

Review on the reporting of the Water Abstraction Charge

1 Project

The Australian Capital Territory (ACT) Environment, Planning and Sustainable Development Directorate, Office of Water, aims to improve the accountability and transparency of costs incurred and recovered through the Water Abstraction Charge.

The Terms of Reference for this review are shown at **Attachment A**.

2 Water Abstraction Charge

The ACT Government levies a regulatory water charge called the Water Abstraction Charge.

The charge is imposed to recover catchment management costs and to reflect the environmental cost of the extraction of water and the value of water as a resource. The costs are incurred by the Government, as opposed to [Icon Water].¹

The Water Abstraction Charge is charged to water licence holders. The Charge is collected from Icon Water for urban potable water and the Environmental Protection Authority for non-potable water. Icon Water passes the charge onto its customers in addition to charges to recover the water delivery and sewerage system costs borne by Icon Water.

The Water Abstraction Charge is made by the ACT Water Minister through a determination under Section 107 of the Water Resources Act 2007. The current Water Abstraction Charge is made in the *Water Resource (Fees) Determination 2022 (No. 2)*.²

A separate statutory body, the Independent Competition Regulatory Commission (ICRC) regulates pricing in relation to bodies providing water, electricity and sewerage services. The ICRC makes price directions to Icon Water for charges to recover water delivery and sewerage costs. The ICRC has no legislative responsibilities in setting the Water Abstraction Charge.³

¹ ACT Government. (2003). *Disallowable instrument utilities (water abstraction charge) Ministerial Direction 2003 (No 1): Explanatory Statement*. <https://www.legislation.act.gov.au/di/2003-333/default.asp>

² Rattenbury. (2022). *Water Resources (Fees) Determination 2022 (No. 2)*. <https://www.legislation.act.gov.au/di/2022-194/>

³ ACT Government. (2022). *Independent Competition and Regulatory Commission Act*. <https://www.legislation.act.gov.au/a/1997-77/default.asp>

In 2003, the ACT Government asked the ICRC to advise an appropriate methodology to calculate the Water Abstraction Charge, and an appropriate charge.⁴

The ICRC calculated the Water Abstraction Charge based on three components:

1. *Water Supply Costs*: this is the recovery of costs for catchment management, biodiversity and environmental monitoring, environment protection, water utility regulation, health monitoring and regulation, water policy and legal services,⁵
2. *Environmental Cost*: this is a value estimated for the cost to the environment caused by altering the timing and magnitude of downstream flows by retaining water in dams and abstracting it in the ACT,⁶ and
3. *Scarcity Value*: this is the value associated with the consumptive use of water in the ACT that prevents alternative use for other economically valuable purposes such as irrigation.⁷

Since the original calculation of the Water Abstraction Charge the ACT Government has:

- agreed 'Water Charge Rules', as the basis of the price of regulatory water charges (discussed in the *Water Charge Rules* section), and
- made several increases to the Water Abstraction Charge discussed in the *Calculating the Water Abstraction Charge* section).

3 Water Charge Rules

Subsequent to the ICRC advice on the Water Abstraction Charge, Australian governments, including the ACT Government, codified objectives and principles for the pricing of regulatory water charges. These are in the:

- Murray-Darling Basin Water Charge Pricing objectives and principles, legislated in 2007,⁸ and
- National Water Initiative Pricing Principles, agreed in 2010.⁹

⁴ Ninety-eight percent of the Water Abstraction Charge comes from an Urban Water Supply Charge. The 2003 review by the Independent Competition Regulatory Commission only related to the Urban Water Supply component of the Water Abstraction Charge and the ICRC called the 'Urban Water Supply' the 'Water Abstraction Charge'. Budget papers have also mostly called the 'Urban Water Supply Charge' the 'Water Abstraction Charge'.

⁵ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁶ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁷ Office of the Commissioner for Sustainability and the Environment. (2018). *The Heroic and the Dammed – Lower Cotter Catchment restoration and evaluation*. <https://nla.gov.au/nla.obj-1885755327/view>

⁸ Australian Government. (2007). Water Act, Part 4 and Schedule 2. <https://www.legislation.gov.au/Details/C2017C00151>

⁹ Australian Government. (2010) *National Water Initiative Water Pricing Principles*. <https://www.dcceew.gov.au/water/policy/policy/nwi/pricing-principles>

These are known as Water Charge Rules. They are based on full cost recovery, and include:

- Water Planning and Management costs,
- Environmental Externalities,¹⁰ and
- Capital Costs.

They specify there should be no cost recovery through water pricing for:

- costs relating to the business of Government, and
- costs that are recouped through other revenue, such as rates and development costs.

The Commonwealth Water Minister may make regulated water charges for Basin States and the ACT in accordance with the *Water Charge Rules 2010* instrument.¹¹ The Commonwealth Water Minister has not exercised this power with respect to the ACT.

The ACT's Water Abstraction Charge has not been updated to be consistent with the Water Charge Rules. A comparison of the costs in the Water Abstraction Charge with eligible costs in the Water Charge Rules show:

- the Water Supply Costs in the Water Abstraction Charge seem mostly equivalent to Water Planning and Management Costs in the Water Charge Rules, with potentially some differences, which are discussed in the *Strategic issues: Water Supply Costs* section.
- the Environmental Costs in the Water Abstraction Charge appear to be different to the Environmental Externalities in the Water Charge Rules. This is discussed in the *Strategic issues: Environmental costs* section.
- the Scarcity Value in the Water Abstraction Charge is not included in the Water Charge Rules. This is discussed in the *Strategic issues: Scarcity value* section.
- it is unclear if the Water Abstraction Charge includes Capital Costs as required in the Water Charge Rules. This is discussed in the *Strategic issues: Capital Costs* section.

3.1 The Australian Competition and Consumer Commission

The Australian Competition and Consumer Commission (ACCC) has legislative responsibility for monitoring regulated water charges and their compliance with the Water Charge Rules.

The ACT Government reports annually to the ACCC the monies received from water fees and charges (primarily the Water Abstraction Charge) and Water Planning and Management Costs identified by the ACT Government.

¹⁰ Australian Government. (2007). *Water Management Act, Schedule 2, Clause 5*. <https://www.legislation.gov.au/Details/C2017C00151>

¹¹ Australian Government. (2010). *Water Charge Rules 2010*. <https://www.legislation.gov.au/Details/F2020C00877>

The ACCC publishes an annual ACCC Water Monitoring Report for all jurisdictions, which includes the Water Abstraction Charge and its associated Water Supply costs in the ACT.¹² This is discussed further in the *Reporting on the Water Abstraction Charge costs* section.

4 Calculating the Water Abstraction Charge

4.1 2003-04 Water Abstraction Charge

The breakdown of the 2003-04 Water Abstraction Charge is shown in *Table 1*.

Table 1: Water Abstraction Charge in 2003¹³

Cost	Water Abstraction Charge Cents per kilolitre
Water Supply Costs	8.2
Environmental Costs	5.1
Scarcity Value	4.4
Recovery from the January 2003 bushfires	2.0
Sub-Total	19.7
Rounding up	0.3
Total	20.0

The method to calculate each cost component is discussed below.

4.1.1 Water Supply Costs

The Water Supply Costs were identified by the ACT Government. Water Supply Costs are those costs incurred by the Government that are directly attributable to the management, operation and administration of the ACT's water supplies (excluding costs incurred by ACTEW - now Icon Water).¹⁴

Costs include:

- weed and feral animal control,
- erosion control through revegetation,
- boundary maintenance including fencing,
- riverine strip fencing,
- maintenance of access roads and tracks
- ranger patrols for inappropriate activities and illegal entry,

¹² ACCC. (2022). *ACCC water monitoring report*. <https://www.accc.gov.au/publications/accc-water-monitoring-report>

¹³ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

¹⁴ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

- community education relating to catchment and environmental management
- managing visitor activities,
- fire pre-suppression/suppression,
- water resource licensing,
- monitoring water quality and flows,
- regulating activities which affect water quality and fishing, and
- salaries and related costs for water policy and administrative roles.¹⁵

The Water Supply Cost per kilolitre is calculated by dividing the total Water Supply Costs by the total volume of water abstracted.

4.1.2 Environmental Costs

The ICRC estimated Environmental Costs by taking the average cost of water recovered for the environment and multiplying it by the 10-year government bond average interest rate. Total Environmental Costs were then applied across the proportion of water not returned to the river through the water treatment plant against the total water abstracted to calculate cents per kilolitre.¹⁶

The calculation of the Environmental Costs is shown in Table 2.

Table 2: Calculation of the environmental costs¹⁷

	Calculation component	Unit	Metric
a.	Water abstracted	65	gigalitres
b.	Water not returned through the water treatment plant	30	gigalitres
c.	Percentage of water that remains in the ACT (b/a)	46	percent
d.	Average cost to recover water for the environment	2,000	dollars per megalitre
e.	Interest rate on 10-year government bond	5.4	percent
f.	Cost per megalitre (d * e)	111	dollars per megalitre
	Environmental Cost (f * c)/1,000	5.1	cents per kilolitre

The ICRC used the 10-year Government bond rate as a proxy for a risk-free rate of return.

¹⁵ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

¹⁶ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

¹⁷ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

4.1.3 Scarcity Value

The ICRC estimated total Scarcity value by using the weighted average temporary trade price in the Regulated Murrumbidgee valley for the previous two years and adding two-thirds of the price from the previous year to one-third of the price from two years earlier. The total Scarcity value was then applied across the proportion of water not returned through the water treatment plant against the total water abstracted to calculate cents per kilolitre.¹⁸

The calculation of the Scarcity value is shown in Table 3.

Table 3: Calculation of the Scarcity value

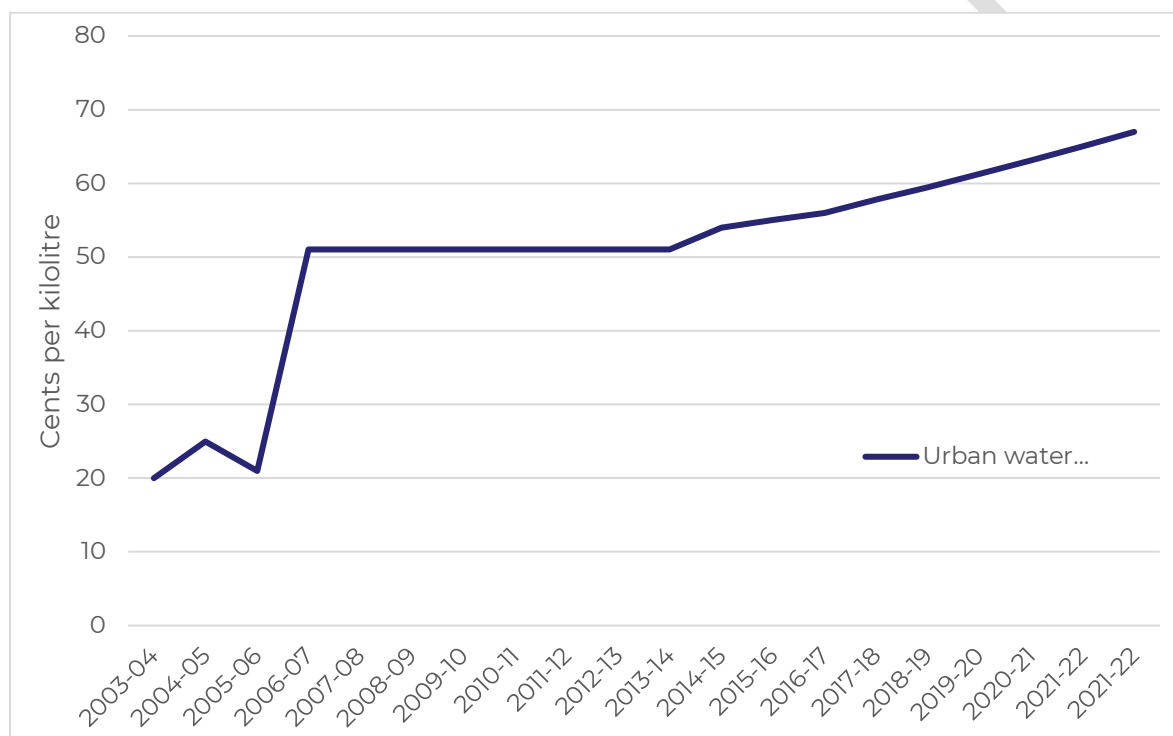
	Calculation component	Unit	Metric
a.	Water abstracted	65	gigalitres
b.	Water not returned through the water treatment plant	30	gigalitres
c.	Percentage of water that remains in the ACT (b / a)	46	percent
d.	Weighted average price of temporary water sales in the Murrumbidgee River in 2001-02	48	dollars per megalitre
e.	Weighted average price of temporary water sales in the Murrumbidgee River in 2002-03	120	dollars per megalitre
f.	Weighting two average prices (d / 3) + (e * 2 / 3)	96	dollars per megalitre
	Environmental Cost (f * c)/1,000	4.4	cents per kilolitre

¹⁸ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

4.2 2022-23 Water Abstraction Charge

The 2022-23 Water Abstraction Charge is 67 cents per kilolitre.¹⁹ Figure 1 shows changes to the charge since 2003-04.

Figure 1: Water Abstraction Charge²⁰



In 2006, the then Treasurer explained:

the additional revenue from the 30 cents increase in the WAC provides a return on a valuable resource and assists in managing the demand for water.²¹

The increase in 2014-15 and 2015-16 was explained in the Budget papers:

This increase maintains the intent of the WAC in reflecting the economic value of water as a scarce resource in the Territory.^{22, 23}

The ACT Government has applied annual indexation of three percent since 2017-18.²⁴

¹⁹ ACT Government. (2022). *Water Resources (Fees) Determination 2022*.

<https://www.legislation.act.gov.au/di/2022-138/#~:text=Water%20Resources%20%28Fees%29%20Determination%202022%20Number%20DI2022-138,Made%20under%20Water%20Resources%20Act%202007%2C%20s%20107>

²⁰ ACT Government. (2022). *Disallowable Instruments*.

<https://www.legislation.act.gov.au/Notifications?category=cDis>

²¹ Stanhope. (2006). *Estimates 2006: Questions on Notice: 60 - Water Abstraction Charge*.

https://www.parliament.act.gov.au/_data/assets/pdf_file/0008/382427/Stanhope_Treasurer_2006.pdf

²² ACT Government. (2014). *2014-15 Budget Paper No. 3: Revenue Initiatives*.

https://www.treasury.act.gov.au/_data/assets/pdf_file/0013/601150/New-Initiatives.pdf

²³ ACT Government. (2015). *2015-16 Budget Paper No. 3: New Initiatives*.

https://www.treasury.act.gov.au/_data/assets/pdf_file/0005/733766/BP3-Chapter-3-New-Initiatives.pdf

²⁴ ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*.

https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

The comparative contribution of each cost component for the 2003-04 and 2022-23 Water Abstraction Charges is shown in Table 4.

Table 4: The comparative contribution of each cost component for the 2003-04 and 2022-23^{25, 26}

	Water Abstraction Charge in 2003-04 (cents per kilolitre)	Water Abstraction Charge in 2022-23 (cents per kilolitre)
Water Supply Costs	8.2	9.8
Environmental Costs	5.1	6.1
Scarcity Value	4.4	45.9
Recovery from the January 2003 bushfires	2.0	2.4
Other charges not explained in Budget papers		2.4
Sub-Total	19.7	66.6
Rounding up	0.3	0.4
Total	20.0	67.0

The Water Abstraction Charge in 2022-23 has been calculated by the 2003-04 cost breakdown (*Table 1*) reported by ICRC, and increasing costs based on the explanations provided in in annual Budget Papers. The increase in each cost is explained below:

- Water Supply Costs of 8.2 cents per kilolitre in 2003-04 were increased by 3 percent annually from 1 July 2017,²⁷ reaching 9.8 cents per kilolitre in 2022-23.
- Environmental costs of 5.1 cents per kilolitre in 2003-04 were increased by 3 percent annually from 1 July 2017,²⁸ reaching 6.1 cents per kilolitre in 2022-23.

²⁵ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge*<https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

²⁶ Rattenbury. (2022). *Water Resources (Fees) Determination 2022*. <https://www.legislation.act.gov.au/di/2022-138/#:~:text=Water%20Resources%20%28Fees%29%20Determination%202022%20Number%20DI2022-138,Made%20under%20Water%20Resources%20Act%202007%2C%20s%20107>

²⁷ ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*. https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

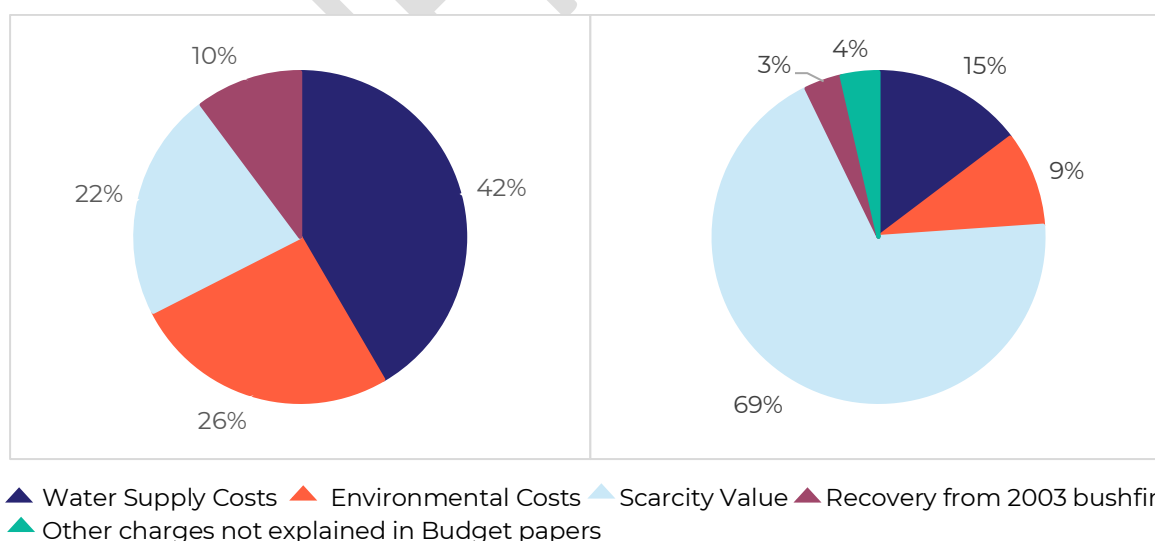
²⁸ ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*. https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

- Scarcity value of 4.4 cents per kilolitre in 2003-04 was increased by 30 cents in 2006-07,²⁹ 3 cents in 2014-15,³⁰ 1 cent in 2015-16³¹ and 38.4 (4.4 plus 30 plus 3 plus 1) cents. In addition, it was increased by 3 percent per annum since 1 July 2017,³² reaching 45.9 cents per kilolitre in 2022-23.
- Recovery costs from the January 2003 bushfires of 2 cents per kilolitre were increased by 3 percent annually from 1 July 2017,³³ reaching 2.4 cents per kilolitre in 2022-23.
- Other charges, not explained in the Budget Papers, totalling 2.4 cents per kilolitre in 2022-23, are:
 - a 5-cent increase in 2004-05,
 - a 4 cent decrease in 2005-06,
 - a 1 cent increase in 2016-17 and
 - a 2 (5 minus 4 plus 1) cent increased by 3 percent per annum from 1 July 2017.³⁴

With the exception Scarcity Value, all costs have increased incrementally each year, roughly in line with inflation. However, the Scarcity Value has increased from 4.4 cents to 45.9 cents, being the biggest factor in the increase from 20 cents in 2003-04 to 67 cents in 2022-23.

The contribution of each cost to the Water Abstraction Charge is shown in Figure 2.

Figure 2: Water Abstraction Charge in 2003-04 (left) and 2022-23 (right)



²⁹ Stanhope. (2006). *Estimates 2006: Questions on Notice: 60 - Water Abstraction Charge*.
https://www.parliament.act.gov.au/_data/assets/pdf_file/0008/382427/Stanhope_Treasurer_2006.pdf

³⁰ ACT Government. (2014). *2014-15 Budget Paper No. 3: Revenue Initiatives*.
https://www.treasury.act.gov.au/_data/assets/pdf_file/0013/601150/New-Initiatives.pdf

³¹ ACT Government. (2015). *2015-16 Budget Paper No. 3: New Initiatives*.
https://www.treasury.act.gov.au/_data/assets/pdf_file/0005/733766/BP3-Chapter-3-New-Initiatives.pdf

³² ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*.
https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

³³ ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*.
https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

³⁴ ACT Government. (2017). *Australian Capital Territory Budget 2016-17: Budget Review*.
https://apps.treasury.act.gov.au/_data/assets/pdf_file/0009/1031688/2016-17-Budget-Review_.pdf

The Scarcity Value contribution to the Water Abstraction Charge was 22 percent in 2003-04 and 68.9 percent in 2022-23. The relative value of the other charges has declined in proportion to the Scarcity Value charge.

4.2.1 Updating the Scarcity Value

To understand if the increase in the Scarcity Value is consistent with the ICRC method, a Scarcity Value has been assessed using the method recommended by the ICRC and recent data.

The Independent Competition and Regulatory Commission recommended that the Scarcity Value be calculated using the weighted average temporary trade price in the regulated Murrumbidgee River.³⁵

The weighted average price for temporary trades in the regulated Murrumbidgee River used by the ICRC were:

- \$120 per megalitre in 2002-03, and
- \$48 per megalitre in 2001-02.³⁶

Weighting the temporary price by two thirds for the previous year, and one third for the two years prior gave a weighted average cost of \$96 per megalitre.

The weighted average price for temporary trades in the regulated Murrumbidgee River for the last two years were:

- \$80 per megalitre in 2021-22, and
- \$72 per megalitre in 2020-21.³⁷

Weighting the temporary price by two thirds for the previous year, and one third for the two years prior gave a weighted average cost of \$77 per megalitre.

That is, the price of Murrumbidgee temporary trades in 2020-21 and 2021-22 was lower than the price in 2001-02 and 2002-03. It does not support a more than 10-fold increase in the Scarcity Value from 4.4 cents in 2003-04 to 45.9 cents in 2022-23.

The relevance of this calculation is discussed further in *Contributions to the Water Abstraction Charge - Scarcity value - Estimating the scarcity value* section.

5 Strategic issues

5.1 Reporting on the Water Abstraction Charge method

The National Water Initiative Pricing Principles state:

³⁵ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

³⁶ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

³⁷ WaterNSW. (2022). *NSW Water Register*. <https://waterregister.watarnsw.com.au/water-register-frame>

*urban water tariffs should be set using a transparent methodology, through a process which seeks and takes into account public comment, or which is subject to public scrutiny.*³⁸

The ICRC recommended:

the methodology for determining and applying the WAC should satisfy the following assessment criteria:

- *transparency;*
- *reliability – such that reasonability and measurability tests can be met;*
- *flexibility; and*
- *legality.*³⁹

There is no reporting on the method to calculate the Water Abstraction Charge annually. In some years, the public Budget papers have reported the reason, but not the method, for increases in the Water Abstraction Charge (see the *Calculating the Water Abstraction Charge* section).

Recommendation: That the method to calculate the Water Abstraction Charge is published annually.

5.2 Reporting on the Water Abstraction Charge costs

5.2.1 Reporting costs to the public

In June 2022 Cabinet agreed to establish a new Office of Water. One of its objectives is to:

*improve access to and understanding of water information...*⁴⁰

The ICRC recommended:

*the WAC should, to the extent possible, reflect actual costs that are incurred by the ACT Government or costs that are reflected in imposts that are borne as a result of the ACT's abstraction of water for consumptive purposes. The WAC should be determined on an annual basis with any change in the WAC to take effect from 1 July of each year.*⁴¹

The Office of the Commissioner for Sustainability and the Environment has reported that:

³⁸ Australian Government. (2010) *National Water Initiative Water Pricing Principles*. <https://www.dcccew.gov.au/water/policy/policy/nwi/pricing-principles>

³⁹ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁴⁰ ACT Government. (2022). *Introducing the Office for Water*. <https://www.environment.act.gov.au/home/home-news-listing/introducing-the-office-for-water>

⁴¹ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

*recent exercises to reconcile the amount collected in WAC revenue...with the water related expenditure...highlights the amount collected significantly exceeds the amount spent.*⁴²

There is no public reporting on the costs incurred against the Water Abstraction Charge.

The Office of the Commissioner for Sustainability and the Environment has recommended that the ACT Government:

*publish an annual detailed breakdown of how the Water Abstraction Charge revenue is expended.*⁴³

Recommendation: That the costs used to calculate the Water Abstraction Charge are published annually.

5.2.2 Reporting costs to the ACCC

The ACT Government reports annually to the ACCC the monies received from the Water Abstraction Charge and its associated Water Supply costs. Because reporting to the ACCC does not include Environmental Externalities or Scarcity value, costs reported by the ACCC will always be less than costs incurred under the Water Abstraction Charge.

The ACCC publishes an annual ACCC Water Monitoring Report for all jurisdictions, which includes the Water Abstraction Charge and the Water Planning and Management Costs.⁴⁴

The 'cost recovery rate' is the percentage of costs incurred compared to costs recovered. A cost recovery rate less than 100 percent means that costs are less than cost recovery. A cost recovery rate more than 100 percent means that cost recovery is higher than costs. The ACCC reported on the comparative cost recovery rate for Basin States (excluding Queensland) between 2014-15 and 2021-22, shown in Figure 3.

⁴² Office of the Commissioner for Sustainability and the Environment. (2018). *The Heroic and the Dammed – Lower Cotter Catchment restoration and evaluation*. <https://nla.gov.au/nla.obj-1885755327/view>

⁴³ Office of the Commissioner for Sustainability and the Environment. (2022). *State of the Lakes and Waterways in the ACT*. <https://envcomm.act.gov.au/wp-content/uploads/2022/08/State-of-the-Lakes-Report-Digital.pdf>

⁴⁴ ACCC. (2022). *ACCC water monitoring report*. <https://www.accc.gov.au/publications/accc-water-monitoring-report>

Figure 3: Rates of cost recovery for Basin states, 2014-15 to 2020-21⁴⁵

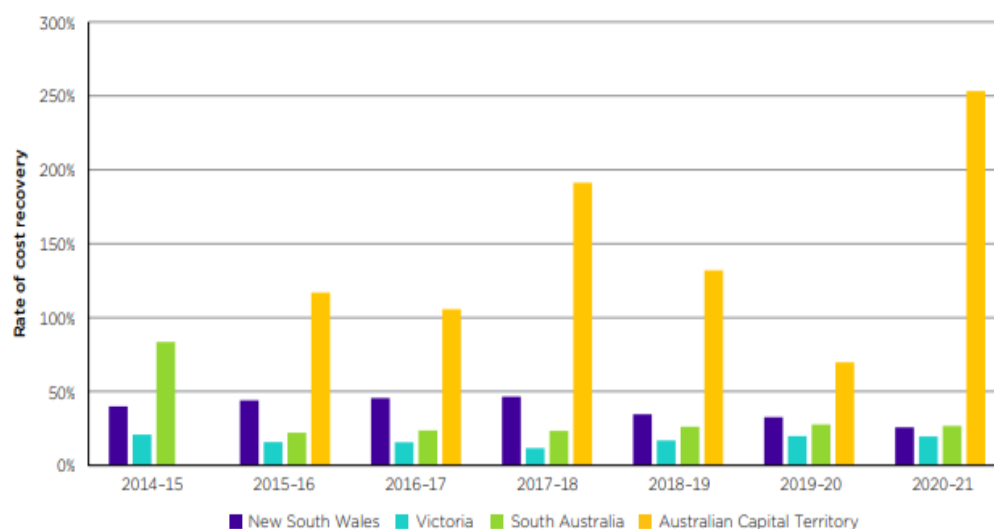


Figure 3 shows that the cost recovery rate reported to the ACCC for the ACT is the highest of the Basin states (excluding Queensland) and has exceeded 100 percent in every year since 2015-16 except in 2019-20. This is explained in part by:

- not all costs recovered in the ACT are reported to the ACCC (Environmental Externalities and Scarcity Value),
- and the ACT's reports capital costs to the ACCC in the year they are incurred, rather than over the life of the asset (see *Desktop assurance review of costs to be reported to the ACCC for the 2021-22 water year*).

These issues are discussed in more detail in: *Contributions to the Water Abstraction Charge - Environmental Costs*, *Contributions to the Water Abstraction Charge - Scarcity value*, and *Contributions to the Water Abstraction Charge - Capital Costs* sections.

5.3 No regulatory price setter

The National Water Initiative states:

*the Parties [the Commonwealth, States and Territories] agree to use independent bodies to set or review prices, or price setting processes, for water storage and delivery by government water service providers...*⁴⁶

The Productivity Commission has called for a revised National Water Initiative, which should:

*enhance the requirement for independent economic oversight by developing national principles, including for the application of price regulation.*⁴⁷

⁴⁵ ACCC. (2022). *Water Monitoring Report: 2020-21*.

https://www.accc.gov.au/system/files/Water%20Monitoring%20Report%202020-21_0.pdf

⁴⁶ Australian Government. (2004). *Intergovernmental agreement on a National Water Initiative*.

<https://www.dcccew.gov.au/sites/default/files/sitecollectiondocuments/water/Intergovernmental-Agreement-on-a-national-water-initiative.pdf>

⁴⁷ Productivity Commission. (2021). *National Water Reform 2020: Productivity Commission Inquiry Report*.

<https://www.pc.gov.au/inquiries/completed/water-reform-2020#report>

There is no body that has a regulatory role in setting the Water Abstraction Charge. The Water Abstraction Charge is set by the ACT Government through a determination under Section 107 of the Water Resources Act 2007.

Improved transparency of the method and costs related to the Water Abstraction Charge is required.

Recommendation: That the Water Abstraction Charge is independently reviewed and that the review is published.

Recommendation: That the review should advise on how often the Water Abstraction Charge should be reviewed.

5.4 Revenue raising

Section 90 of the Constitution confers exclusive power to the Commonwealth to collect customs, excise and bounties.

The ICRC sought legal advice on the ACT Government's powers to make certain charges or levies that could be interpreted as taxes or an excise under s90 of the Constitution.

The ICRC advised that to avoid a constitutional challenge, the Water Abstraction Charge should be made regarding the following principles:

- *that the quantum of the charge should reflect discernible and measurable costs to government (and therefore the community);*
- *discernible and measurable costs can include social and environmental as well as economic costs; and*
- *the charge should not be levied for revenue raising purposes.*⁴⁸

They also advised that:

*any consideration of amendments to the WAC level or the methodology used to set the WAC, other than those recommended in this report, should be consistent with these principles (listed in the preceding paragraph) in order to avoid the possibility of a constitutional challenge.*⁴⁹

There is no public information on the method to determine increases to the Water Abstraction Charge, so it is unclear if the ICRC principles were used when amendments were made to the subsequent Water Abstraction Charges.

⁴⁸ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁴⁹ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

The over recovery of costs is addressed in the National Water Initiative Pricing Principle 6, which says:

*where water usage charges lead to revenue recovery in excess of upper bound revenue requirements in respect of new investments, jurisdictions are to address the over recovery. In addressing the over recovery, revenues should be redistributed to customers as soon as practicable.*⁵⁰

In 2021-22, the Water Abstraction Charge raised \$29,886,564. Costs identified for water planning and management activities were only \$11,814,500, or 39 percent of revenue.⁵¹ Such a large difference between the revenue and costs are likely to invite questions about whether the Water Abstraction Charge includes a portion for the purpose of revenue raising.

Recommendation: That the independent review includes advice on whether part of the Water Abstraction Charge is levying charges for the purpose of revenue raising, and if so, what risk does that pose to the Government.

5.5 Contributions to the Water Abstraction Charge

5.5.1 Water Supply Costs

Water Supply Costs are called 'Water Planning and Management' costs in the Water Charging Rules.

Environmental management costs are included in Water Supply Costs (see the *Contributions to the Water Abstraction Charge - Environmental Externalities and cost recovery* section). This is consistent with the Water Charge Rules.

The Water Supply Costs in the Water Abstraction Charge calculation include:

*catchment management, biodiversity and environmental monitoring, environment protection, water utility regulation, health monitoring and regulation, water policy and legal services.*⁵²

Costs that are the business of Government, such as such as water reform, strategy and policy development, are not consistent with the Water Charge Rules or the Water Abstraction Charge Cost Framework developed under this project (see *Desktop assurance review of costs to be reported to the ACCC for the 2021-22 water year*).

⁵⁰ Australian Government. (2010) *National Water Initiative Water Pricing Principles*. <https://www.dcceew.gov.au/water/policy/policy/nwi/pricing-principles>

⁵¹ Environment, Planning and Sustainable Development Directorate. (2022). *Copy of Attachment A – ACT ACCC Reporting WPM – 2021-22 (A39750875).xlsx*

⁵² Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

Water policy costs and legal services appear to be costs that are the business of Government, and therefore should not be recovered through the Water Abstraction Charge.

Recommendation: That the independent review should review Water Supply Costs against the *Water Abstraction Charge Cost Framework* to ensure they do not include any costs relating to the business of Government.

5.5.2 Environmental Costs

5.5.2.1 Environmental Externalities and cost recovery

The Organisation for Economic Co-Operation and Development defines environmental externalities as:

*the economic concept of uncompensated environmental effects of production and consumption that affect consumer utility and enterprise cost outside the market mechanism.*⁵³

The National Water Commission made a clear distinction between charges to recover the cost of water planning and management and charging for externalities:

*charging for externalities encompasses activities that seek to internalise the impact (cost or benefit) of the externality to the party causing it (e.g. by imposing a specific charge or tax) rather than simply recovering the costs of managing the impact from relevant parties.*⁵⁴

The 'Environmental cost' in the Water Abstraction Charge attempts to estimate:

*the environmental costs associated with the effect on the flow of water downstream associated with altering the timing and magnitude of downstream flows by retaining water in dams.*⁵⁵

That is, it is an attempt to cost an externality, rather than a cost recovery.

The ICRC called its environmental charge 'environmental costs', whereas they are an estimate of environmental externalities, rather than the cost of environmental management.

The Water Charge Rules require water pricing to include 'Environmental Externalities.' However, Environmental Externalities are not defined, nor is there any explanation on how they should be calculated. The Water Charge Rules cite 'resource management costs' as an example of an Environmental Externality'.

⁵³ OECD. (2003). *Glossary of statistical terms: Environmental externalities*.

<https://stats.oecd.org/glossary/detail.asp?ID=824#:~:text=Environmental%20externalities%20refer%20to%20the%20economic%20concept%20of,tend%20to%20be%20lower%20than%20its%20%E2%80%9Csocial%E2%80%9D%20cost.>

⁵⁴ Frontier Economics. (2011). *Externality pricing in the Australian water sector: Waterlines report No. 43*.

<https://apo.org.au/sites/default/files/resource-files/2011-04/apo-nid24658.pdf>

⁵⁵ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

This has resulted in the situation where the Water Abstraction Charge 'environmental costs' are actually an estimate of environmental externalities, and the Water Charge Rules 'Environmental Externalities' are actually a cost recovery.

It is unclear whether the 'Environmental Externalities' prescribed in the Water Charge Rules instruct that pricing should include the recovery of the costs of environmental water management, and an additional charge for environmental externalities, or just the former. Noting that the costs of environmental water management are already included in the Water Supply Costs.

5.5.2.2 Environmental Externalities and the Australian Competition and Consumer Commission

The ACCC is responsible for monitoring regulated water charges and compliance with water charge rules. However, it does not appear to require the inclusion of environmental externalities in water charges. It conducted a review of water charge rules in 2016 which did not mention the reporting or monitoring of environmental externalities.⁵⁶

The ACCC's annual monitoring of water charge rules is also silent on environmental externalities.⁵⁷ The annual reporting of water charges to the ACCC is through a spreadsheet generated by the ACCC which does not include a provision for environmental externalities.

Other Basin jurisdictions do not appear to include Environmental Externalities in their regulated water charges. For example, the NSW calculation of rural water prices for 2022-23 does not mention environmental externalities.⁵⁸

5.5.2.3 Estimating the 'Environmental cost'

The ICRC based the Environmental Externality Costs on:

*the average costs to preserve or permanently recover one megalitre of water in the system.*⁵⁹

It is unclear if the 'system' is the Murrumbidgee or the entire Southern Connected Basin. It is also unclear if water recovery relates to a specific water licence category, such as General Security, or all water licence categories (High Security, General Security, Supplementary, etc.).

⁵⁶ Australian Competition & Consumer Commission. (2016). *Review of the Water Charge Rules: Final Advice*. <https://www.accc.gov.au/regulated-infrastructure/water/water-regulation-and-monitoring/review-of-the-water-charge-rules-advice-development/final-advice>

⁵⁷ Australian Competition & Consumer Commission. (2022). *Water Monitoring Report: 2020-21*. https://www.accc.gov.au/system/files/Water%20Monitoring%20Report%202020-21_0.pdf

⁵⁸ Independent Pricing and Regulatory Tribunal: NSW. (2022). *Annual review of WaterNSW's rural bulk water charges for 2022-23: Final Report*. (https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Final-Report-Annual-review-of-WaterNSWs-rural-bulk-water-charges-for-2022-23-June-2022.PDF)

⁵⁹ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

All water recovery purchases have been funded by Commonwealth, New South Wales, or Victorian governments. The ACT Government has not incurred any costs for water recovery and therefore cannot rightfully argue that water recovery is a cost to be recovered.

Recommendation: That the independent review should advise the best practice:

- treatment of environmental externalities (as opposed to cost recovery) in water pricing, and
- method to incorporate environmental externalities into Regulatory Water Charges.

5.5.3 Scarcity value

The Water Charge Rules do not include any charges for 'Scarcity Value'.

5.5.3.1 Scarcity Value to achieve policy outcomes

Throughout the water pricing reform process there has been consideration that urban prices based on a scarcity value can better achieve policy objectives than urban prices based on a full cost recovery.⁶⁰

The former National Water Commission:

*supports further consideration of scarcity pricing in urban areas on the basis that scarcity pricing may be a more efficient way of balancing supply and demand and could significantly reduce the need for water restrictions.*⁶¹

Note, this assumes that urban prices are based on a scarcity value only, not in addition to a full cost recovery approach.

The ICRC reported that, because the demand for water is relatively inelastic and therefore relatively insensitive to increased pricing, it is a poor policy tool to reduce water use.⁶²

The ICRC advised that water use has discretionary and non-discretionary components, and perhaps a price signal could be levied against the non-discretionary component.

We note that the ACT Government has implemented other policy responses to reduce water use when it is scarce, such as water restrictions.

⁶⁰ Frontier Economics. (2011). *Efficient water resource pricing in Australia: an assessment of administered scarcity pricing in urban areas – Waterline Report Series No. 44*
https://web.archive.org/au/awa/20160615124528mp_/http://archive.nwc.gov.au/_data/assets/pdf_file/0016/10933/4_4_Scarcity.pdf

⁶¹ National Water Commission. (2008). *Urban Water Pricing: National Water Commission position*.
https://web.archive.org/au/awa/20160615110524mp_/http://archive.nwc.gov.au/_data/assets/pdf_file/0019/9730/7_Urban_Water_Pricing_-_PS1.pdf

⁶² Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge*
<https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

5.5.3.2 Estimating the scarcity value

The ICRC based the Scarcity value on the weighted average temporary trade price in the regulated Murrumbidgee River.⁶³

It is not clear if the weighted average price of temporary trades relates to a specific water licence category, such as General Security, or all water licence categories (High Security, General Security, Supplementary, etc.,).

The ICRC weighted the 2001-02 year by one third and the 2002-03 year by two thirds. It did not explain the rationale for this.

The price per volume of trades is often not reported in the NSW Water Trade Register. Between 2017-18 and 2021-22, prices were only recorded for between 13 and 30 percent of all trades. Omission of such a large part of the data set means that a weighted average price cannot be determined with any confidence. Note that non-zero price transactions were removed from this calculation.

When the ICRC was conducting its review, market transactions were straight forward trades. Market transactions increasingly include derivatives, such as forward contracts, leasing, carryover parking, options, etc.⁶⁴ There can be large variations in price which could distort a Weighted Average cost calculation.

While it is possible to re-estimate a Water Abstraction Charge using the method advised by the ICRC, it is unlikely to be meaningful and should not be relied on with any confidence.

Recommendation: That the Independent Review include consideration of the:

- inclusion of a Scarcity Value in the Water Abstraction Charge, and
- if appropriate, a method to incorporate Scarcity Value into Regulatory Water Charges.

5.5.4 Capital Costs

Planning and management costs are typically incurred annually so the period that the costs are incurred matches the period when the costs are used.

Capital costs relate to an investment that is expected to last several years. Capital costs are typically expensed over the life of the asset, rather than in the year they were incurred. This is called the 'cost of asset consumption' in the Water Charge Rules and is a similar concept to depreciation or amortisation in financial statements.

Capital costs usually include the cost of the asset adjusted for the cost of financing the costs, or its opportunity costs, and the time value of money.⁶⁵

⁶³ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁶⁴ Marsden Jacob Associates. (2020). *Murray Darling Basin Water Market Products Scoping Study*. MDBA: Canberra. <https://www.mdba.gov.au/sites/default/files/pubs/Murray%E2%80%93Darling%20Basin%20Water%20Market%20Products%20Scoping%20Study%20-%20full%20report.pdf>

⁶⁵ Dews, Hawkins and Horton. (1992). *RDP 9205: Measuring the Cost of Capital in Australia 2. What is the Cost of Capital?*. <https://www.rba.gov.au/publications/rdp/1992/9205/what-is-the-cost-of-capital.html>

The Water Charge Rules specify that capital costs are recovered over the life of the asset, based on an annual weighted cost of capital.⁶⁶

The ICRC recommends that Capital Costs be apportioned over a three-year period.^{67, 68}

The Water Charge Rules recommend an annual charge for capital costs based on the cost of asset consumption (depreciation) and the cost of capital calculated using a Weighted Average Cost of Capital.⁶⁹

The ACT Government appears to report its capital costs to the ACCC in the year they are incurred, rather than an annual Capital Cost over the life of the asset (see *Desktop assurance review of costs to be reported to the ACCC for the 2021-22 water year*). This overstates annual costs in the year that capital expenditure is incurred and understates them in later years when the capital works are being used.

Recommendation: That the Independent Review include:

- a method to incorporate capital costs into the Water Abstraction Charge, and
- a recalculation of historical capital costs reported to the ACCC.

Recommendation: That the Independent Review prepare a 'Capital Cost Register' to calculate capital costs for reporting to the ACCC and future calculations of the Water Abstraction Charge.

6 Recommendations

1. That the method and costs used to calculate the Water Abstraction Charge are published annually.
2. That the monies raised and costs incurred relating to the Water Abstraction Charge are reconciled and published annually.
3. That the Water Abstraction Charge is independently reviewed and that the review is published.
4. That the independent review should include:
 - a. advice on how often the Water Abstraction Charge should be reviewed,
 - b. consideration of whether the Water Abstraction Charge is levying charges for the purpose of revenue raising, and if so, what risk does that pose to the Government,

⁶⁶ Australian Government. (2007). Water Act, Part 4 and Schedule 2. <https://www.legislation.gov.au/Details/C2017C00151>

⁶⁷ Independent Competition and Regulatory Commission. (2003). *Final Report: Water Abstraction Charge. Determining the Water Abstraction Charge* <https://www.icrc.act.gov.au/projects/completed-projects/water-and-sewerage/water-abstraction-charge>

⁶⁸ The ICRC did not separately identify any Capital Costs in the Water Abstraction Charge calculation, so it is unknown if any Capital Costs were used to calculate the Water Abstraction Charge.

⁶⁹ Australian Government. (2010) *National Water Initiative Water Pricing Principles*. <https://www.dcceew.gov.au/water/policy/policy/nwi/pricing-principles>

- c. a review Water Supply Costs against the *Water Abstraction Charge Cost Framework* to ensure they do not include any costs relating to the business of Government,
 - d. advice on the best practice:
 - i. treatment of environmental externalities (as opposed to cost recovery) in water pricing, and
 - ii. method to incorporate environmental externalities into Regulatory Water Charges.
 - e. consideration of the:
 - i. inclusion of a Scarcity Value in the Water Abstraction Charge, and
 - ii. if appropriate, a method to incorporate Scarcity Value into Regulatory Water Charges.
 - f. advice on a method to incorporate capital costs into the Water Abstraction Charge, and
 - g. the recalculation of historical capital costs reported to the ACCC.
5. That the Independent Review prepare a 'Capital Cost Register' to calculate capital costs for reporting to the ACCC and future calculations of the Water Abstraction Charge.

Attachment A: Terms of Reference

Task 1: *Review and confirm the appropriateness of the criteria used by the Environment, Planning and Sustainable Development Directorate for allocating relevant expenditure collected from the Water Abstraction Charge. Propose amendments to the criteria if required to align with the statutory basis for the charge.*

Task 2: *Conduct a desktop assurance review of water planning and management expenditure allocated from the Water Abstraction Charge as reported to the Australian Competition and Consumer Commission for the 2021-22 water year, using the criteria from task 1.*

Task 3: *Report on Task 1 and Task 2, and:*

Discuss the appropriateness of current reporting and provide advice on potential improvements in relation to:

- a. Statutory reporting requirements under the Water Act (Cth)*
- b. Best practice guides and Audit Insights by the Australian National Audit Office*
- c. ACT Government policies relevant to financial reporting.*

Advise on any strategic risks associated with current reporting on the expenditure of revenue raised through the Water Abstraction Charge.

A Water Abstraction Charge Cost Framework was developed under Task 1.

The Desktop assurance review of costs to be reported to the ACCC for the 2021-22 water year was developed under Task 2. It includes the Water Abstraction Charge Cost Framework.