



Issues paper
**Regulated water and sewerage
services 2013–18**

**Report 1 of 2012
February 2012**

The Independent Competition and Regulatory Commission (the Commission) was established by the *Independent Competition and Regulatory Commission Act 1997* (ICRC Act) to determine prices for regulated industries, advise government about industry matters, advise on access to infrastructure, and determine access disputes. The Commission also has responsibilities under the ICRC Act for determining competitive neutrality complaints and providing advice about other government-regulated activities. Under the *Utilities Act 2000*, the Commission has responsibility for licensing utility services and ensuring compliance with licence conditions.

Correspondence or other inquiries may be directed to the Commission at the following addresses:

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Foreword

As I write this foreword, the ACT's water supply is almost the exact opposite of that confronting my predecessor in August 2006. In the foreword to the information paper for the Commission's last review of water and sewerage services, Paul Baxter noted:

The importance of water management, including water and wastewater pricing, has been brought to public attention in recent years as a result of the drought which has affected the ACT and much of south-eastern Australia. In the ACT, the increased prominence given to water management and, in particular, to the security of water supply culminated in a debate surrounding the possible construction of a new dam. It was in this context that a pipeline between the Cotter and Googong catchments was constructed, increasing the ability of ACTEW to store water previously lost from the Cotter catchment. In addition, the ACT Government introduced water restrictions during the drought, and Permanent Water Conservation Measures were introduced in the ACT in March 2006.¹

As I write now, I can record that the drought that resulted in reduced inflows to the dams and the imposition of water restrictions ended in 2010 with one of the wettest years in Canberra's history. The dams are now nearly full and have been for the past year. Work on the major water security projects—the enlarged Cotter Dam and the Murrumbidgee to Googong Pipeline—is well underway and is expected to be completed by the end of 2012.

This sharp contrast in situation provides a graphic illustration of the challenges confronting those involved in the provision and pricing of water and sewerage services in the ACT. There is, however, one thing that the context of the present review shares with that of its predecessor: the debate about water security for the ACT is still running hot. The focus of the questions being asked has, however, changed. As the dearth of water has been replaced by an abundance, the questions now being asked include: why are water prices now rising and do we really need to make further efforts to restrain our water consumption? The first of those questions lies squarely within the scope of the current review, and the Commission is beginning to address the second in the review of secondary water use that is also in progress.²

Part of the answer to the first question lies in the need to pay for the water security initiatives that were developed in response to the drought. There have been significant cost increases for some of these projects. The cost of the Cotter Dam enlargement was forecast at \$145 million in 2007, rose to \$363 million in 2009, and that estimate is likely to be breached as unusually heavy summer rains interrupt construction.

How these costs should be borne and whether there is scope to mitigate these costs going forward are major issues for the current review. It is also timely to reflect on the decisions that gave rise to a need to consider this question, namely the decisions to undertake the range of water security initiatives the costs of which must now be recouped from the ACT community in one way or another. The Commission is keen to hear from the community on these and all the other issues identified in this paper.

Malcolm Gray
Senior Commissioner
21 February 2011

¹ Independent Competition and Regulatory Commission, *Information paper: Prices for water and wastewater services*, Report 13 of 2006, August 2006, p. iii.

² Independent Competition and Regulatory Commission, *Issues paper: Secondary water use in the ACT*, Report 9 of 2011, November 2011.

How to make a submission

The Independent Competition and Regulatory Commission (the Commission) welcomes submissions on the issues raised in this paper as well as any other relevant information that could assist the Commission's inquiry into regulated water and sewerage services in the ACT.

Responses to the issues paper should be supported with evidence and data wherever possible. Where parties are interested in addressing one or more of the questions listed in the paper, the relevant question number(s) should be noted.

Submissions may be mailed to the Commission at:

Independent Competition and Regulatory Commission
GPO Box 296
CANBERRA ACT 2601

Alternatively, submissions may be emailed to the Commission at icrc@act.gov.au. The Commission encourages interested parties to make submissions in either Microsoft Word format or PDF (OCR readable text format—that is, they should be direct conversions from the word-processing program, rather than scanned copies in which the text cannot be searched).

Submit your submission documents along with a completed submission cover sheet, which is available on the Commission's website at www.icrc.act.gov.au/waterandsewerage. For submissions received from individuals, all personal details (for example, home and email addresses, telephone and fax numbers) will be removed for privacy reasons before the submissions are published on the website.

The Commission is guided by and believes strongly in the principles of openness, transparency, consistency and accountability. Public consultation is a crucial element of the Commission's processes. It is the Commission's preference that all submissions it receives be treated as public and be published on the Commission's website unless the author of the submission indicates clearly that all or part of the submission is confidential and not to be made available publicly. Where confidential material is claimed, the Commission prefers that this be under a separate cover and clearly marked 'In Confidence'. The Commission will assess the author's claim and discuss appropriate steps to ensure that confidential material is protected while maintaining the principles of openness, transparency, consistency and accountability.

The secretariat may be contacted at the above addresses, by telephone on (02) 6205 0799 or by fax on (02) 6207 5887. The Commission's website is at www.icrc.act.gov.au.

Submissions on the issues paper are due with the Commission by **5 pm, Friday 30 March 2012**.

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1 Introduction

The Independent Competition and Regulatory Commission (the Commission) is currently undertaking two separate but related reviews of the ACT water sector.

The first is an inquiry into secondary water use in the ACT in response to a motion passed in the ACT Legislative Assembly on 4 May 2011. Secondary water, or water that has been used productively for a second time, is more commonly known as recycled water. The **secondary water use inquiry** is scheduled for completion by the end of June 2012.³

The second inquiry, the **water and sewerage services inquiry**, will determine the prices that ACTEW Corporation (ACTEW) will be able to charge for its regulated water and sewerage services from 1 July 2013. This **issues paper** represents the first of many opportunities for interested members of the ACT community to provide the Commission with information for its review of water and sewerage services.

The Commission released a **context paper** on water in the ACT on 23 November 2011.⁴ The context paper provides a framework for both the secondary water use inquiry and the review of ACTEW's water and sewerage service prices. The context paper describes the key characteristics of the ACT water sector and identifies some of the significant matters that may need to be considered in the two water reviews.

The Commission took the unusual step of releasing a context paper given the links between the two inquiries and the Commission's desire to adopt a holistic approach to the matters under reference. Specifically, the inquiry into secondary water use will identify the ACT's current level of water security, and the contribution of secondary water to achieving that level of security. The inquiry into ACTEW's water and sewerage services will then consider all relevant issues and result in a new price direction for these two services.

1.1 Background to the inquiry

This inquiry represents the sixth occasion on which the Commission (or its predecessor bodies) has been called upon by the ACT Government to develop a price direction for ACTEW's regulated water and sewerage services. The first price direction covered the period 1997–98 and since that time the regulatory regime has developed in line with Australian regulatory practice.

The Commission's most recent price direction covers the period 1 July 2008 to 30 June 2013. As part of that review, the Commission developed a series of reports that discussed many of the important issues associated with economic regulation. These reports included:

- an information paper on prices for water and wastewater services⁵
- a discussion paper on technical regulatory issues⁶
- a discussion paper on approaches to calculating the return on capital⁷

³ Papers associated with the secondary water use inquiry can be found on the Commission's website at www.icrc.act.gov.au.

⁴ Independent Competition and Regulatory Commission, *Context paper: Water in the ACT*, Report 8 of 2011, November 2011. All of the Commission's papers are available at www.icrc.act.gov.au.

⁵ Independent Competition and Regulatory Commission, *Information paper: Prices for water and wastewater services*, Report 13 of 2006, August 2006.

⁶ Independent Competition and Regulatory Commission, *Discussion paper 1: Technical regulatory issues*, Report 14 of 2006, November 2006.

- a discussion paper on water and wastewater pricing⁸
- a working conclusions report setting out the Commission’s preliminary approach to key decisions⁹
- a draft report and draft price direction¹⁰
- a final report and price direction.¹¹

Submissions were sought and received on each of these papers (excluding the final report and price direction).¹²

On 13 October 2011, the Commission received terms of reference to develop a price direction to apply from 1 July 2013 to 30 June 2018 (the forthcoming regulatory period and price direction period). The reports prepared as part of the existing price direction, and the submissions received in response to those reports, provide important background and context to the current regulatory review. Further, the forthcoming price direction should be seen as part of the evolution of the process commenced in 1997.

The current regulatory review which will result in a price direction for the forthcoming regulatory period takes place at a pivotal time in the ACT’s development. Over the course of the past year the ACT has emerged from a decade of severe drought, during which decisions were taken to pursue increased water security through supply augmentations, demand-management initiatives and water recycling initiatives.

The context paper explores these issues within a framework of the provision of water and sewerage services in an urban environment. The context paper identifies the importance of considering all elements of the water cycle in a holistic manner. This issues paper should be read in conjunction with the context paper, particularly since the latter provides important and relevant background information about the broader water cycle, of which a key element is the regulated water and sewerage services provided by ACTEW.

1.2 Purpose of the issues paper

The issues paper is the first step in the Commission’s engagement with the ACT community on its inquiry into ACTEW’s regulated water and sewerage services. The purpose of the issues paper is to provide relevant information to inform submissions from interested parties, including:

- in conjunction with the context paper, relevant background information on the ACT water sector and the Commission’s previous ACTEW price direction
- the requirements of the terms of reference
- the key issues to be considered as part of the inquiry and specific issues on which the Commission is seeking comment and information through the submission process.

⁷ Independent Competition and Regulatory Commission, *Water and wastewater discussion paper 2: Return on capital*, Report 3 of 2007, March 2007.

⁸ Independent Competition and Regulatory Commission, *Water and wastewater discussion paper 3: Prices*, Report 8 of 2007, August 2007.

⁹ Independent Competition and Regulatory Commission, *Water and wastewater price review: Working conclusions*, Report 9 of 2007, September 2007.

¹⁰ Independent Competition and Regulatory Commission, *Water and wastewater price review: Draft report and price determination*, Report 11 of 2007, December 2007. A corrigendum was also released.

¹¹ Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008. A corrigendum was also released.

¹² These papers as well as the submissions received can be found on the Commission’s website at www.icrc.act.gov.au/waterandsewerage.

This issues paper is not intended to analyse in detail the issues relevant to the inquiry. Rather, it attempts to identify all relevant issues and provide sufficient background (and references to more detailed information) to allow the ACT community to provide input and guidance as to whether the issues identified warrant further attention.

The Commission will undertake significant analysis in the preparation of the draft report. This analysis will build on the issues identified as important from this issues paper, and may include the release of papers on specific matters deemed important.

1.3 Scope of the terms of reference

The Commission was issued with terms of reference on 13 October 2011 to undertake an inquiry into ACTEW's water and sewerage service prices. The inquiry is to be undertaken pursuant to sections 15(1) and 16 of the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act).¹³ The main elements of the terms of reference are as follows:

1. The Commission should take into consideration:
 - a. policies of the ACT Government as they relate to water security and the use of water
 - b. national water initiatives, policies and agreements
 - c. the impact of a price on carbon on the provision of water and sewerage services in the ACT
 - d. the ability of the pricing path to match revenue recovery requirements to the consumer benefits accrued from the water security program
 - e. all potential regulatory models, including consideration of the provision of sufficient flexibility in price setting across the regulatory period to minimise the impact of significant price fluctuations
 - f. the legislative requirements outlined in section 20 of the Act
 - g. any other matters the Commission considers relevant to the inquiry.

The Commission is to provide its final report by 1 May 2013.

A full copy of the terms of reference is at Appendix 1.

The terms of reference (section 1f) require the Commission to consider the legislative requirements outlined in section 20 of the Act. Section 20 states that the Commission must have regard to:

- (a) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies (including policies relating to the level or structure of prices for services) and standard of regulated services; and
- (b) standards of quality, reliability and safety of the regulated services; and
- (c) the need for greater efficiency in the provision of regulated services to reduce costs to consumers and taxpayers; and
- (d) an appropriate rate of return on any investment in the regulated industry; and
- (e) the cost of providing the regulated services; and

¹³ See Appendix 2 for an extract from the ICRC Act.

- (f) the principles of ecologically sustainable development mentioned in subsection (5);
- (g) the social impacts of the decision; and
- (h) considerations of demand management and least cost planning; and
- (i) the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry; and
- (j) the effect on general price inflation over the medium term; and
- (k) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person.

1.4 Role of ACTEW in the Commission's inquiry

ACTEW is the only business licensed to provide water and sewerage services in the ACT. This means that the Commission, and the ACT community, are highly reliant on ACTEW's information systems and technical expertise. The Commission will provide ACTEW with a detailed information request early in 2012 seeking, among other things, details of actual expenditures in the current period against the 2008 projections as well as planned expenditures for the 2013–18 period.

As part of the response to the information request, ACTEW will also provide the Commission with a detailed public submission setting out its proposed treatment of various technical regulatory matters and its forecast customer and volume figures and proposed pricing structures and outcomes. In addition, ACTEW will assist the Commission's engineering consultants in their prudence and efficiency assessment of its historical and forecast costs.

The Commission intends to make all information provided by ACTEW available publicly on the Commission's website.

1.5 Structure of the issues paper

The structure of the remainder of the issues paper is as follows:

- **Chapter 2** describes the regulatory framework and the role of the Commission
- **Chapter 3** identifies carryover issues from the 2008–13 price direction
- **Chapter 4** discusses issues raised in the terms of reference
- **Chapter 5** outlines other issues relevant to the forthcoming price direction
- **Chapter 6** outlines the next steps in the inquiry process
- **Chapter 7** collates the key issues upon which the Commission is seeking comment.

1.6 Inquiry timeline

Based on meeting a requirement to report by 1 May 2013, the Commission proposes the following timetable for the inquiry.

Task	Expected date
Receive terms of reference	13 October 2011
Release of context paper	23 November 2011
Release of issues paper	21 February 2012
Submissions on issues paper close	30 March 2012
Receipt of ACTEW submission	July 2012
Release of draft report	November 2012
Workshops and information sessions (if required)	December 2012
Submissions on draft report close	February 2013
Public hearing	February 2013
Final report	May 2013

If it identifies a need, the Commission may also elect to release further papers and analysis on specific issues in advance of the release of the draft report. In addition, there will be an opportunity for the ACT community to comment on the ACTEW submission.

2 Regulatory framework and the role of the Commission

The terms of reference for this inquiry require the Commission to conduct ‘an investigation into, and the making of a price direction for, regulated water and sewerage services provided by ACTEW Corporation Limited’. In conducting the investigation, section 1e of the terms of reference require that the Commission take into consideration ‘all potential regulatory models’. This chapter outlines the issues the Commission must confront in selecting an appropriate regulatory model for the industry that is the subject of this reference. It does this by:

- reviewing the territory laws, regulations and codes that govern the provision of water and sewerage services by ACTEW
- considering the evolution of the institutions involved in the provision of water and sewerage services in the ACT
- outlining the principal characteristics of the industry and some of the challenges they present to the Commission in selecting an appropriate regulatory model
- analysing the processes the Commission has used in past reviews and how they relate to the issues identified in the preceding discussion.

2.1 Statutory framework for utility services in the ACT

Water services include the collection, storage and, where necessary, treatment of water for its distribution through a water network, making a water network available for the provision of connection services, the distribution of water through a network, a water connection service and the supply of water from the water network to premises for consumption. Sewerage services are defined as making a sewerage network available for the provision of a sewerage connection service, a sewerage connection service and a sewerage service.¹⁴

In the territory, prescribed utilities services, which include water and sewerage services, can only be provided in accordance with a utility licence which specifies the conditions under which the service is provided. Utility licences are granted by the Commission in accordance with the *Utilities Act 2000*.¹⁵ A licence is subject to general conditions requiring the utility to comply with all relevant territory laws, applicable industry and technical codes, and directions from the Commission and the technical regulator. The utility must also be capable of meeting technical and prudential criteria established by the Commission and maintain records and documents necessary to meet reporting requirements.

ACTEW is the only entity licensed to provide prescribed water and sewerage services in the territory. These services include the operation of separate water and sewerage networks, connection of premises to the networks, and supply of water for consumption and the sewerage service. This framework requires water and sewerage services in the territory to be operated by a vertically integrated monopoly service provider.

¹⁴ *Utilities Act 2000*, sections 11–14.

¹⁵ *Utilities Act 2000*, section 37.

This structure is not uncommon in many parts of Australia. The Productivity Commission's report on Australia's urban water sector could not identify a single operational structure that would be suitable in all instances, noting that:

the most suitable efficient structural option for each of Australia's large cities will depend on a range of location (and utility) specific factors, including the existing structural, institutional and regulatory arrangements in place.¹⁶

The Productivity Commission, however, recommended that 'State and Territory Governments undertake a comprehensive review of the costs and benefits of pursuing structural reform in large cities'.¹⁷

Preliminary analysis undertaken by the Commission suggests that such a review in the ACT is unlikely to conclude that the costs of such reform would outweigh the benefits. For the purposes of this inquiry, the Commission therefore proposes to assume that the present arrangements, as outlined above, for the provision of water and sewerage services in the territory will continue.

It should, however, be noted that the likely most feasible alternative service delivery structure in the ACT would involve the separation of bulk water supply from operation of the water and sewerage networks. Variations on this model have been adopted in other Australian jurisdictions including Queensland, New South Wales and Victoria. Accordingly, a more thorough assessment of the potential costs and benefits from some form of structural reform in the ACT may be appropriate in the future, particularly once the current round of infrastructure spending is complete. Pursuant to the recently received reference on secondary water use in the territory, the Commission is required to review alternative sources of bulk water, including whether it might be provided by entities other than ACTEW.¹⁸

Territory licences to supply water, as well as electricity and gas, are subject to the condition that the utility supply only customers specified in the licence, and if the licence is to supply franchise customers then supply must be in accordance with the terms of the utility's standard customer contract.¹⁹ The supply of water to a non-franchise customer can be declared by the minister under section 18 of the *Utilities Act 2000*. However, to date no declaration of non-franchise customers has been made in relation to the supply of water to premises. Accordingly, all water and sewerage service consumers in the territory are supplied in accordance with the terms of ACTEW's standard customer contract. This means that customers are not able to negotiate supply terms other than those established in the standard customer contract. It may be worth examining whether a wider range of consumer choice in contract arrangements could produce better outcomes.

In addition to the requirements of the *Utilities Act 2000*, ACTEW must operate in accordance with the following legislation:

- *Environmental Protection Act 1997*
- Australian Consumer Law (ACT)
- *Planning and Development Act 2007*
- *Water and Sewerage Act 2000*

¹⁶ Productivity Commission, *Australia's urban water sector: Productivity Commission inquiry report volume 1*, 31 August 2011, p. 375.

¹⁷ *Ibid.*

¹⁸ See Independent Competition and Regulatory Commission, *Issues paper: Secondary water use in the ACT*, Report 9 of 2011, November 2011, for a discussion of the issues as of February 2012. The final report is due in mid-2012.

¹⁹ *Utilities Act 2000*, section 27.

- *Water Resources Act 2007*
- *Work Safe Act 2008*.

ACTEW's water licence also requires it to operate in accordance with the Water and Sewerage Network Boundary Industry Code and five technical codes:

- Dam Safety Code
- Water and Sewerage Network (Design and Maintenance) Code
- Water and Sewerage Service and Installation Code
- Water Metering Code
- Water Supply and Sewerage Service Standards Code.

Compliance with these codes is administered by the Director General of the Environment and Sustainable Development Directorate, who is designated as the technical regulator.²⁰

2.2 Evolution of institutional arrangements for ACT utility services

The ACT Electricity Authority (ACTEA) was established as a Commonwealth authority and made responsible for the supply of electricity in the territory from 1 July 1963.²¹ ACTEA remained a Commonwealth authority until 1 July 1988, when a new Commonwealth authority known as the Australian Capital Territory Electricity and Water Authority (ACTEWA) was established through the merger of ACTEA with the Water Supply and Sewerage Branch of the Department of Housing and Construction.²²

Self-government was conferred on the territory in 1989. On 30 May 1995, ACTEW Corporation Ltd was registered with the then Australian Securities Commission as a public company limited by shares. On 1 July 1995 the rights, liabilities and responsibilities of ACTEWA were transferred to ACTEW. The two shares in ACTEW are held by the Chief Minister and Deputy Chief Minister of the ACT, and ACTEW is subject to the provisions of the *Territory Owned Corporations Act 1990*.

ACTEW's predecessors operated as statutory authorities, which allowed their senior executives to be included in various planning committees, including deliberations associated with major infrastructure development in the ACT. The creation of ACTEW was intended to bring greater commercial accountability consistent with it operating as an autonomous business entity. As noted in a history of ACTEW, it did not always have a commercial focus:

Funding of the electricity and water resources had never been a problem under the commonwealth government. ACTEA has been able to fund its own activities from revenues and the guaranteed allocation of electricity from the Snowy Mountains Authority ensured that costs to consumers were kept to a minimum. Funds for capital infrastructure for water and sewerage services had been readily found from general revenue and there was no expectation that these costs should be recovered from operations.²³

²⁰ See Administrative Arrangements 2011 (No 1) Notifiable Instrument NI2011-244.

²¹ By section 5 of the *Australian Capital Territory Electricity Supply Act 1962* (Cwlth).

²² By section 4 of the *Electricity and Water Ordinance 1988*, which became an ACT Act on 11 May 1989 (see *Australian Capital Territory (Self-Government) Act 1988* (Cwlth), section 34(4)).

²³ Donovan, P.F., *Lights! Water! ... ACTEW! A history of ACTEW and its predecessors*, ACTEW, 1999, p. 185.

The *Territory Owned Corporations Act 1990* requires ACTEW:

- (a) to operate at least as efficiently as any comparable business; and
- (b) to maximise the sustainable return to the Territory on its investment in the corporation or subsidiary in accordance with the performance targets in the latest statement of corporate intent of the corporation; and
- (c) to show a sense of social responsibility by having regard to the interests of the community in which it operates, and by trying to accommodate or encourage those interests; and
- (d) if its activities affect the environment—to operate in accordance with the object of ecologically sustainable development.²⁴

As part of this arrangement, ACTEW is expected to pay a dividend to the ACT Government from its after-tax accounting profits.²⁵ The Act also establishes accountability and reporting arrangements, including an obligation on directors to prepare an annual statement of corporate intent specifying, among other things, the commercial objective of the entity, its business and corporate strategies and the targets and performance measures by which the entity might be judged.

In establishing ACTEW in 1995, the government also committed itself to regulation of the prices the corporation charged consumers for electricity and water services. As a consequence of this commitment, the ACT Energy and Water Charges Commission was established in 1996 and made its first determination on ACTEW's charges for electricity, water and sewerage services in May 1997. Later in 1997 the ACT Energy and Water Charges Commission was subsumed by the Independent Pricing and Regulatory Commission, which became the Independent Competition and Regulatory Commission in 2000.

2.3 Issues in determining an appropriate regulatory model

In determining an appropriate regulatory model to apply to the provision of water and sewerage services in the ACT, there are three aspects of the industry in the territory that demand attention:

- The services are provided by a vertically integrated monopoly operator in the form of a public company that is owned by the ACT community through the shares held by the ACT Government.
- The provision of water and sewerage services requires lumpy investment in long-lived assets and is capital-intensive.
- The most demanding task in the provision of water services is maintaining continuity in the supply of water to the ACT community.

Public ownership of the corporate service provider

The standard textbook theory of price regulation is based on the assumption that the regulator is determining the regulated price (or prices) for a monopoly business in order to limit the use of market power by the sole provider. It is generally assumed that the monopoly business is a profit-maximising business that would in the absence of price regulation set prices at the monopoly price level. Absent in many of the standard descriptions of regulation is the nature of the ownership of the business. No distinction is made between government-owned businesses and privately owned businesses.

²⁴ *Territory Owned Corporations Act 1990*, section 7(1).

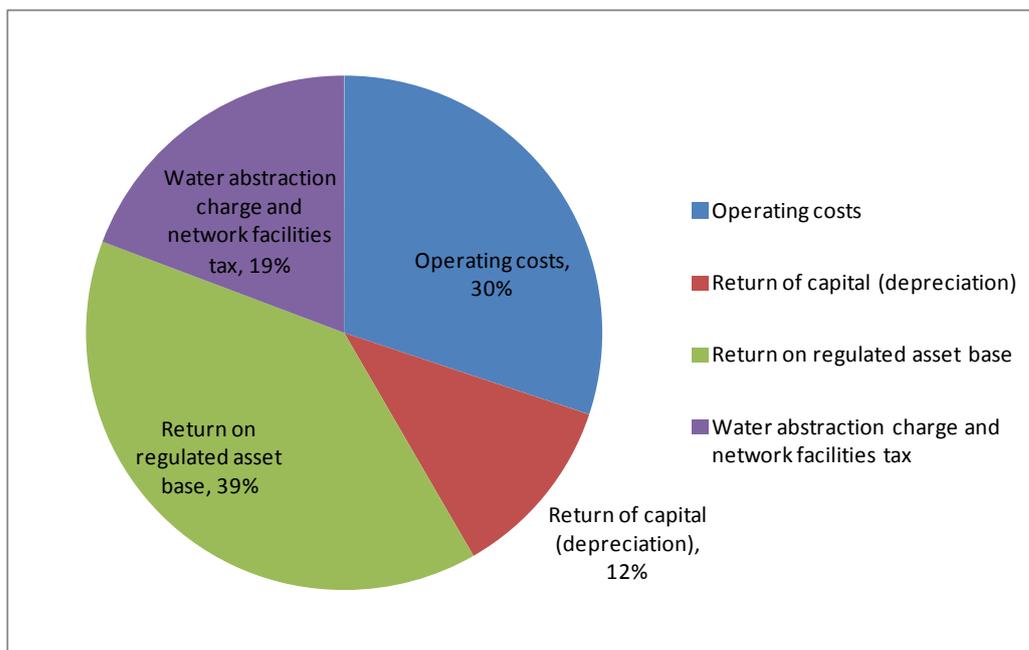
²⁵ Under National Competition Policy agreements ACTEW is subject to a tax-equivalent regime.

To illustrate the importance of this distinction, consider the different treatment of capital expenditure. Suppose that the regulator determines ex post that spending on a particular capital project was not prudent and decides, therefore, that the business is not entitled to earn a return on the excess of the capital spend over what the regulator considered prudent. For a privately owned business, the loss generated by this decision would be borne by the shareholders in the business and customers would be unaffected. For a government-owned business, while a similar outcome would occur, with the government as shareholder the loss ends up being borne by the whole community. In the case of water and sewerage services in the ACT, while the community as customers would not bear the direct burden of imprudent capital expenditure they would as taxpayers through lower spending or higher taxes to offset the losses suffered by government as the shareholder of the business. For the reasons discussed below, the potential scale of those losses is substantial. This raises the question whether the incentives to avoid imprudent investment are the same for publicly and privately owned businesses operating under the same regulatory regime. If not, the regulator may need to adopt a different approach when dealing with a publicly owned business than it would adopt in dealing with a privately owned one.

Capital intensity

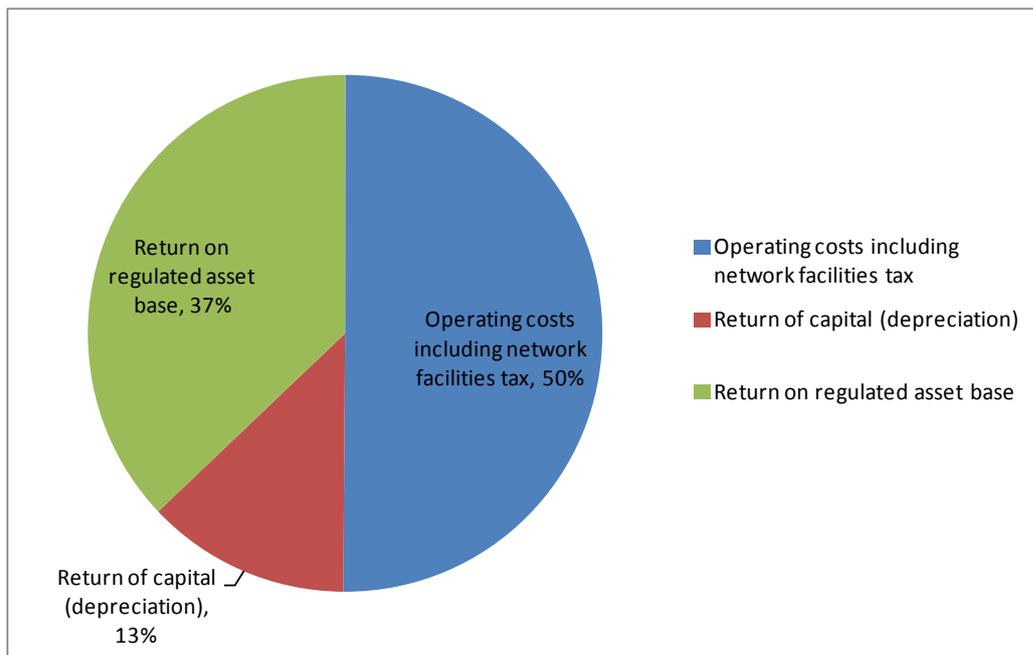
The capital intensity of the provision of water and sewerage services is illustrated in figures 2.1 and 2.2, which show the shares of operational costs and the return of and on capital in the build-up of efficient costs for ACTEW in the final year of the current price direction (2012–13). The costs of maintaining the capital of the business are a substantial element in the build-up of total efficient costs, accounting for just over half. As explained in section 2.4, under the methodology currently used by the Commission and most other similar regulators in Australia, prices are set based on estimates of projected sales so as to generate sufficient revenue to allow the service provider to recover these costs. Variations in the costs attributable to capital are, therefore, a major driver of variations in price. The influence of these capital-related costs on final pricing outcomes is likely to increase over coming years given the current focus on capital expenditure, aimed predominantly at ensuring water supply security but also at increasing expenditures on maintaining and expanding the existing networks.

Figure 2.1 2012–13 forecast water revenue requirement breakdown



Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and determination*, Report 1 of 2008, April 2008, Table 10.1, p. 107.

Figure 2.2 2012–13 forecast sewerage service revenue requirement breakdown



Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and determination*, Report 1 of 2008, April 2008, Table 10.2, p. 107.

There are three principal elements that enter into the calculation of the costs attributable to capital: the size of the capital stock, the return allowed to be earned on that capital stock, and the rate at which the capital stock is assumed to depreciate.

The capital in existence at a point of time is the accumulation of the investments deemed to be prudent less the depreciation assumed to have taken place.²⁶ Investment and its prudence or otherwise therefore plays a major role in determining efficient cost and hence price. As discussed below, determining the prudence or otherwise of investments in the water and sewerage services industry is particularly difficult.

The rate of return the business is allowed to earn on capital invested is commonly established, including in past determinations of the Commission, by measuring the weighted average cost of capital or WACC. In determining the WACC for regulated businesses in Australia, regulators uniformly determine the rate of return for a ‘typical’ business, where a typical business is synonymous with a privately owned business—that is, a business where private investors are making the decision whether to become shareholders of the business based on a comparison of the risk–return profile it offers against the risk–return profiles of alternative investment opportunities. The assumption then is that the business must earn a commercial rate of return—that is, a return that is competitive with other investment opportunities confronting its potential suppliers of capital.²⁷

²⁶ In the jargon of regulation, this is usually referred to as the regulated asset base or RAB.

²⁷ A business can, of course, obtain finance other than by issuing shares (for example, by issuing corporate bonds or by borrowing from financial institutions). The WACC calculation takes all these into account, but in every case the finance provider is assumed to confront a range of options for investment of its funds, and therefore to be successful in attracting funds a business needs to offer a competitive or commercial rate of return.

The Commission raised this issue in the 2008 review in the second discussion paper on the return on capital:

There may be valid reasons, supported by economic theory, for treating government-owned businesses differently from privately owned businesses. This would involve continuing to provide a 'commercial' rate of return but recognising that the return required on government-provided equity may be different from return required on privately provided equity.²⁸

One obvious reason why a difference may arise is that the shareholders of a publicly owned business have typically become shareholders and remain so for reasons other than the competitiveness of the risk–return profile offered by the business. There may be a host of social, political, historical and even economic reasons for a business entity to remain in public ownership. The history of ACTEW outlined in section 2.2 provides one example of how such a state of affairs may come about.

A second reason for expecting such a difference is that government shareholders often want the businesses that they own to borrow on the most advantageous terms and to this end provide guarantees in various forms to those lending to the business. This shifts a portion, perhaps all, of the risk associated with the borrowing from the lender, enabling it to lend on finer terms, to the guarantor government and hence to the community. If the community is bearing the risk in such circumstances, the question naturally arises as to why the return provided to the regulated, publicly owned business needs to include a risk premium.

In its 2008 review the Commission nevertheless concluded:

However, the Commission is unaware of any network regulator in Australia that treats government-owned businesses differently from privatised businesses.²⁹

In concluding the 2008 review, the Commission determined ACTEW's return on capital on the basis of a typical firm model. However, recognition of the amplifying effect of the interaction of this factor with the capital intensity of the business of supplying water and sewerage services and the inherent difficulty of some of the investment decisions that must be taken in such a business, as discussed below, make an impressive case for reconsidering this issue.

Section 1d of the terms of reference for this inquiry requires the Commission to have regard to 'the ability of the pricing path to match revenue recovery requirements to the consumer benefits accrued from the water security program'.

Much of the water security program involves the creation of very long-lived assets, like the Cotter Dam upgrade. Hence, benefits will flow from these investments for a correspondingly long time, and many of the benefits will flow to generations yet to be born. This creates two related difficulties. The first, referred to in the section of the terms of reference quoted above, is how to spread the cost burden of creating such assets over the long sequence of generations that will benefit from them. The second is how to reflect the preferences of those yet unborn generations in decisions that will affect their welfare but that must be made today.

Failure to reflect benefits flowing to future generations adequately may lead to significant undervaluation of the community benefits of the investment under consideration. This is a very difficult issue that has generated a great deal of controversy, for example, in the debate about the

²⁸ Independent Competition and Regulatory Commission, *Water and wastewater discussion paper 2: Return on capital*, Report 3 of 2007, March 2007, p. 7.

²⁹ *Ibid.*

appropriate response to climate change.³⁰ Similarly, a failure to spread the cost burden that leads to a disproportionate share being borne by the current, decision-making generation may reduce willingness to invest in long-lived assets.

One aspect of the set of relevant considerations here is the setting of the depreciation rate that determines the rate of return of capital, one of the two components of the portion of costs attributable to capital. Setting the depreciation rate and other matters raised by section 1d of the terms of reference will need to be given careful consideration by the Commission, both to avoid bias in decision-making about long-term investments and to contain the price rises imposed on the current generation of water consumers.

Continuity of supply

As emphasised in the context paper for this and the secondary water use reference, a major task in providing water services is to provide storage that can collect and hold water when rainfall makes it available so that it can be supplied to customers when they demand it irrespective of whether there is rainfall at that time or not.³¹ As experience in the ACT over the last decade graphically illustrates, rainfall can be well short of meeting demand for water over extended periods or be more than sufficient over significant periods. There is an increasing range of options for securing storage or contingent water supply and the territory, largely through ACTEW, has begun to adopt a portfolio approach to combining these various alternatives into a water security strategy. Optimising such a strategy is a demanding task, but it pales alongside the task of determining how much water security the community wants and, more importantly, is prepared to pay for.

A market-based solution to this problem would involve the water service supplier offering a range of levels of water security at different prices that reflect the costs of providing that level of security.³² Customers would express their preferences in the usual way by purchasing the offering that best suited their needs and budget. In principle, the water service business could then match its portfolio of water supply options to the customers' expressed desire for water security. There are, however, a number of difficulties with this approach. Options for supplying different levels of water security tend to be lumpy and inflexible. Dams, for example, tend to have a large minimum efficient scale and be very long-lived assets. While water trading offers more flexibility, the market is still relatively thin and trade in water rights rather than water volumes limits flexibility. More fundamentally, while such a market may offer a solution for the marginal player, by transferring water to users who value it most, it cannot alone address a widespread drought.

In addition to these technical difficulties, there is the challenge presented by the widely held community view that everybody, regardless of their income, is entitled to a minimum, but reasonably high, level of security of water supply. The combination of these factors has tended to produce collectivised arrangements, such as those in the ACT described above, where political processes play a major role in a community-wide decision about water security.

³⁰ The leading example of this debate is provided by the Stern Review of climate change conducted for the United Kingdom Government and the subsequent exchanges between the authors and their critics. The Stern Review can be found at http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/sternreview_index.htm. A convenient summary of the exchanges with some of the principal critics can be found at <http://www.ycsg.yale.edu/climate/forms/FullText.pdf>.

³¹ Independent Competition and Regulatory Commission, *Context paper: Water in the ACT*, Report 8 of 2011, November 2011, p. 5.

³² For a monopoly water service provider, there might be a role for the regulator to ensure that such tariff schedules reflect the efficient cost of providing the security of supply offered.

It is critical for the overall welfare of the community that the decision about the level of water security to be procured is made well. If too low a level of security is chosen, the community will find itself spending long periods with high levels of water restrictions and/or high water prices, depending on the method chosen to ration the limited supply of water. If too high a level of water security is chosen, the community will find itself bearing a high cost burden, through some combination of higher water prices, higher taxes and lower levels of provision of other government services, for an excessive level of water security. That is, the community will find itself wishing it had lower water prices (or taxes etc) even if that meant more frequent periods of water rationing of whatever kind.

Because of the interactions between the three particular characteristics of the supply of water services described in this section, the costs to the community of poor-quality decision-making can be very substantial.

Key issues for the Commission

This analysis raises two key issues for the Commission:

- How can the Commission best contribute to a quality outcome from the community decision on a desired level of water security?
- If, perhaps in spite of the best efforts of all involved, the decision turns out poorly, what can the Commission do to minimise the negative impact of the poor outcome on community welfare?

There is clearly community concern about aspects of the water security decisions that have been recently taken. The community has complied with edicts to conserve water only to be told that this means water prices will need to be raised. There is also the apparent paradox that the heavy rainfall associated with recent La Niña weather events, which has ensured a plentiful supply of water, also means that water prices must rise. In addition, much of the capital cost of recent water security initiatives has yet to find its way into the regulated asset base. If and when it does, this will put further upward pressure on water prices.

While some of this is a consequence of the simple arithmetic of full cost recovery under the building block approach to determining efficient cost described below in section 2.4, a fuller understanding of the forces at play here requires a careful analysis of the relationship between ACTEW and the government—principally, understanding the government’s involvement in determining and approving ACTEW’s water security capital expenditure and ACTEW’s involvement in determining and administering policies relating to water management and water quality.

Matters the Commission may need to consider include the performance targets established as part of ACTEW’s statement of corporate intent, which underpins the relationship between the business and its government shareholders. The Commission will also seek to understand the priority placed on financial performance targets to deliver specified dividends as opposed to any targets intended to drive operating efficiencies in the business while maintaining or improving service delivery standards.

ACTEW's statement of corporate intent sets out the corporation's objectives for the coming year. For example, ACTEW's most recent statement included the following priorities with respect to water for 2011–12:³³

- Complete construction of the enlarged Cotter Dam and Murrumbidgee to Googong water transfer projects.
- Contribute to the review being undertaken by the ACT Government of *Think water, act water*.
- Continue to advise and work with the ACT Government to achieve an appropriate sustainable diversion limit in the Murray–Darling Basin Plan for the ACT.
- Assist the ACT Government to finalise the intergovernmental agreement on water trading between the ACT and NSW and finalise the commercial agreement between ACTEW and Snowy Hydro Limited for the Tantangara transfer project.

A challenge faced by all territory-owned corporations is how to balance their suite of objectives as contained in the *Territory Owned Corporations Act 1990* and their statements of corporate intent. In balancing this suite of objectives, the corporations are often required to make trade-offs between objectives. For example, it is difficult for a business, on the one hand, to operate within a profit objective while, on the other hand, being engaged as a part of the local community. Similarly, there are potential conflicts of interest for an entity required to act like a business while also being involved in providing policy advice to government. It is these tensions and the implications for the operation of the business and community decision-making that the Commission will need to consider.

2.4 Commission processes for determining water and wastewater charges

The Commission or a predecessor body has had responsibility for approving water and wastewater charges in the territory since 1997. The Commission's powers and procedures are provided in the ICRC Act. ACTEW's water and wastewater charges were first determined by the Commission in 1997 and subsequently reset in 1998, 1999, 2004 and 2008.

The process by which the Commission determines water and wastewater charges commences with an industry reference under sections 15 and 16 of the ICRC Act. The Commission then conducts an inquiry into the matters relevant to the determination, which can be specified in the terms of reference that initiated the process. In addition, the Commission must have regard to factors listed in section 20 of the Act.

This price determination process is broadly consistent with regulatory arrangements adopted by other state and territory regulatory bodies (and the Commonwealth) which were established as a requirement of the Competition Principles Agreement 1995.

To date, most Australian regulators responsible for determining the charges of infrastructure service providers have adopted what is referred to as a building block approach to determining a price path over the period of the price determination. The building block approach first seeks to determine the efficient cost of providing the service or services (based on an assessment of the appropriate return on capital, return of capital and level of operating expenditure) and then to set a price path that allows the utility to recover these efficient costs over the regulatory period. Underpinning this methodology is an assumption that future demand for the service can be forecast with a reasonable degree of accuracy.

³³ ACTEW Corporation, *Statement of corporate intent 2011–12 to 2014–15*, p. 3.

Australian regulators and policy makers have also sought to provide incentives for regulated utilities to improve the efficiency of their service delivery. To this end regulatory arrangements have sought to determine an indicative or allowed rate of return for the utility and for the utility to be able to retain any profit it can generate above the allowed rate of return within the regulatory period.

These incentive arrangements not only require a high level of accuracy in relation to preparation and acceptance of forecasts of future operating and capital expenditures, they also assume that service quality standards will be maintained when a utility underspends its operating and/or capital expenditure allowances.

The reasonableness of the building block approach to determining efficient costs and prices may be undermined by the regulator's reliance on data and technical assessments submitted by the service provider and a lack of independent data to assess the veracity or otherwise of the regulatory proposal. To address this information asymmetry, UK regulators have sought to use benchmark or non-firm-specific data when setting regulated prices.

The Australian Energy Market Commission (AEMC), the rule-making body in the energy sector, recently reviewed the merits of alternative approaches to determining energy charges, including establishing prices in accordance with changes in total factor productivity (TFP) and the greater use of industry benchmarks to set efficient costs as an alternative to an analysis of a utility's own costs. The AEMC concluded that:

the application of TFP as an alternative to the building block approach could lead to increased productivity and lower prices for consumers in the long term ... However, it also concluded that a number of conditions need to be met for TFP to work properly and such conditions are not met at the present time.³⁴

In setting ACTEW's water and wastewater charges since 1 July 1997, the Commission, while meeting the requirements of its terms of reference and the ICRC Act, has also taken account of developments in Australian regulatory practice. The Commission adopted the practice of locking in the value of ACTEW's regulated assets and has rolled this value forward in subsequent determinations following an assessment of the prudence and efficiency of the capital expenditures undertaken in the regulatory period just concluded. Where the Commission determines that expenditures were not prudent or efficient, it is open to the Commission to increase the value of the regulatory asset base by a lesser amount than the value of capital expenditures actually undertaken.

The opportunity for an ex-post assessment of capital expenditure prudence and efficiency is not available under the provisions of the Electricity and Gas Rules. Under these rules, the prudence and efficiency of capital expenditure are assessed in the process of determining the forecast capital allowance for the price direction period. Under the Electricity and Gas Rules the actual capital expenditure is then included in the RAB as part of the roll-forward without any ex-post assessment of prudence or efficiency. In the case of the regulatory approach for water and sewerage services, the Commission has retained the option to conduct an ex-post assessment of the prudence and efficiency of the capital expenditure as part of the roll-forward of the RAB.

The national energy regulatory framework is applied consistently to government-owned businesses and privately owned businesses and assumes that the incentives facing government and private businesses are the same. In the case of the electricity sector, this assumption has recently been

³⁴ Australian Energy Market Commission, *National Electricity Amendment (Total Factor Productivity for Distribution Network Regulation) Rule 2011*, December 2011, p. 3.

challenged by a study suggesting that government-owned businesses are more likely to overspend capital allowance and have higher operating costs.³⁵

Consistent with regulatory practice in the energy sector, the Commission has determined the regulated return for ACTEW's water and wastewater businesses by determining a WACC to be applied to ACTEW's regulated asset base for determining its return on capital. This involves assuming a debt–equity ratio, an indicative commercial borrowing cost and a return on equity using a capital asset pricing model framework. For the purposes of determining the WACC, the Commission has adopted the use of a pre-tax rate of return rather than a post-tax rate of return as is used by some other regulators.

Adoption of this approach treats the publicly owned, monopoly service provider as if it were a private sector investor. Questions have been raised in the earlier discussion about the reasonableness of this assumption.

Under the building block approach to price determination, the value of ACTEW's regulatory asset base is the most significant element in determining the level of its charges. For this and other reasons noted above, the Commission will need to give particularly careful consideration to its approach to this task.

2.5 Conclusion

Based on the preceding discussion, the Commission has identified the following key issues upon which it is seeking comment.

- Q1:** Does the Commission need to review its assessment that ACTEW will continue to operate as a vertically integrated monopoly service provider? If so, why?
- Q2:** If ACTEW's operating risks are effectively underwritten by ACT taxpayers, what regard should the Commission give to this in assessing ACTEW's capital expenditure programs and its required return on capital?
- Q3:** How might the Commission's investigation and price determination processes best contribute to the development of a quality outcome on the ACT community's desired level of water security, including an outcome that properly incorporates the preferences of future generations?
- Q4:** In light of the issues identified in questions 1 to 3, are there alternative regulatory models or regulatory principles that the Commission might consider as part of the forthcoming price determination process?
- Q5:** Should the Commission's approach to dealing with investment that it determines not to be prudent be influenced by the fact that ACTEW is publicly owned? If so, in what way?

There are further key issue boxes throughout the remainder of the paper. These issues are collated in chapter 7.

³⁵ Mountain, B. and Littlechild, S., *Comparing electricity distribution network costs and revenues in NSW and Great Britain*, University of Cambridge EPRG Working Paper 0903, December 2009.

3 Carryover issues from the 2008–13 price direction

There are three significant carryover issues from the current price direction. The first two may have direct implications for prices to apply from 1 July 2013. These issues are the under-recovery of revenue due to lower than forecast water sales during the current regulatory period and the possibility of a capital expenditure overspend as compared to that included in the current price direction. The third issue relates to the approach adopted to forecast customer numbers and sales volumes. These matters are discussed in turn in the remainder of this chapter.

3.1 Under-recovery of approved revenue

As part of a price direction, forecasts of water sales are required in order to translate the total revenue requirement into prices. Given the uncertainty associated with forecasting water consumption (discussed further in section 3.3), the current price determination contained a provision stating that where the net present value of actual water revenue earned by ACTEW over the 1 July 2008 to 30 June 2013 regulatory period differs by more than 3% from that forecast, the under-collection or over-collection of revenue must be made up in the forthcoming regulatory period.

Table 3.1 summarises the total forecast water sales and the actual volumes that have been sold in the first three years of the price direction period.

Table 3.1 Forecast and actual water sales, 2008–09 to 2010–11

	2008–09	2009–10	2010–11
Total sales (ML)—forecast	45,871	49,962	51,328
Total sales (ML)—actual	38,616	37,796	33,845
Difference	-7,255	-12,166	-17,483

Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and determination*, Report 1 of 2008, April 2008, Table 5.4, p. 31 for forecast water sales. Actual water sales are taken from ACTEW's submission to the mid-term review, p. 42, and additional water consumption data provided by ACTEW.

Table 3.1 shows that sales have been significantly below forecast—as of the end of 2010–11, the total shortfall in sales was approximately 36,900 ML. This outcome will result in a substantial revenue shortfall in excess of \$100 million. In the absence of a significant increase in consumption during 2011–12 and 2012–13, there is likely to be a significant under-collection of revenue during the current regulatory period which will trigger the catch-up mechanism.

The under-recovery of approved revenues in the current period can be factored into future prices in a number of ways. These include as a one-off price increase during 2013–14 or as an increase that is smoothed across each year of the forthcoming price direction period. Alternatively, the revenue shortfall could be 'capitalised' and thereby included in the asset base with recovery taking place over the longer term. The main issue to consider in deciding the most appropriate approach is the trade-off between a possible price shock of a short-term recovery compared with the inequity of imposing costs from the present on consumers of the future.

As part of the current inquiry, the Commission will also be considering the appropriateness of including such a revenue catch-up mechanism in the forthcoming price direction.

Q6: Should the Commission include in the forthcoming price direction a revenue catch-up due to lower than expected water sales during the current price determination period? If so, over what period of time should that catch-up take place?

Q7: Is it appropriate for a revenue catch-up mechanism to be included in the forthcoming price direction?

The Commission will also be considering how best to address forecasting uncertainty. This matter is discussed further in section 3.3 (forecasting sales volumes) and section 5.1 (length of the regulatory period).

3.2 Capital expenditure overspend

The second event during the current regulatory period with direct price implications for the forthcoming regulatory period relates to the likely overspend of capital compared with expenditure allowed for in the price direction.

The Commission will consider this issue in the context of determining the amount of capital expenditure to be included in the opening value of the regulatory asset base (RAB) for 1 July 2013. In deciding the level of capital expenditure to include in the RAB, the Commission will apply a prudence review followed by an efficiency review.

A prudence review assesses whether the capital expenditure was necessary. If an expenditure is deemed to have been necessary, an efficiency review then determines the efficient cost of the activity in question. The Commission engages engineering consultants to undertake prudence and efficiency reviews and advise the Commission on the appropriate costs. Once determined, the efficient costs are then used in the roll-forward of the RAB in order to calculate the opening value of the asset base as of 1 July 2013.

Table 3.2 shows the variance between the capital expenditure allowed in the price direction and the expenditure that has been incurred in the first three years of the regulatory period.

Table 3.2 Forecast and actual total capital expenditure, 2008–09 to 2010–11
(\$'000, 2010–11 dollars)

	ACTEW reported capital expenditure	ICRC decision	Variance
Water (non-security expenditure)	183,755	120,165	63,590
Water security major projects	360,194	314,916	45,278
Total sewerage	112,063	92,542	19,521
Total	656,012	527,623	128,389

Source: ACTEW, *Annual report to the Independent Competition and Regulatory Commission: Capital expenditure report 2010–11*, September 2011, Table 2.

Additional detail on the difference between forecast and actual capital expenditure can be found in Appendix 3.

One implication of the data in Table 3.2 is that, if the Commission accepts that some portion of the capital overspend is prudent and efficient, the value of ACTEW's regulatory asset base in 2013 will be higher than the Commission determined in 2008. All other things being equal, this implies

a step increase in ACTEW's revenues in 2013–14 in order to recover these additional capital-related costs.

The Commission, with the assistance of its engineering advisors, will be assessing carefully the prudence and efficiency of ACTEW's capital expenditure when it comes to determining the opening RAB for 2013–14. The Commission in its 2008 determination did not determine any of ACTEW's capital expenditure to be imprudent; however, it noted concerns raised by its engineering consultants regarding project approval and recordkeeping processes.³⁶

In assessing prudence and efficiency, the Commission will also take account of the policies of the ACT Government. The Commission will also examine the relationship between ACTEW and the ACT Government and its implications for the appropriate regulatory framework within which to determine prices (as discussed in chapter 2).

3.3 Forecasting sales volumes

The final significant issue arising from the current price direction with implications for the forthcoming period relates to forecasting sales volumes. This issue has arisen due to the discrepancy between forecast and actual water sales volumes and was identified in section 3.1 with specific respect to the revenue shortfall over the first three years of the price direction. This section discusses the underlying approach to forecasting, the reasons for the discrepancy and the implications for the approach to be adopted in the forthcoming price direction.

The Commission must set prices in advance and in doing so must forecast water consumption volumes. If actual consumption exceeds that forecast, the water business will earn greater than expected profits. Conversely, if actual consumption falls short of that forecast, the water business will earn lower than expected profits. Forecasting is an inherently uncertain exercise, and the risk of forecasts diverging from actual outcomes increases with the forecast horizon.

The most contentious forecasts relate to water sales. Forecasts of customer numbers (including water and sewerage service customers) can be forecast more accurately, have less significant revenue implications and as such are less problematic.

Before the current price direction the Commission adopted an approach whereby it annually reforecast volumes in order to determine prices for the coming year. As part of the current price direction the Commission moved away from this approach and undertook forecasts for the full five years of the price direction. This approach was based on a desire to provide increased price stability and reduce the regulatory burden associated with annual price resets.

However, to mitigate the potential effects of inaccurate forecasts, two allowances were included in the price direction. These were the revenue catch-up mechanism discussed in section 3.1 and the ability to adjust forecasts for 2011–12 and 2012–13 should the forecasts in the previous three years prove to be inaccurate. Due to the discrepancy between forecasts and actual consumption, the adjustment to 2011–12 and 2012–13 forecasts has been made and it is highly likely that the revenue catch-up will also be triggered.

Table 3.3 shows the initial and adjusted water sales forecasts. Table 3.3, in combination with Table 3.1, show that actual sales have been below those forecast and that the forecasts for 2011–12 and 2012–13 have subsequently been reduced.

³⁶ Independent Competition and Regulatory Commission, *Final report and price direction: Investigation into prices for water and wastewater services in the ACT*, March 2004, p. 30.

Table 3.3 Initial and adjusted forecast volumes for the current regulatory period (ML)

	2008–09	2009–10	2010–11	2011–12	2012–13
Total sales—initial forecasts	45,871	49,962	51,328	51,733	51,589
Total sales—adjusted forecasts	na	na	na	47,962	47,962

The likelihood that both the adjustment to forecast sales and revenue catch-up mechanisms will be triggered illustrates the difficulties associated with forecasting water sales volumes. Moreover, the likely revenue under-collection (estimated to date at \$135 million) illustrates the importance of minimising forecast error.

During the development of the current price direction, there was much debate about what forecasts of water sales to adopt. The Commission in 2008 developed its own forecasts as it believed that those provided by ACTEW overestimated the likely sales. Despite this reduction in the forecasts relative to those provided by ACTEW, the final forecasts still proved to overestimate consumption. This overestimation was due to retention of water restrictions for longer than envisaged by the Commission followed by two relatively wet years which have reduced demand for outdoor water consumption. These factors combined with the behavioural changes that have taken place and the investments made by consumers in more water efficient appliances appear to have reduced underlying demand.

Given the difficulties experienced in these most recent forecasts, the forecasts for the coming price direction will require considerable thought. However, while the previous forecasts were developed in a time of relatively high uncertainty, some of this uncertainty has diminished. For example, much of the uncertainty to do with supply has been addressed through the water security projects (effectively removing the prospect of significant water restrictions for the short to medium term) and information is now available on the impact of the water conservation measures adopted across Canberra. As such, the main area of uncertainty remaining from the previous set of forecasts relates to annual climate variability and the associated impact on outdoor water demand.

The Commission expects ACTEW to take these factors into account, including the merits of alternative approaches such as annual volume forecasting, when developing its forecasts of water sales for the forthcoming regulatory period.

Q8: Given the uncertainty inherent in forecasting water sales volumes, should the Commission establish an indicative price path for the next regulatory period and adjust prices annually to reflect actual water volume sales in the previous year?

4 Issues raised in the terms of reference

This chapter discusses the matters raised specifically in the terms of reference to be considered as part of the forthcoming regulatory review. These issues are:

- ACT Government water-related policies (section 1a)
- Commonwealth Government water-related policies, initiatives and agreements (section 1b)
- the impact of a carbon price on the operations of ACTEW (section 1c)
- the ability of the pricing path to match revenue recovery with consumer benefits (section 1d)
- a consideration of all potential regulatory models (section 1e)
- the legislative requirements of section 20 of the Act (section 1f).

In addition, the terms of reference require the Commission to consider other matters it believes are relevant to the review (section 1g). These matters are discussed in chapter 5.

4.1 ACT Government water policies

The terms of reference (section 1a) require the Commission to consider policies of the ACT Government as they relate to water security and the use of water.

The context paper released by the Commission on 23 November 2011 discussed the governance, institutional and policy arrangements in the ACT. It also contained a timeline of key policy events and milestones.³⁷ An issues paper on secondary water use in the ACT was released on 23 November 2011 which discussed many of the ACT Government's policies.³⁸ The policies identified in the two papers included:

- *Think water, act water*, released in April 2004. This document is the ACT Government's long-term water resources strategy and highlights recycling, conservation and demand management as the key options for securing the ACT's water supply. It included the following targets with direct implications for the operation of the water and sewerage networks:
 - a reduction (relative to 2003 consumption) in per capita consumption of mains water by 12 per cent by 2013 and 25 per cent by 2023 through water efficiency measures, sustainable water recycling and use of stormwater and rainwater
 - an increase in wastewater reuse from 5 per cent to 20 per cent by 2013.
- Water conservation measures such as permanent water conservation measures. Permanent water conservation measures were introduced from 1 November 2010 through the Utilities (Water Conservation) Regulation 2006, which is made under the *Utilities Act 2000*. The measures are aimed at reducing the usage of potable water and impose 'common sense' requirements such as the use of hand-held hoses, prohibition on watering gardens at designated times and other restrictions on use.
- Water restriction measures such as the temporary water restrictions scheme. These measures are also approved under the Utilities (Water Conservation) Regulation 2006 and are used in times of emergency water shortage. Temporary water restrictions are applied through a four-stage scheme of progressively higher levels of restrictions based on the scarcity of water. The

³⁷ Independent Competition and Regulatory Commission, *Context paper: Water in the ACT*, Report 8 of 2011, November 2011.

³⁸ Independent Competition and Regulatory Commission, *Issues paper: Secondary water use in the ACT*, Report 9 of 2011, November 2011.

ACT was in various stages of temporary water restrictions almost continuously over the recent drought period from 2002 to 2010. At present the temporary water restrictions regime is managed and implemented largely by ACTEW.

- Water planning requirements as implemented through the Water Sensitive Urban Design (WSUD) General Code. WSUD is aimed at achieving a 40 per cent reduction in mains water usage in all new dwellings (single residential, multi-unit residential, estate, commercial, industrial or institutional) compared to 2003 levels as well as stormwater quality and quantity management. The mains water reduction target applies to all new developments or redevelopments. The WSUD principles therefore apply to a significant proportion of ACT buildings, including all new suburbs and commercial and industrial developments.
- Rebates, subsidies and programs administered by the ACT Government.
- The *Where Will We Play* strategy, which aims to reduce potable water usage at particular sporting facilities.
- The Canberra Integrated Urban Waterways project, which is aimed at improving water quality for local river systems, contributing to flood protection, enhancing urban biodiversity and landscape amenity, and substituting non-potable for potable water supply through the use of alternative water sources such as harvested stormwater from ponds and recharged groundwater sources. The target is to substitute up to 1.5 GL of potable water by 2011 and up to 3 GL by 2015. The Commission is undertaking a review of elements of this project as part of its inquiry into secondary water use in the ACT.
- The Weathering the Change Draft Action Plan 2, which included an action relating to increasing the security of Canberra's urban water supply through completion of a number of existing projects, including the enlarged Cotter Dam, the Murrumbidgee to Googong transfer pipeline, the purchase of water entitlements and supplementing non-potable supply through the Canberra Integrated Urban Waterways project. The Draft Action Plan 2 also stated the intention to promote 'recycling, water re-use and other ways to reduce demand of potable water in the ACT, where cost effective in managing water security'.³⁹

The Commission notes that the primary policy document—*Think water, act water*—is under review, and a revised strategy is due to be released in 2012. The Commission will consider the outcomes of the revised policy and any implications for the operation of ACTEW's water and sewerage network.

In addition, the Commission will take into account the impact of the broad range of policies and activities on the actions and operations of ACTEW. An example of a government policy having a potential impact on ACTEW's operations is the Canberra Integrated Urban Waterways project. To the extent that this program reduces the volume of water sold by ACTEW, the unit price of water will need to increase given the principle of setting prices on the basis of cost recovery. This point highlights the importance of adopting an integrated water management approach to ensuring that the ACT's water security is achieved in a secure, reliable, effective and economically efficient manner. The Commission is considering this matter in detail as part of its inquiry into secondary water use.

Similarly, the measures aimed at reducing water consumption (permanent water conservation measures and the temporary water restriction regime) have obvious implications for the volume of water sold by ACTEW. As such, the recent investments in supply augmentation may result in a

³⁹ ACT Government, *Weathering the change: Draft Action Plan 2*, December 2011, p. 33.

need to reconsider the nature and operation of these regimes, including ACTEW's role in implementing the regimes.

Q9: Are there any other ACT Government water-related policies that the Commission should take into account?

4.2 National water-related policies, initiatives and agreements

The terms of reference (section 1b) require the Commission to consider national water initiatives, policies and agreements. The most significant national arrangement relates to the ACT's position in the Murray–Darling Basin. The ACT is a signatory to the Murray–Darling Basin Agreement (MDB Agreement), an intergovernmental agreement between Basin jurisdictions.

Current arrangements

The MDB Agreement, among other things, sets a long-term cap on surface water diversions. The cap allows the ACT to take out of the ACT river system a long-term average net⁴⁰ 40 GL of water per year for consumptive use. The cap is allowed to grow as the population increases by applying a growth factor.

The *Water Resources (Water available from areas) Determination 2007 (No 1)* made under the *Water Resources Act 2007* (ACT) sets a sustainable upper limit on ACT groundwater abstraction of 7.25 GL per annum. A total of about 1.7 GL of groundwater access entitlements have been issued, well below the upper limit.

Murray–Darling Basin Plan

Despite the cap arrangements under the MDB Agreement, the Basin has been under environmental stress as a result of past water-allocation decisions, prolonged drought, natural climate variability, and emerging climate change. As part of the process to resolve these issues, the Murray–Darling Basin Authority (MDBA) is developing a Basin Plan under the auspices of the Commonwealth *Water Act 2007*. This is a strategic plan for the integrated and sustainable management of water resources across the whole Basin.

The Basin Plan, among other things, will set mandatory long-term average sustainable diversion limits (SDLs) on the amount of water that can be taken from Basin water resources. The SDLs are limits on the volumes of water that can be taken for human uses (such as domestic, urban and agricultural) and are set at both a catchment and Basin scale. SDLs will be set for both surface water and groundwater diversions. The Basin Plan will replace the existing ACT cap under the MDB Agreement with an ACT SDL.

The MDBA released the proposed Basin Plan on 28 November 2011 for a 20-week public consultation period.⁴¹

Proposed ACT sustainable diversion limits

Chapter 6 of the proposed Basin Plan, in conjunction with schedules 2, 3 and 4, presents the proposed surface water and groundwater SDLs for all Basin catchments, including the ACT. Table 4.1 shows how the proposed Basin Plan SDLs relate to the current arrangements.

⁴⁰ A net cap means gross water extractions minus water returned to the river system after use.

⁴¹ The draft Basin Plan is available on the MDBA website at www.mdba.gov.au/draft-basin-plan.

Table 4.1 Current diversion limits and proposed sustainable diversion limits

Current diversion limits	Proposed Basin Plan SDLs
Surface water 40 GL/year plus growth factor	Surface water 40.5 GL/year with no growth factor
Groundwater 7.25 GL/year	Groundwater 7.25 GL/year

The SDLs under the Basin Plan will come into effect in 2019, with current cap arrangements remaining in place until then. Based on the SDLs contained in the proposed Basin Plan, the only notable difference relates to the removal of the population growth factor.

The Commission is considering the impact of the Basin Plan in detail as part of the secondary water use inquiry. Any relevant outcomes from secondary water use inquiry will be used to inform the water and sewerage service price direction.

Q10: Are there any other national water initiatives, policies or agreements that the Commission should take into account?

4.3 Impact of a carbon price

The terms of reference (section 1c) require the Commission to consider the impact of a price on carbon on the provision of water and sewerage services in the ACT.

On 8 November 2011 the Australian Senate passed legislation for a price on the carbon emissions of liable businesses that will begin on 1 July 2012 and end on 30 June 2015. The price on carbon emissions starts at \$23 per tonne of carbon dioxide equivalent (CO₂-e) for the first year and is expected to increase to \$24.15 per tonne CO₂-e in 2013–14. From 1 July 2015 the price of carbon will no longer be fixed and instead will be set through a market in emissions permits.

The carbon price will have no direct impact on ACTEW's operations. However, it is likely to increase wholesale electricity costs, which would in turn flow through to the price of electricity used by ACTEW. This may then result in increased costs to ACTEW, especially in relation to its energy-intensive activities such as pumping and treatment.

The Commission also notes that ACTEW has undertaken various greenhouse gas abatement activities in relation to its investments in the water security projects and will be seeking detail on these expenditures.

Q11: When assessing the prudence and efficiency of the greenhouse gas abatement activities undertaken by ACTEW, are there any additional factors that need to be considered?

4.4 Pricing path

The terms of reference (section 1d) require the Commission to consider the ability of the pricing path to match revenue recovery requirements to the consumer benefits accrued from the water security program.

It is important from an intergenerational equity perspective that cost recovery matches the time during which consumer benefits accrue. For example, it would be inappropriate for today's

consumers to make a one-off payment for the enlarged Cotter Dam when the dam will be providing benefits to the community over its entire life.

The Commission under its current approach attempts to ensure that the prices charged accurately reflect the appropriate costs incurred by the business, including a fair apportionment of ‘benefit accrual’ from capital investments. The Commission does this by allowing ACTEW to recover the costs as they are deemed to be incurred. The approach adopted to achieve this outcome is the classification of costs as either operating expenditure or capital expenditure.

Operating expenditure is recurrent and recovered immediately as it is necessary for the ongoing delivery of services. Given the length of the regulatory period and the annual adjustment of prices, operating expenditure is recovered on an annual basis.

With respect to capital costs, the Commission assigns an appropriate life for capital expenditure such that the costs are recovered over the life of the asset with all new capital assets assumed to have an effective life of 66 years. A question the Commission will consider is whether a life of 66 years is appropriate for the expenditures related to the water security program or whether the adoption of a longer life is justified on the basis of the expected useful life of the asset.

An implication of longer effective life is that it reduces the annual return of capital component of revenue requirement and hence prices. However, this effect is counteracted by a relatively higher RAB and associated return on capital.

An alternative approach that can be adopted is to break the assumed linkage between effective life and the accrual of consumer benefits. Under this approach assets are included in the RAB when they will be utilised. For example, this approach would see the cost (suitably inflated) of the water security projects gradually rolled into the RAB as their capacity is called upon. This approach is allowed for in the case of gas network regulation.⁴²

In addition there are other models which can be adopted, such as adopting an infinite life for assets or levelising (or averaging) the return on capital over its entire life rather than granting the return on capital on the notionally depreciated asset value.

Q12: Should the Commission consider allowing ACTEW to recover the cost of water security projects in accordance with the timing of their expected benefits, or over their expected lives?

4.5 Potential regulatory models

The terms of reference (section 1e) require the Commission to consider all potential regulatory models, including consideration of the provision of sufficient flexibility in price setting across the regulatory period to minimise the impact of significant price fluctuations. The Commission discussed this matter in detail in chapter 2 and noted that in past determinations the Commission has adopted a regulatory model referred to as a building block approach.

Alternatives to the building block approach include the use of benchmark performance data whereby a business is compared against other industry participants (referred to as total factor productivity). While this approach may have attractions in terms of avoiding the need to undertake

⁴² National Gas Rules V12 Part 9 deals with the treatment of conforming and non-conforming capital expenditure as well as redundant assets.

a cost build-up, it requires water industry information which the Commission does not consider to be available in sufficient detail at present. Moreover, it is potentially a difficult time to adopt such an approach given the recent spike in capital investment.

However, while setting prices purely on the basis of benchmark performance data may not be practical at this point in time, the Commission will use benchmark data in its assessment of the efficiency of ACTEW's operations.

The second matter raised in section 1e is in relation to sufficient price setting flexibility to minimise the impact of significant price fluctuations. The Commission has previously taken into account the matter of price fluctuations when determining final water and sewerage service prices. As an example, in the current regulatory period the Commission determined a price path that adjusted consistently across the regulatory period.

Q13: Are there alternative regulatory models that would better balance the objectives of achieving price stability or certainty while also allowing ACTEW to recover its efficient costs?

4.6 Section 20 of the ICRC Act

The terms of reference (section 1f) require the Commission to consider the legislative requirements outlined in section 20 of the *ICRC Act 1997*. Section 20 states that the Commission must have regard to:

- (a) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies (including policies relating to the level or structure of prices for services) and standard of regulated services; and
- (b) standards of quality, reliability and safety of the regulated services; and
- (c) the need for greater efficiency in the provision of regulated services to reduce costs to consumers and taxpayers; and
- (d) an appropriate rate of return on any investment in the regulated industry; and
- (e) the cost of providing the regulated services; and
- (f) the principles of ecologically sustainable development mentioned in subsection (5);
- (g) the social impacts of the decision; and
- (h) considerations of demand management and least cost planning; and
- (i) the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry; and
- (j) the effect on general price inflation over the medium term; and
- (k) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person.

The Commission will have regard to these matters throughout the inquiry.

5 Other issues

This chapter discusses those matters that are likely to be relevant to this review but are not discussed elsewhere in this paper. These issues are:

- the length of the regulatory period
- pricing structures
- pricing offerings
- the Productivity Commission review of the urban water sector.

5.1 Length of the regulatory period

The current regulatory period covers the five-year period from 1 July 2008 to 30 June 2013. However, there is no set length for a regulatory determination. Previous Commission price directions covered four years and initially only single years.

Under the approach known as incentive regulation adopted by the Commission, it is argued that the length of the regulatory period affects the incentive for the regulated business to seek and achieve efficiency gains. It is thought that longer regulatory periods create greater incentives for a business to seek efficiency gains as it is able to retain any cost savings until the following regulatory period. The regulator then takes into account efficiencies achieved and returns some or all of the savings to consumers by way of reduced prices into the future.

Longer regulatory periods also reduce the number of reviews required, which decreases the regulatory costs incurred by both the business and the regulator. In addition, it is argued that establishing a price path for a reasonably long period creates a predictable environment for the business to operate in and may increase certainty for consumers in regard to future prices.

However, the implementation of longer regulatory periods necessarily implies that the delivery of the benefits of efficiency gains to consumers is delayed. Also, because the determination of prices is based on estimates of future costs—and the further in advance the regulator is forecasting, the more uncertainty surrounds the estimates—a forecasting error may lead to either under-collection or over-collection of revenue by the regulated business.

This issue of forecasting accuracy is fundamental to incentive regulation and was at the centre of the discussion in chapter 3. To address these uncertainties, the current price direction included various mechanisms that in essence allowed for adjustments to the price path to account for unforeseen circumstances. These included the updating of sales estimates for 2011–12 and 2012–13 as discussed in section 3.3 as well as an adjustment to the RAB as of 1 July 2011–12 to account for contingent water security projects, the likelihood and cost of which were unknown at the time of completing the review.⁴³ These mechanisms are in addition to the revenue catch-up mechanism due to lower than expected water sales discussed in section 3.1.

As discussed in section 2.3, ACTEW's costs are in large measure driven by its capital works program which entails one-off lumpy investments combined with a more predictable asset replacement program. This implies some degree of certainty in relation to forecasting costs over a

⁴³ Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008, pp. 63–80, 164–65.

reasonable time horizon. Against this, and as discussed in section 3.3, forecasts of sales volumes are highly uncertain. Given this disconnect in the confidence that can be attributed to forecasts of costs and sales, the Commission will need to consider the period over which its price determination should apply.

Q14: Does the uncertainty regarding ACTEW’s water volume sales suggest that the Commission should adopt a shorter regulatory period for the next price determination?

5.2 Pricing structures

The structure of current water prices can be characterised as a two-part inclining block tariff. That is, customers face a fixed annual charge, a lower price for up to 200 kL of consumption per year and a higher price for consumption in excess of 200 kL per year. This structure and actual prices for the current regulatory period are shown in Table 5.1.

Table 5.1 Water prices for the current regulatory period

Product	2008–09	2009–10	2010–11	2011–12	2012–13
Fixed charge (\$/year)	85.00	89.55	92.08	95.63	CPI + 1%
Tier 1 (0–200 kL) (\$/kL)	1.85	1.95	2.00	2.33	CPI + 1%
Tier 2 (201 kL +) (\$/kL)	3.70	3.90	4.01	4.66	CPI + 1%

Sewerage services are priced via a fixed annual service charge for residential customers and a fixed annual service charge plus a per fixture cost for non-residential customers. Table 5.2 shows the sewerage service and fixture prices for the current regulatory period.

Table 5.2 Sewerage service prices for the current regulatory period

Product	2008–09	2009–10	2010–11	2011–12	2012–13
Service charge (\$/year)	443.82	484.25	516.11	555.39	CPI + 4.76%
Fixture charge (\$/year)	434.04	473.58	504.74	543.15	CPI + 4.76%

Alternative pricing arrangements have been proposed by the Productivity Commission and considered in the work of the National Water Commission. The Productivity Commission in its review of the urban water sector (see section 5.4) has argued that inclining block tariffs are inefficient and that prices should include a volumetric charge using a two-part tariff (based on the marginal cost of supplying water, which includes the direct short-run marginal cost of supply, the value of externalities and the scarcity value of water).⁴⁴

Similarly, the National Water Commission has argued that inclining block tariffs reduce efficiency by breaking the link between marginal costs and prices.⁴⁵ In addition, the National Water Commission has stated its preference for a scarcity-based approach to setting water prices that would see volumetric prices vary inversely with water availability.⁴⁶ The variable price approach assumes that in times of water shortage it is more efficient for water consumption to be rationed by prices rather than by water restrictions as occurs currently.

⁴⁴ Productivity Commission, *Australia’s urban water sector: Productivity Commission inquiry report volume 1*, 31 August 2011, recommendations 6.2–6.4, pp. XLIX–L.

⁴⁵ National Water Commission, *Approaches to urban water pricing (prepared by Frontier Economics), Waterlines occasional paper no. 7*, July 2008, p. vii.

⁴⁶ *Ibid.*, p. viii.

The Commission has previously considered the matter of appropriate pricing structures and provided reasons for adopting the current inclining block water tariff structure. This has included a detailed analysis in its discussion paper released in the preparation of the current price direction as well as the discussion in the final decision.⁴⁷

At this stage, it is the Commission's view that the benefits of a shift to structures as suggested by the Productivity Commission and National Water Commission are yet to be fully enunciated. In addition, the practical problems such as how to ensure cost-recovery within a marginal cost/scarcity-based framework; how to address the potential for significant price fluctuations; how to manage billing given the lag between consumption and payment; and how to accurately value externalities and the scarcity value of water are yet to be addressed sufficiently.

However, the Commission welcomes further analysis on this matter and will reassess the underlying rationale for the existing approach as part of the current inquiry.

Q15: In assessing the merits of alternative price offering arrangements, are there particular efficiency, equity and environmental considerations that the Commission should take into account?

5.3 Pricing offerings

The Productivity Commission has also considered the issue of pricing offerings and has stated that customers should be offered greater choice on security of supply and price stability.⁴⁸ For example, under the regime considered by the Productivity Commission, a customer would be able to select from, say, two price offerings. The first would be based on a higher price but would guarantee supply while the second may have a lower price but be subject to restrictions in times of shortage.

The Commission identified the potential for greater choice of pricing offerings in chapter 2 and understands that ACTEW is also considering these matters. The Commission considers it important that any analysis addresses not only the theoretical issues associated with such an approach but also the practical implementation issues such as how to price more secure water, how to ensure cost recovery under such a framework and how to address concerns regarding equity in water supply.

The Commission will review any analysis provided by ACTEW as well as that undertaken by the Productivity Commission, the National Water Commission and other sources as identified.

Q16: What limitations, if any, should the Commission consider in the event that ACTEW proposes price offerings which provide consumers with the option of higher water security but with a higher price?

⁴⁷ Independent Competition and Regulatory Commission, *Water and wastewater discussion paper 3: Prices*, August 2007 and *Water and wastewater price review: Final report and determination*, April 2008, pp. 127–40.

⁴⁸ Productivity Commission, *Australia's urban water sector: Productivity Commission inquiry report volume 1*, 31 August 2011, recommendations 6.2–6.4, pp. XLIX–L.

5.4 Productivity Commission review of urban water sector

The Productivity Commission's recent report on Australia's urban water sector covered many aspects of the sector. The key recommendations as they relate to the ACT and the regulatory review of ACTEW not discussed previously are summarised below.

- Governments should articulate a common set of objectives based on the provision of water, wastewater and stormwater services in an economically efficient (broadly defined to include environmental, health and other costs and benefits) manner so as to maximise the net benefits to the community (Recommendation 3.1).
- Governments should create the conditions necessary for institutions to operate efficiently and ensure the appropriate assignment of roles and functions (Recommendation 4.1).
- A real options approach should be used for the assessment of future supply augmentation and demand management options and all options should be considered (Recommendation 5.2).
- Principles of good regulatory practice should be followed (Recommendation 5.4).
- Upfront developer charges should be used where incremental costs of development are well established and benefits accrue mainly to those in the development (Recommendation 6.1).
- Water restrictions should be the exception (limited to emergencies and of short duration) and implemented by utilities. Governments should not prescribe water use efficiency and conservation activities unless there is a market failure and clearly established benefits from intervention, and government information and education campaigns should provide objective information on costs and benefits (Recommendations 7.1–7.3).
- Ministerial directions should be publicly disclosed to strengthen independence, responsibility, accountability and transparency (Recommendation 10.1).
- Governments should review objectives currently given to utilities and regulators and remove those that would more appropriately be allocated to other agencies. Where conflicting objectives are unavoidable, guidance should be provided (Recommendation 10.2).
- Governments should ensure that environmental and health regulators are more transparent and accountable in their decision-making by publishing draft decisions and establishing merit review procedures (Recommendation 10.6).
- Governments should move away from regulatory price setting to a price monitoring regime (where some form of prices oversight is considered necessary). Independent price setting should only be applied where it can be demonstrated that price monitoring and appropriate governance arrangements are unlikely to prevent misuse of market power (Recommendation 11.1).
- Structural reform options should be considered including vertical and/or horizontal separation of elements of the water and wastewater supply chain (Recommendation 12).

The Commission will be mindful of these recommendations and will consider their applicability to different aspects of the regulatory review as appropriate.

6 Next steps

The issues paper is the first step in the Commission's consultation on this inquiry. The ACT community will have further opportunities to participate in the consultation process. The timetable showing the proposed timing of the next steps in the inquiry process is set out below.

Task	Expected date
Receive terms of reference	13 October 2011
Release of context paper	23 November 2011
Release of issues paper	21 February 2012
Submissions on issues paper close	30 March 2012
Receipt of ACTEW submission	July 2012
Release of draft report	November 2012
Workshops and information sessions (if required)	December 2012
Submissions on draft report close	February 2013
Public hearing	February 2013
Final report	May 2013

As noted in section 1.7, if it sees value the Commission may also release further papers and analysis on specific issues in advance of the release of the draft report. In addition, there will be an opportunity for the ACT community to comment on the ACTEW submission.

If you wish to be included on future correspondence lists to receive reports and information as they become available, please contact the Commission by telephone on (02) 6205 0799, by fax on (02) 6207 5887, or by email at icrc@act.gov.au.

7 Key issues

Throughout this paper, the Commission has identified specific questions on which it welcomes responses from interested parties. The full list of questions is reproduced below for ease of reference.

The Commission also welcomes comments on any other issue, including on the context paper on water in the ACT, or the provision of any other relevant information that interested parties think could assist the Commission's inquiry.

Questions on which the Commission is seeking comment

Q1: Does the Commission need to review its assessment that ACTEW will continue to operate as a vertically integrated monopoly service provider? If so, why?

Q2: If ACTEW's operating risks are effectively underwritten by ACT taxpayers, what regard should the Commission give to this in assessing ACTEW's capital expenditure programs and its required return on capital?

Q3: How might the Commission's investigation and price determination processes best contribute to the development of a quality outcome on the ACT community's desired level of water security, including an outcome that properly incorporates the preferences of future generations?

Q4: In light of the issues identified in questions 1 to 3, are there alternative regulatory models or regulatory principles that the Commission might consider as part of the forthcoming price determination process?

Q5: Should the Commission's approach to dealing with investment that it determines not to be prudent be influenced by the fact that ACTEW is publicly owned? If so, in what way?

Q6: Should the Commission include in the forthcoming price direction a revenue catch-up due to lower than expected water sales during the current price determination period? If so, over what period of time should that catch-up take place?

Q7: Is it appropriate for a revenue catch-up mechanism to be included in the forthcoming price direction?

Q8: Given the uncertainty inherent in forecasting water sales volumes, should the Commission establish an indicative price path for the next regulatory period and adjust prices annually to reflect actual water volume sales in the previous year?

Q9: Are there any other ACT Government water-related policies that the Commission should take into account?

Q10: Are there any other national water initiatives, policies or agreements that the Commission should take into account?

Q11: When assessing the prudence and efficiency of the greenhouse gas abatement activities undertaken by ACTEW, are there any additional factors that need to be considered?

Q12: Should the Commission consider allowing ACTEW to recover the cost of water security projects in accordance with the timing of their expected benefits, or over their expected lives?

Q13: Are there alternative regulatory models that would better balance the objectives of achieving price stability or certainty while also allowing ACTEW to recover its efficient costs?

Q14: Does the uncertainty regarding ACTEW's water volume sales suggest that the Commission should adopt a shorter regulatory period for the next price determination?

Q15: In assessing the merits of alternative price offering arrangements, are there particular efficiency, equity and environmental considerations that the Commission should take into account?

Q16: What limitations, if any, should the Commission consider in the event that ACTEW proposes price offerings which provide consumers with the option of higher water security but with a higher price?

Appendix 1: Terms of reference

Australian Capital Territory

Independent Competition and Regulatory Commission (Regulated Water and Sewerage Services) Terms of Reference Determination 2011*

Disallowable instrument DI2011–287

made under the

Independent Competition and Regulatory Commission Act 1997 (‘the Act’), Section 15 (Nature of industry references) and Section 16 (Terms of industry references).

Reference for investigation under s. 15:

Pursuant to subsection 15(1) of the Act, I refer to the Independent Competition and Regulatory Commission (the ‘Commission’) the matter of an investigation into, and the making of a price direction for, regulated water and sewerage services provided by ACTEW Corporation Limited.

Specified requirements in relation to investigation under s. 16:

Pursuant to subsection 16(1) of the Act, I specify the following requirements in relation to the conduct of the investigation.

1. The Commission should take into consideration:
 - a. policies of the ACT Government as they relate to water security and the use of water;
 - b. national water initiatives, policies and agreements;
 - c. the impact of a price on carbon on the provision of water and sewerage services in the ACT;
 - d. the ability of the pricing path to match revenue recovery requirements to the consumer benefits accrued from the water security program;
 - e. all potential regulatory models, including consideration of the provision of sufficient flexibility in price setting across the regulatory period to minimise the impact of significant price fluctuations;
 - f. the legislative requirements outlined in Section 20 of the Act; and
 - g. any other matters the commission considers relevant to the enquiry.
2. In accordance with subsection 16(2)(a) of the Act, the Commission is to provide its final report by 1 May 2013.

Andrew Barr MLA
Treasurer
13 October 2011

* Name amended under Legislation Act, s 60.

Appendix 2: Extract from the ICRC Act

15 Nature of industry references

- (1) A referring authority may provide an industry reference to the commission in relation to any of the following matters:
 - (a) prices for regulated services;
 - (b) competition within a regulated industry;
 - (c) any other matter in relation to a regulated industry;
 - (d) any matter in relation to regulated industries in general;
 - (e) any other matter in relation to an industry, or industries in general;
 - (f) any matter provided for by another law of the Territory.
- (2) The fact that a price direction is in force in relation to a regulated industry does not preclude a further investigation of prices in the industry, or the making of a new price direction in relation to prices in the industry.
- (3) An industry reference may limit the scope of the investigation and report to a particular aspect of the regulated industry, or to a particular period during which the industry has been operating, or in any other matter.
- (4) An industry reference may relate to a number of goods or services supplied by the same or different suppliers.
- (5) An industry reference may be withdrawn or amended by the referring authority at any time before the commission has delivered its report to the person.
- (6) If an industry reference is amended or withdrawn, the referring authority must prepare a written notice setting out the reasons for the amendment or withdrawal.
- (7) The referring authority must give a copy of the notice to the commission.
- (8) The notice is a notifiable instrument.

Note A notifiable instrument must be notified under the Legislation Act.

16 Terms of industry references

- (1) The referring authority may determine terms of reference for an investigation on an industry reference.
- (2) The terms of reference may include 1 or more of the following:
 - (a) a specification of a period within which a report is required to be submitted to the referring authority;
 - (b) a requirement that the commission consider specified matters;
 - (c) except in relation to price regulation, the making of a price direction and any related investigation and report—a requirement that the commission exercise its functions subject to any subsequent written direction of the authority.
- (3) A determination under subsection (1) is a disallowable instrument.

Note A disallowable instrument must be notified, and presented to the Legislative Assembly, under the Legislation Act.

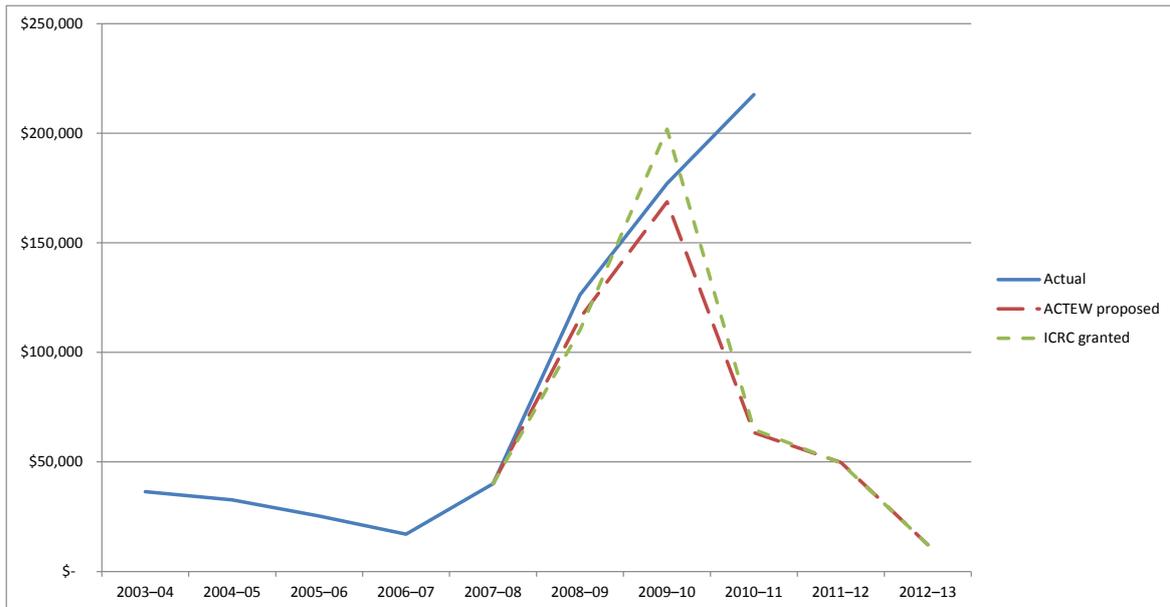
- (4) A referring authority must cause a direction mentioned in subsection (2) (c) to be presented to the Legislative Assembly within 6 sitting days after it is given.

Appendix 3: Current price direction data

Capital expenditure overspend in current price period

Figures A3.1 to A3.4 provide further information to that contained in section 3.2 and illustrate the current overspend of capital as compared to the capital expenditure allowed for in the existing price direction. Figure A3.1 shows the forecast total water capital expenditure compared with that sought by ACTEW as well as the actual expenditure incurred in 2008–09, 2009–10 and 2010–11.

Figure A3.1 ACTEW's total water actual, proposed and granted capital expenditure (\$'000, nominal)

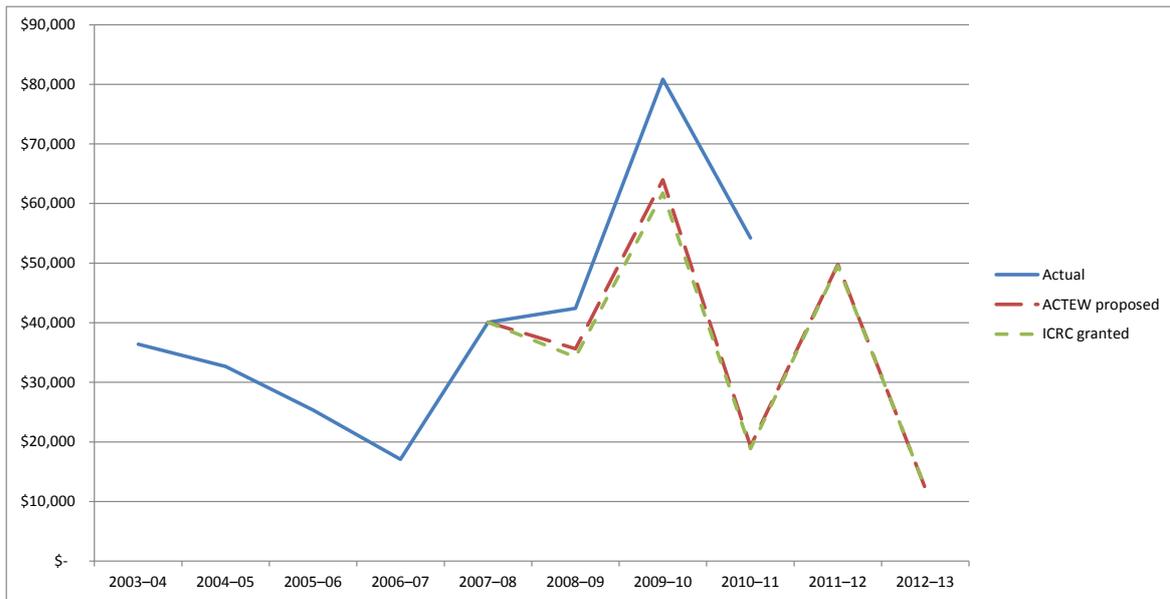


Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008. Based on tables 7.12, 8.3 and 8.5 with adjustments from real 2006–07 dollars to nominal dollars based on an assumed inflation rate of 2.5% per annum. Also includes data from ACTEW's annual capital expenditures reports (which assume differing inflation figures—as such, the figure illustrates broad trends rather than directly comparable cost data).

The significant spike in capital expenditure is related to the water security projects that are currently underway, including enlargement of the Cotter Dam, the Murrumbidgee to Goongong water transfer project and other water-related expenditure. Figure A3.1 also shows that the actual expenditure was slightly higher than that granted in 2008–09, slightly lower in 2009–10 and significantly higher for 2010–11. It is expected that capital costs will fall during 2011–12 and 2012–13 as the projects are completed.

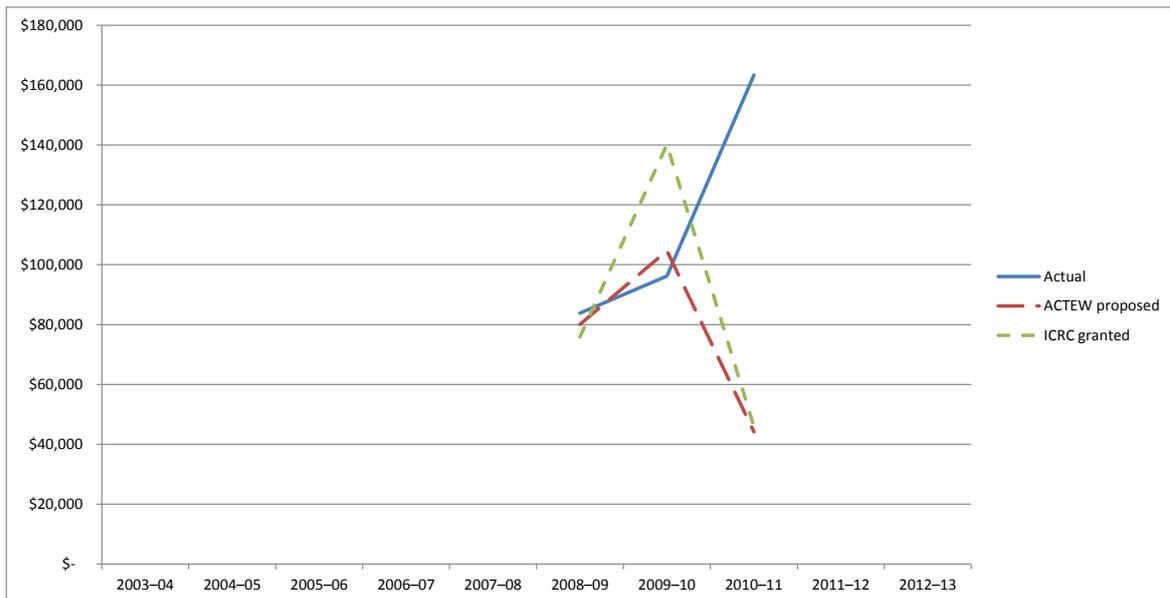
The total water-related capital expenditure can be broken down between water (non-security) projects and water security projects. Figures A3.2 and A3.3 illustrate this detail and show that the current overspend on water (non-security) projects is approximately \$65 million and the overspend on water security projects is approximately \$45 million.

Figure A3.2 ACTEW's water (non-security) actual, proposed and granted capital expenditure (\$'000, nominal)



Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008. Based on tables 7.12, 8.3 and 8.5 with adjustments from real 2006–07 dollars to nominal dollars based on an assumed inflation rate of 2.5% per annum. Also includes data from ACTEW's annual capital expenditures reports (which assume differing inflation figures—as such, the figure illustrates broad trends rather than directly comparable cost data).

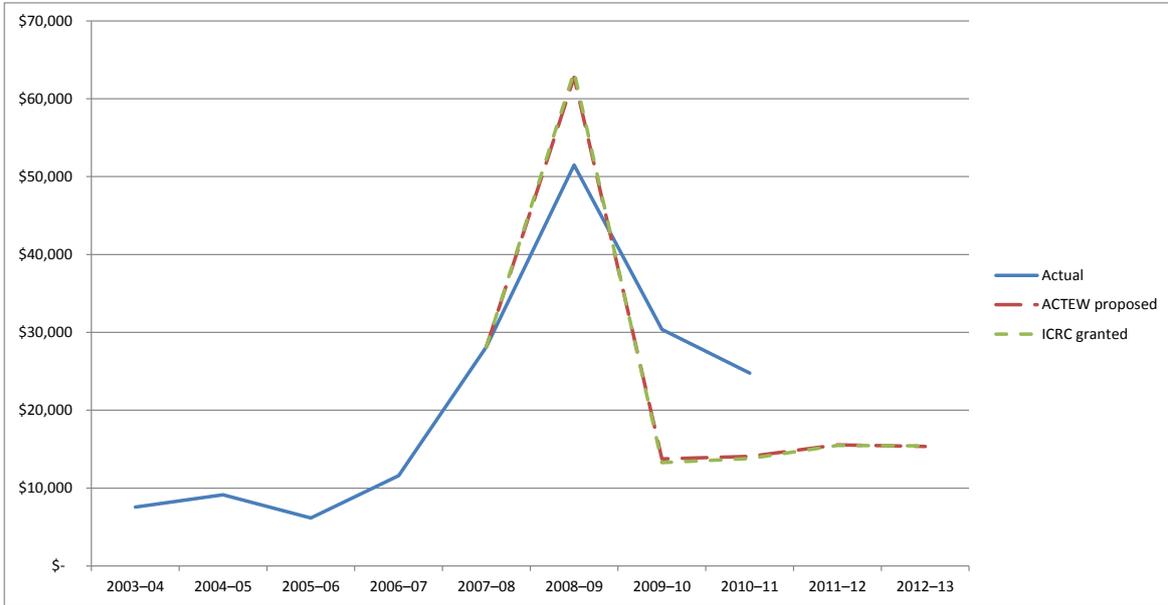
Figure A3.3 ACTEW's water security actual, proposed and granted capital expenditure (\$'000, nominal)



Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008. Based on tables 7.12, 8.3 and 8.5 with adjustments from real 2006–07 dollars to nominal dollars based on an assumed inflation rate of 2.5% per annum. Also includes data from ACTEW's annual capital expenditures reports (which assume differing inflation figures—as such, the figure illustrates broad trends rather than directly comparable cost data).

With respect to ACTEW’s sewerage service capital expenditure, the overspend is currently approximately \$20 million.⁴⁹ Figure A3.4 shows that ACTEW’s actual sewerage services expenditure was less than that envisaged in 2008–09 but greater than that allocated in 2009–10 and 2010–11.

Figure A3.4 ACTEW’s sewerage services actual, proposed and granted capital expenditure (\$’000, nominal)



Source: Independent Competition and Regulatory Commission, *Water and wastewater price review: Final report and price determination*, Report 1 of 2008, April 2008. Based on tables 7.12, 8.4 and 8.6 with adjustments from real 2006–07 dollars to nominal dollars based on an assumed inflation rate of 2.5% per annum. Also includes data from ACTEW’s annual capital expenditures reports (which assume differing inflation figures—as such, the figure illustrates broad trends rather than directly comparable cost data).

⁴⁹ ACTEW, *Annual report to the Independent Competition and Regulatory Commission: Capital expenditure report 2010–11*, September 2011, Table 2.

Abbreviations and acronyms

ACT	Australian Capital Territory
ACTEA	Australian Capital Territory Electricity Authority
ACTEW	ACTEW Corporation
ACTEWA	Australian Capital Territory Electricity and Water Authority
AEMC	Australian Energy Market Commission
Commission	Independent Competition and Regulatory Commission (ACT)
CO ₂ -e	carbon dioxide equivalent
CPI	consumer price index
ICRC	Independent Competition and Regulatory Commission
ICRC Act	<i>Independent Competition and Regulatory Commission Act 1997 (ACT)</i>
kL	kilolitre
MDBA	Murray–Darling Basin Authority
MDB Agreement	Murray–Darling Basin Agreement
ML	megalitre
RAB	regulatory asset base
SDL	sustainable diversion limit
TFP	total factor productivity
WACC	weighted average cost of capital
WSUD	water-sensitive urban design