8 Australian Capital Territory

8.1 Best practice pricing

Water and wastewater businesses should earn sufficient revenue to ensure their ongoing commercial viability while avoiding monopoly returns. To this end, governments agreed the following principles should apply:

- The jurisdictional independent pricing body should set or review prices or pricing processes for water storage and delivery and report publicly.
- To be viable, a water business should recover at least the operational, maintenance and administrative costs, externalities (defined as the natural resource management costs attributable and incurred by the water business), taxes or tax equivalents (not including income tax), the interest cost on debt, dividends (if any) and provision for future asset refurbishment/replacement. If a dividend is paid, it should be set at a level that reflects commercial realities and simulates a competitive market outcome. This is defined to be the lower bound of cost recovery.
- To avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities (all external costs and benefits), taxes or tax equivalent regimes, and provision for the cost of asset consumption and the cost of capital, the latter being calculated using a weighted average cost of capital. This is defined to be the upper bound of cost recovery.
- In determining prices, the independent pricing body should determine the level of revenue for a water business based on efficient resource pricing and business costs. Specific circumstances may justify transition arrangements to that level. Cross-subsidies that are not consistent with efficient and effective service, use and provision should ideally be removed.
- Where service deliverers are required to provide water services to customer classes at less than full cost, the cost of this should be fully disclosed and ideally paid to the service deliverer as a community service obligation (CSO).
- Asset values should be based on a deprival value method unless an alternative approach can be justified, and an annuity approach should be used to determine medium to long term cash requirements for asset replacement/refurbishment.
- Transparency is required in the treatment of CSOs, contributed assets, the opening value of assets, externalities (including resource management costs), tax equivalent regimes and any remaining cross-subsidies.

Future reform: Metropolitan water systems should continue movement toward the upper bound of cost recovery by 2008. Rural and regional water systems should achieve the lower bound of cost recovery, and continue to move towards the upper bound where practicable. Where upper bound pricing is unlikely and a CSO is necessary, it should be publicly reported and the government should consider alternative management arrangements. Jurisdictions' approaches to pricing and attributing the costs of water planning and management should be consistent by 2006. Water prices should be set on a consumption basis, comprising a fixed component and a variable use component, where this is cost effective.

References: 1994 Council of Australian Governments (CoAG) water reform agreement, clauses 3(a)–(d); guidelines for the application of section 3 of the CoAG strategic framework and related recommendations in section 12 of the expert group report (1998 CoAG pricing principles); Intergovernmental Agreement on a National Water Initiative

Cost recovery in issuing licences for water extraction

Assessment issue: The ACT is to demonstrate that its approach to charging for water extraction licences will achieve cost recovery in accord with the CoAG pricing principles. In previous National Competition Policy (NCP) assessments, the National Competition Council found that the ACT set fees for water extraction licences on a relatively ad hoc basis and should consider more robust estimates of the costs of processing and enforcing licences, and an appropriate method of allocating these costs (for example, using an avoidable cost method). For the 2004 NCP assessment, the Council has looked for the ACT to provide information on the extent to which current water licence fees reflect costs.

Future reform: Signatories to the National Water Initiative are to bring into effect by 2006 consistent approaches to pricing and to attributing the costs of water planning and management. This should involve identifying all costs associated with water planning and management, including the proportion of these costs that can be attributed to water access entitlement holders, consistent with the principle of linking charges as closely as possible to the costs of activities or products. These approaches should be consistent across sectors and jurisdictions in which water entitlements can be traded.

References: 1994 CoAG water reform agreement, clauses 3(a), (d) and (e); 1996 Agriculture and Resources Management Council of Australia and New Zealand (ARMCANZ) paper; 1998 CoAG pricing principles; 1999 tripartite meeting; Intergovernmental Agreement on a National Water Initiative

The *Water Resources Act 1989* provides for a range of fees for the issuing of allocations, permits and licences (covering application and annual administration costs) and a charge for water abstraction. The ACT has advised that all water users are required to pay the licence application and annual administration fees. It initially set these two fees at $50 and $100 respectively. It set the annual administration fee (excluding the water abstraction charge) to recover the estimated costs of administering the licence system and monitoring compliance with licensed activities. The ACT compared its cost estimates with those in New South Wales to ensure cross-border equity. Fees are subject to an annual CPI adjustment.

The ACT has reviewed the fees charged under the Water Resources Act. The main finding was a need to increase the annual administration fee to more accurately reflect the costs of administering the licensing system (estimated at $300 a licence). It increased the administration fee with date of effect 1 July 2004. All other fees appear to have been increased by the annual adjustment for the consumer price index.

The water abstraction charge aims to recover from water users the costs of water provision that are not incurred by the service provider — the ACT Electricity and Water Corporation (ACTEW). It includes administration and regulation costs, catchment management and operation costs, as well as an imputed cost to downstream users (the environment and humans) from the consumption of water in the ACT. The purpose of the charge is to provide a better signal to consumers as to the 'true' cost of using water, to encourage more efficient water use. Set on the recommendation of the Independent Competition and Regulatory Commission, the fee when introduced was $0.10 a kilolitre. The ACT Government increased the water abstraction

charge to $0.20 a kilolitre from 1 January 2004, based on a charge review undertaken by the commission.

Discussion and assessment

The National Water Initiative commits governments to bring into effect by 2006 consistent approaches to pricing and to attributing the costs of water planning and management. This should involve identifying all costs associated with water planning and management, including the proportion of costs that can be attributed to water access entitlement holders, consistent with the principle of linking charges as closely as possible to the costs of activities or products.

Although the ACT did not provide detailed information on how it calculated its various licence fees, the Council notes that the ACT sought to ensure its licence fee structure recovers appropriate costs and is consistent with licence fees in New South Wales. The ACT uses the commission to recommend the charge for water abstraction providing an independent and rigorous assessment of the appropriate charge. The Council considers that the ACT has satisfactorily addressed its CoAG water pricing obligations for the 2004 NCP assessment.

8.2 Water access entitlements

Assessment issue: The ACT is to institute a statutory water access entitlement system and support systems for the consumptive use of water, separate from land. The water access entitlement system should be specified as a perpetual or open-ended share of the consumptive pool of a water source. These arrangements should be in place by 2006.

At the time of the 2003 NCP assessment, the ACT had established a system of water entitlements separated from land title and specified in volumetric terms. Water entitlements are issued in perpetuity. The ACT had a register of water entitlements, but the register did not record third party interests and was accessible only in hard copy form at the Environment Management Authority's office. While the ACT had agreed to participate in the Murray–Darling Basin Ministerial Council cap on water diversions, it was yet to finalise the territory's cap.

For the 2004 NCP assessment, the Council has looked for the ACT to ensure its water access entitlements system and supporting arrangements are consistent with the territory's commitments under the National Water Initiative, including in relation to the registry of entitlements. The Council also looked for the ACT to progress towards setting an appropriate Murray–Darling Basin Ministerial Council cap, to determine the amount of water available for consumptive uses in the ACT.

References: 1994 CoAG water reform agreement, clause 4; 1999 tripartite meeting; Intergovernmental Agreement on a National Water Initiative

In the ACT, the Water Resources Act is the legal basis for allocating water, issuing licences to take water, and determining environmental flow requirements. Water entitlements are separated from land title and issued in perpetuity, and provide the holder with a right to a share of the available resource.[1]

The Environment Management Authority (within Environment ACT) maintains a register of licences and water entitlements. A hard copy of the register may be inspected at the authority's office. There is no facility to record third party interests in an entitlement.

Under the Act, water entitlements are managed through the ACT's water resources management plans, the first of which came into effect in 2000. The initial plan set out estimates of total water resources, environmental flow requirements and water available for consumption to 2010. At the time of the 2003 NCP assessment, the ACT Government anticipated reaching a final position on its component of the Murray–Darling Basin Ministerial Council cap on water diversions during 2003.

Reform progress

The ACT Government released its strategy for sustainable water resource management, *Think water, act water*, in April 2004 (Government of the ACT 2004a). The strategy was developed via a public process involving the release of a draft strategy in November 2003 for three months of public comment.

Think water, act water is the ACT's new water resources management plan. In line with the requirements of the Water Resources Act, it includes a description of the ACT's water resources, details of water entitlements and action to be taken to manage water resources. Under the strategy, the ACT Government aims to reduce per person consumption of mains water by 12 per cent by 2013 and 25 per cent by 2023. It is proposing to reduce consumption through water efficiency measures (including subsidies for households to adopt water efficient appliances), water recycling and the use of stormwater and rainwater (including subsidies for rainwater tanks). The government is aiming to increase the use of reclaimed water from 5 per cent to 20 per cent by 2013.

Think water, act water also commits ACTEW to completing feasibility studies into future water supply options by the end of 2004, in case the measures aimed at reducing consumption do not result in sufficient water savings to

[1] Holders of territory leases issued before December 1998 have common law rights to groundwater. The rights to groundwater remain connected to land until the lease is re-issued. At the time of the 2001 NCP assessment, the ACT advised that most groundwater use will be subject to the allocation system in five to 10 years, because leases for many significant users of groundwater are due for renewal over that period.

avoid a new water supply. The government also undertook to review its environmental flow guidelines (see section 8.3).

The ACT Government has agreed to participate in the Murray–Darling Basin Ministerial Council cap. It is developing an appropriate cap in consultation with other members of the Murray–Darling Basin Commission (MDBC). It aims to complete a memorandum of understanding with the New South Wales and Australian governments by 2005. The memorandum of understanding will include provision for a cap (Government of the ACT 2004b).

Discussion and assessment

The ACT's Water Resources Act establishes a comprehensive system of water entitlements separated from land title and specified in volumetric terms, consistent with the obligation in the 1994 CoAG water reform agreement. Water entitlements are issued in perpetuity, consistent with the commitment given by the ACT under the National Water Initiative.

The ACT's registry of water entitlements does not record third party interests and is accessible only in hard copy form at the Environment Management Authority's office. The National Water Initiative requires participating states and territories to ensure they have compatible, publicly accessible and reliable systems for registering entitlements (including any encumbrances) by 2006. This requirement is likely to require further work by the ACT, which has advised that it can readily address any need to record third party interests.

The Murray–Darling Basin Ministerial Council cap for the ACT will need to be finalised to determine the amount of water available for consumptive uses in the ACT. This is a necessary precursor to interstate trading. Other issues related to the ACT cap are considered in section 8.4.

The Council considers that the ACT has made satisfactory progress against its CoAG obligations on water access entitlements for the 2004 NCP assessment.

8.3 Water planning — providing a better balance in water use

Assessment issue: Governments are to establish water allocation systems that provide a sustainable balance between the environment and other uses of water, including by formally providing water in rivers and groundwater systems for use by the environment.

Under the 1994 CoAG water reform agreement, governments committed to determine environmental water requirements using the best available scientific information, wherever possible, and to have regard to the intertemporal and interspatial environmental water requirements needed to maintain the health and viability of river systems and groundwater basins. For river systems that are overallocated or deemed to be stressed, governments committed to provide a better balance in water use to enhance or restore the health of the river systems. Governments also committed to consider establishing environmental contingency allocations and to review allocations five years after they have been determined. In allocating water to the environment, governments agreed to have regard for the ARMCANZ/Australian and New Zealand Environment and Conservation Council (ANZECC) National Principles for the Provision of Water for Ecosystems (see appendix B).

Arising from the 1994 CoAG water reform agreement, each state and territory established a program in 1999 for implementing water allocations for priority river systems and groundwater resources. Governments committed to substantially complete their 1999 programs by 2005 (including allocations for stressed and overallocated rivers by 2001). Under the National Water Initiative, signatory governments confirmed the importance of water planning as a mechanism for assisting water management and allocation decisions. Signatory governments committed to prepare water plans for surface water and groundwater systems in which entitlements are issued, to assist with water management and allocation decisions to meet productive, environmental and social objectives. They agreed that management and allocation decisions would involve judgments informed by the best available science, socioeconomic analysis and community input. Signatory governments committed to substantially complete allocation arrangements by 2005 for overallocated and overused surface and groundwater systems covered by their 1999 implementation programs, and to prepare water plans by the end of 2007 for other systems that are overallocated, fully allocated or approaching full allocation and by the end of 2009 for other systems that are not approaching full allocation.

The ACT had environmental flows in place for all of its 32 subcatchments at the time of the 2001 NCP assessment. In 2002 it commenced development of a new water resource strategy. For the 2004 NCP assessment, the Council has asked the ACT to report on the outcome of this strategy. The Council has also asked the ACT to report on progress with finalising the ACT component of the Murray–Darling Basin Ministerial Council cap on water diversions and provide details on its component of the cap.

References: 1994 CoAG water reform agreement, clauses 4(b)–(f); 1999 tripartite meeting; Intergovernmental Agreement on a National Water Initiative

Water planning in the ACT is guided by the principles of ecological sustainability, with the aim of protecting the environmental and use values of ACT water bodies. The Water Resources Act reflects this aim by requiring water to be allocated for environmental flows before consumptive uses. Environmental allocations for each of the ACT's 32 subcatchments are set out in the Water Resources Management Plan and were in place for all subcatchments by the time of the 2001 NCP assessment. Unless the plan provides for it, no new allocations of water can be made for consumptive use.

The ACT Government considers that it has adopted a conservative approach to water extractions. It dedicates approximately 269 gigalitres of water of a

total annual useage of 494 gigalitres (approximately 55 per cent) to environmental flows. The ACT's environmental flow guidelines protect flows up to the 80th percentile (that is, the flow that is exceeded 80 per cent of the time). For most subcatchments, extraction for consumptive use is limited to 10 per cent of flows above the 80th percentile. For water supply catchments, 100 per cent of flows above the 80th percentile are available for extraction (except for spawning flows). Under the licensing conditions the government requires ACTEW, the ACT water supply utility, to meet these minimum requirements within a tolerance band of plus or minus 20 per cent. Groundwater extraction is limited to 10 per cent of average annual recharge.

In addition to setting extraction limits, the ACT conducts low-flow monitoring programs and uses the results of this monitoring to adjust its flow management regime. It argues that this work enables it to maintain a sustainable balance between environmental needs and human use.

Table 8.1 provides a snapshot of water allocations in the ACT under the current plan. The table shows that the environment is allocated just over half of the total annual water supply and, in most subcatchments, receives an allocation of over 90 per cent, although the annual environmental water provision is much smaller in the key water supply catchments. In the Corin, Bendora and lower Cotter subcatchments the environmental water provision is about 25–28 per cent of the total supply. In the Googong, Tinderry and Burra subcatchments, it is around 9 per cent of the total supply.

Table 8.1: ACT controlled water resources, as at 30 September 2003

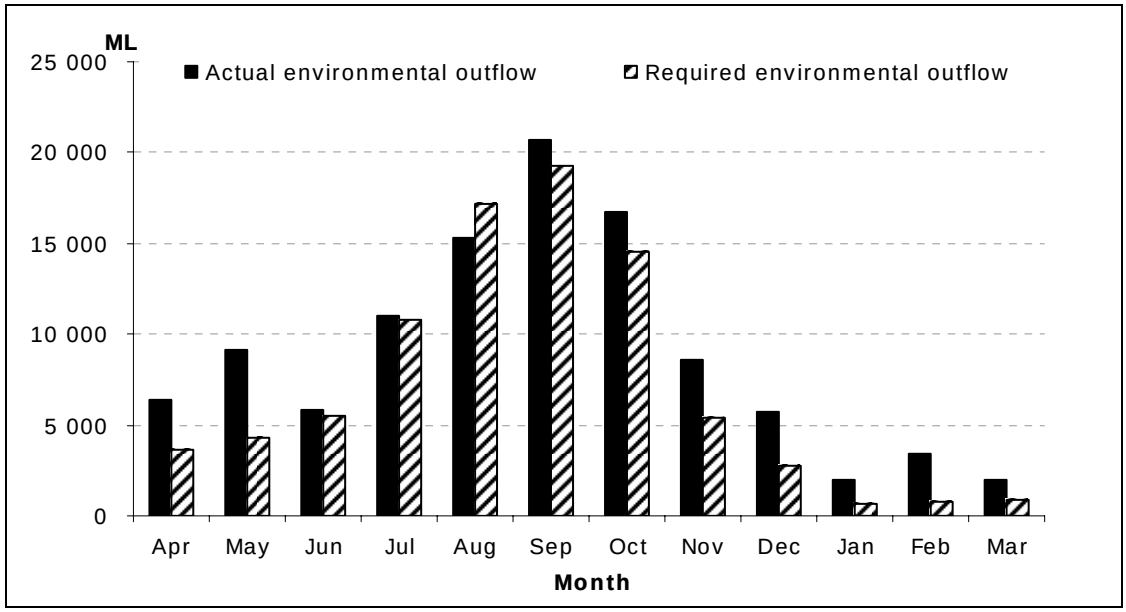
Subcatchment	*Total water allocation*	*Allocation for the environment*	*Allocation available for use*		
			Total	*Existing use*	*Reserved*
	Megalitres	*%*	*%*	*%*	*%*
Corin	75 751	25	75	39	2
Bendora	33 906	28	72	62	4
Lower Cotter	36 045	26	74	0	33
Tinderry	82 805	9	91	12	3
Googong	8 575	9	91	14	3
Burra	11 784	9	91	14	4
All other	244 910	92	8	1	1
Total	**493 776**	**55**	**45**	**13**	**4**

Source: Government of the ACT 2004a

However, because the ACT is not currently using all allocated consumptive water, the excess water can be re-allocated to the environment. Figure 8.1 shows that over the period from April 2001 to March 2002, for example, environmental water releases from the Bendora, Corin, Cotter and Googong dams were typically above requirements. While the figure indicates that releases were less than required at times, Environment ACT found that releases were within the acceptable tolerance bands or that there was a

genuine reason for not implementing the required flow (for example to conduct maintenance) (Environment ACT 2003).

Figure 8.1: Environmental water outflows from the Bendora, Corin, Cotter and Googong dams, April 2001 to March 2002



Source: Environment ACT 2003

Reform progress

As discussed in section 8.2, the ACT Government released its water resources strategy, *Think water, act water*, in April 2004, setting the direction for achieving the short and long term (until 2050) sustainable water resource management objectives in the Water Resources Act. The strategy sets water allocations and provisions for future water use and is the ACT's new water resources management plan, which came into effect on 1 July 2004. The strategy's key environmental objectives are to protect the water quality of ACT rivers, lakes and aquifers, maintain and enhance environmental amenity, recreational and designated use values, and protect the health of people in the ACT and down river. Accordingly, *Think water, act water* commits the ACT Government to:

- continue environmental and health water quality programs to meet the aim of 'same or better quality' for water leaving the ACT compared with the water entering
- review the environmental flow guidelines in 2004 taking account of scientific knowledge gained since 1999
- review water resource monitoring
- implement a riparian management plan

- ensure best practice management of the ACT's water resources, including continuous re-assessment and improvement in management.

The ACT Commissioner for the Environment will provide an independent check on the effectiveness with which the ACT meets these objectives by reporting in the ACT's three-yearly *ACT state of the environment report*.

In the most recent state of the environment report, the ACT Commissioner for the Environment reported that the drought and the 2003 bushfires had caused a decline in river health (as measured by aquatic macroinvertebrate populations). Impacts include a general decline in water quality in unforested catchments, and a reduction in the amount of water released for environmental flows in the Cotter River.

The commissioner also noted that estimates of recharge rates suggest extraction of groundwater from most subcatchments may be within 70 per cent of the estimated sustainable yield, but that that lack of precise data makes it difficult to determine the true sustainable yield and the impact of current extraction rates (ACT Commissioner for the Environment 2004). The commissioner recommended that the ACT Government undertake a catchment-by-catchment hydrological study of groundwater systems to assess water quality and quantity, and its connectivity, spatial distribution and temporal variability. In light of the impact of the January 2003 bushfires on stream water quality, aquatic habitat and the water supply dams, the report also proposed that the ACT adopt a whole-of-catchment approach to planning and managing water and other conservation values, and fund this approach by increasing water use charges. The ACT Government must respond to the report's recommendations within six months of its tabling in the Legislative Assembly, which occurred on 31 March 2004.

The ACT has advised that it is considering several options for an ACT cap as its component for the Murray–Darling Basin. It will make a final decision on this matter once the necessary interstate trading arrangements are in place (see section 8.4).

Discussion and assessment

The ACT has a water resources management plan in place, which provides environmental water allocations for each of its surface water and groundwater resources. It has thus met its 1994 CoAG water reform obligation to provide water for the environment. The ACT has also developed a new strategy for water management, which sets directions until 2050. The strategy is broadly consistent with the commitments provided by the ACT under the National Water Initiative.

8.4 Water trading

Assessment issue: Trading arrangements in water allocations or entitlements are to be instituted to maximise water's contribution to national income and welfare, where systems are physically shared or hydrologic connections and water supply considerations permit trading. Under the 1994 CoAG water reform agreement, trading arrangements were to be finalised by 2005. The National Water Initiative extends to 2007 the timeframe for establishing institutional and regulatory arrangements that facilitate intra- and interstate trade, and requires the removal of certain barriers to trade (including the immediate removal of all restrictions on temporary trade).

In the 2003 NCP assessment, which considered intrastate trading arrangements, the Council found that the ACT permits permanent and temporary trades subject to the approval of the Environment Management Authority. There are no other legislative impediments to trading. The absence of water trading within the ACT largely reflects the territory's small industrial and agricultural sectors relative to the available resource. Interstate trade involving the ACT depends on the finalisation of the Murray–Darling Basin Ministerial Council cap on diversions for the ACT, and on agreement with other jurisdictions on the terms and conditions of trade.

The ACT needs to finalise the cap and develop interstate trading arrangements.

References: 1994 CoAG water reform agreement, clause 5; 1999 tripartite meeting; Intergovernmental Agreement on a National Water Initiative

The Water Resources Act permits the permanent or temporary transfer of all or part of a water entitlement with the approval of the Environment Management Authority. In determining whether to approve the transfer, the authority is required to account for the environmental record of the applicant. Where the authority refuses the transfer, the Act permits the ACT Administrative Appeals Tribunal to review the decision.

There has been no water trading in the ACT or between the ACT and other jurisdictions, largely reflecting the territory's relatively small industrial and agricultural sectors relative to the available resource. The ACT Government previously advised that there is insufficient demand in the territory to justify the establishment of intra-territory trading rules (beyond the requirement for the approval of the Environment Management Authority) or an intra-territory trading market.

While the Water Resources Act also provides for trade between the ACT and other jurisdictions, interstate trade depends on the finalisation of the Murray–Darling Basin Ministerial Council cap on water diversions for the ACT, and on agreement with other jurisdictions on the terms and conditions of trade.

Reform progress

As noted in section 8.2, the ACT Government, in consultation with the other members of the MDBC, is developing an appropriate Murray–Darling Basin Ministerial Council cap. The ACT has advised that it cannot finalise a cap until interstate trading arrangements are determined, because the main

options for its cap rely on the availability of interstate trade to meet future growth in water demand in the ACT. The ACT Government is participating in the development of interstate trading arrangements through the MDBC, and is aiming to complete a memorandum of understanding with the New South Wales and Australian governments (which will include provision for a cap) by the end of 2005.

There were no developments on intra-ACT trade and no trading activity during 2003-04.

Discussion and assessment

Through the Water Resources Act, the ACT Government has removed all legislative impediments to intrastate trade in water. Given that there is little, if any, demand for intra-territory trading, the requirement for trades to be approved by the Environment Management Authority is sufficient to ensure trading occurs within the physical and ecological constraints of catchments. As the demand for trade increases, the ACT may need to develop specific intra-territory trading rules.

The ACT is progressing the two main requirements for interstate trading: (1) its Murray–Darling Basin Ministerial Council cap; and (2) agreement with other jurisdictions on the terms and conditions of trade. The National Water Initiative extends to 2007 the timeframe for establishing institutional and regulatory arrangements that facilitate interstate trade. The ACT's completion of a memorandum of understanding with the New South Wales and Australian governments (including provision for a cap) would represent a significant first step. Completion of the memorandum of understanding by the end of 2005, as proposed, should provide sufficient time for the ACT to finalise its interstate trading arrangements in line with the National Water Initiative timetable. (While the southern Murray–Darling Basin states have agreed to facilitate interstate trade by taking all necessary steps to enable by June 2005 exchange rates and/or tagging of water access entitlements, the ACT is not covered by this element of the National Water Initiative.)

To facilitate interstate trading, the ACT may also need to further develop its register of water entitlements. The ACT's register is not accessible electronically and does not record third party interests. The National Water Initiative obliges governments to implement compatible, publicly accessible and reliable registers (including any encumbrances) by 2006.

The Council considers that the ACT has made satisfactory progress against its CoAG obligations on water trading for the 2004 NCP assessment.