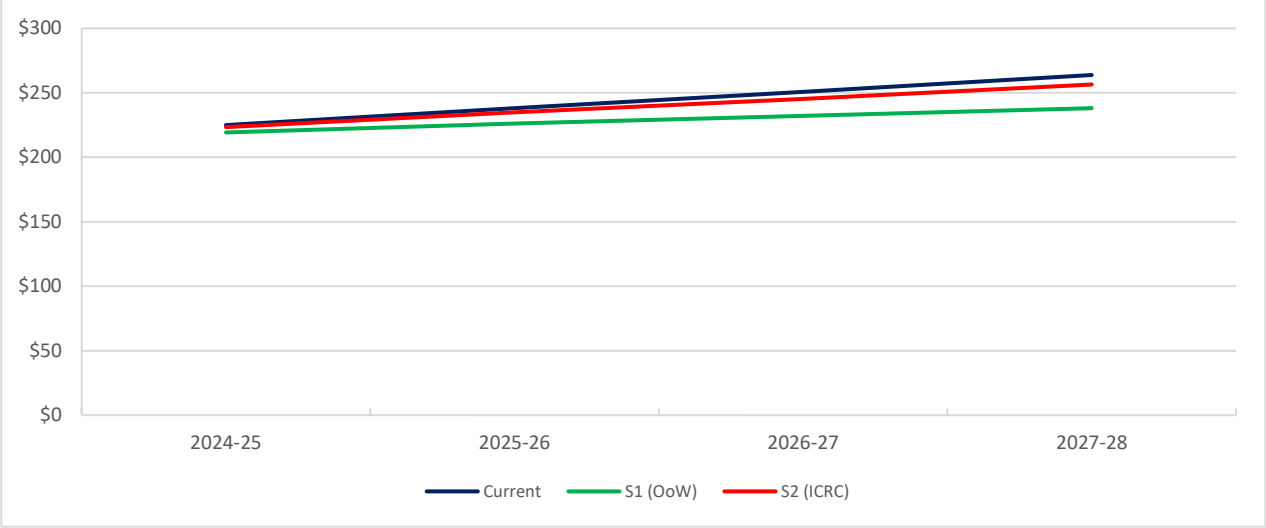


Source: our calculation.
The impact on the water supply charge and the water usage rates are shown in Figure 2 and **Source**: our calculation.

Figure 3, respectively.

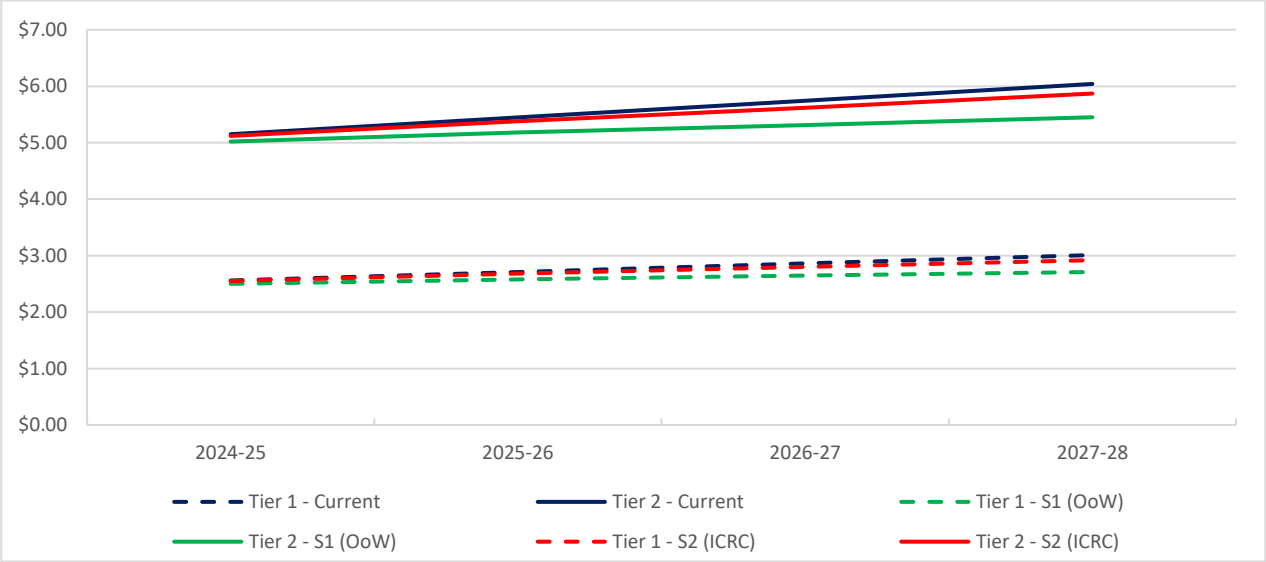
- In 2024-25, the supply charge and usage rates would have been 2.5% lower under S1 (OoW) and 1% lower under S2 (ICRC) than the current rates.
- By the end of the regulatory period (2027-28), the supply charge and usage rates would be 10% lower under S1 (OoW) and 3% lower under S2 (ICRC) compared with the current rates.

Figure 2 Water supply charge, $/year, nominal



Source: our calculation.

Figure 3 Water usage charges, $/kL, nominal



Source: our calculation.

Table 4 compares indicative annual combined water and sewerage bill for an average customer[2] under current rates and key scenarios. Overall, the impact on the combined bill is less than the impact on water prices, because the change to water abstraction charges only impacts the water component of customer's bills.

[2] A residential customer who consumes 200kL water per year, and a non-residential customer who uses 5,000kL water per year and has 50 billable fixtures.

- In 2024-25, the estimated reduction in the water and sewerage bill for an average residential customer (consuming 200kL water per year) is 1.4% under S1 (OoW) and 0.3% under S2 (ICRC), respectively. This reduction will increase to 5.5% under S1 and 1.6% under S2 by 2027-28.
- The estimated reduction for a non-residential customer using 5,000kL water per year with 50 billable fixtures is 1.2% in 2024-25 and increasing to 4.5% in 2027-28 under S1. Under S2, the reduction is 0.3% in 2024-25 and increasing to 1.3% by 2027-28.

Table 4 Indicative annual water and sewerage bill impacts for a typical customer, $nominal

	2024-25	2025-26	2026-27	2027-28
Residential customer consuming 200kL water per year				
Current rates	$1,338	$1,420	$1,503	$1,589
S1 (OoW)	$1,320	$1,381	$1,440	$1,501
S2 (ICRC)	$1,334	$1,410	$1,485	$1,563
Non-residential customer consuming 5,000kL water per year with 50 billable fixtures				
Current rates	$54,361	$57,722	$61,114	$64,678
S1 (OoW)	$53,720	$56,388	$58,989	$61,760
S2 (ICRC)	$54,214	$57,377	$60,520	$63,837

Source: our calculation.

Attachment A - Calculation of WPM charge

Table A. 1 Forecast operating and capital expenditure and other revenue, $nominal

	2024-25	2025-26	2026-27	2027-28
Operating expenditure	$12,496,401	$15,546,775	$15,553,655	$15,880,163
Capital expenditure	$5,944,754	$11,658,952	$10,755,788	$11,055,334
Other revenue	$131,963	$137,836	$143,935	$150,267

Source: OoW and our calculations.

Table A. 2 Regulatory asset base, $nominal

	2024-25	2025-26	2026-27	2027-28
Opening RAB	$29,709,705	$34,706,662	$45,064,024	$54,256,948
forecast capital expenditure	$5,944,754	$11,658,952	$10,755,788	$11,055,334
Indexation	$914,955	$1,134,834	$1,412,153	$1,673,708
Depreciation	$1,862,752	$2,436,424	$1,975,017	$3,528,683
Closing RAB	$34,706,662	$45,064,024	$54,256,948	$63,457,307

Source: OoW and our calculations.

Table A. 3 Building blocks, $nominal

	2024-25	2025-26	2026-27	2027-28
Return on capital	$1,946,919	$2,442,540	$3,076,433	$3,688,634
plus depreciation	$1,862,752	$2,436,424	$1,975,017	$3,528,683
less indexation	$914,955	$1,134,834	$1,412,153	$1,673,708
plus opex	$12,496,401	$15,546,775	$15,553,655	$15,880,163
less other revenue	$131,963	$137,836	$143,935	$150,267
plus tax payable	$46,248	$57,617	$71,918	$85,456
less imputation credits	$23,124	$28,809	$35,959	$42,728
Total revenue requirement	$15,282,277	$19,182,876	$20,084,977	$21,316,233

Source: OoW and our calculations.

Table A. 4 Forecast volumes and estimated WPM charges, $nominal

	2024-25	2025-26	2026-27	2027-28

ss, ML	52,307	52,845	53,414	53,952
WPM charge, $/kL	0.29	0.36	0.38	0.40

Source: our calculations.

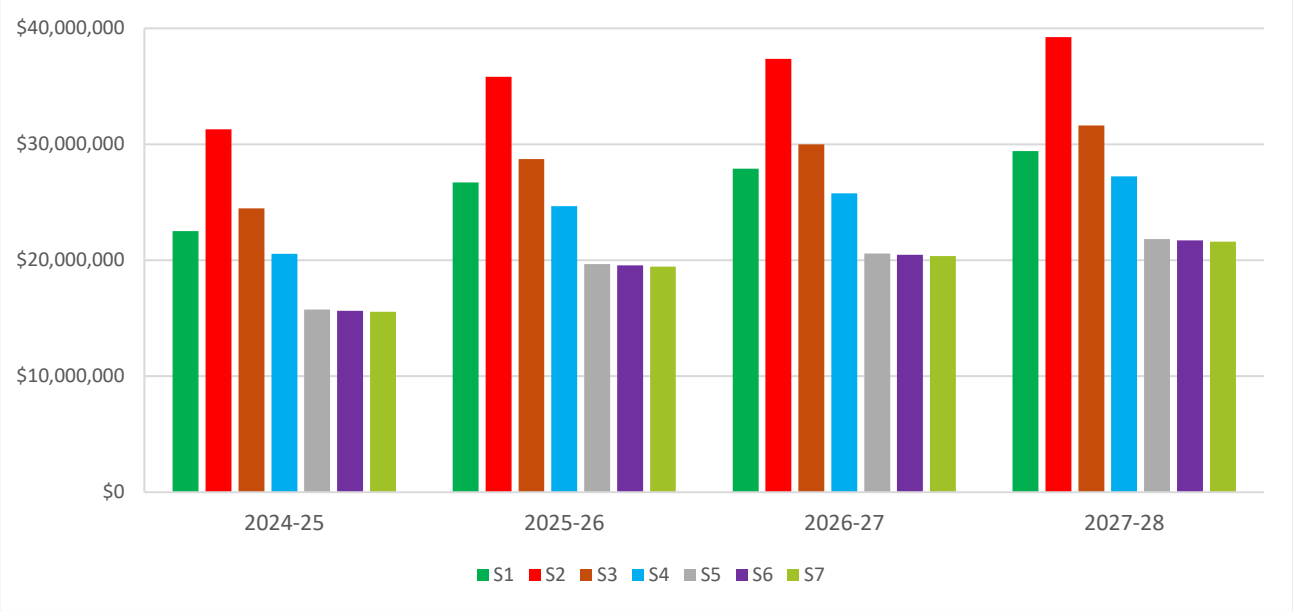
Attachment B - Sensitivity test

Table B. 1 Estimated WAC rates under different scenarios, cents per kL, nominal

		2024-25	2025-26	2026-27	2027-28
Potable water	S1	43.1	50.5	52.2	54.5
	S2	59.8	67.8	69.9	72.8
	S3	46.8	54.4	56.2	58.6
	S4	39.3	46.7	48.3	50.5
	S5	30.1	37.2	38.5	40.5
	S6	29.9	37.0	38.3	40.3
	S7	29.7	36.8	38.1	40.1
Non-potable water	S1	13.8	14.2	14.6	15.0
	S2	30.6	31.5	32.3	33.2
	S3	17.6	18.1	18.6	19.1
	S4	10.1	10.4	10.7	11.0
	S5	0.88	0.90	0.93	0.96
	S6	0.69	0.71	0.73	0.75
	S7	0.51	0.52	0.53	0.55

Source: our calculations.

Figure B. 1 Estimated total WAC charges (potable water), $nominal



Source: our calculations.

Table B. 2 Water supply charge usage charges, $nominal

		2024-25	2025-26	2026-27	2027-28
S1	Supply charge, $/year	219.25	226.24	232.07	238.06
	Tier 1, $/kL	2.50	2.58	2.65	2.71
	Tier 2, $/kL	5.02	5.18	5.31	5.45
S2	Supply charge, $/year	223.39	234.81	245.38	256.44
	Tier 1, $/kL	2.55	2.68	2.80	2.92
	Tier 2, $/kL	5.12	5.38	5.62	5.87
S3	Supply charge, $/year	220.19	228.17	235.04	242.13
	Tier 1, $/kL	2.51	2.60	2.68	2.76
	Tier 2, $/kL	5.04	5.22	5.38	5.54
S4	Supply charge, $/year	218.31	224.30	229.10	234.00
	Tier 1, $/kL	2.49	2.56	2.61	2.67
	Tier 2, $/kL	5.00	5.14	5.25	5.36
S5	Supply charge, $/year	215.95	219.51	221.79	224.10
	Tier 1, $/kL	2.46	2.50	2.53	2.55
	Tier 2, $/kL	4.95	5.02	5.07	5.12
S6	Supply charge, $/year	215.90	219.41	221.64	223.90
	Tier 1, $/kL	2.46	2.50	2.53	2.55

	Tier 2, $/kL	4.94	5.02	5.08	5.13
S7	Supply charge, $/year	215.85	219.31	221.79	224.10
	Tier 1, $/kL	2.46	2.50	2.53	2.55
	Tier 2, $/kL	4.94	5.02	5.07	5.12

Source: our calculations.

Table B. 3 Indicative annual combined water and sewerage bills, $nominal

	2024-25	2025-26	2026-27	2027-28
Residential customer using 200kL water per year				
S1	$1,320	$1,381	$1,440	$1,501
S2	$1,334	$1,410	$1,485	$1,563
S3	$1,323	$1,387	$1,450	$1,515
S4	$1,317	$1,375	$1,429	$1,488
S5	$1,308	$1,357	$1,405	$1,453
S6	$1,308	$1,357	$1,405	$1,453
S7	$1,308	$1,357	$1,405	$1,453
Non-residential customer using 5,000kL water per year with 50 billable fixtures				
S1	$53,720	$56,388	$58,989	$61,760
S2	$54,214	$57,377	$60,520	$63,837
S3	$53,818	$56,586	$59,334	$62,206
S4	$53,621	$56,190	$58,690	$61,316
S5	$53,372	$55,645	$57,851	$60,178
S6	$53,324	$55,597	$57,851	$60,178
S7	$53,324	$55,597	$57,803	$60,130

Source: our calculations.