



Independent Pricing and Regulatory Tribunal

Review of prices for Essential Energy's water, sewerage and other services in Broken Hill

From 1 July 2014

Water — Issues Paper
June 2013



Independent Pricing and Regulatory Tribunal

Review of prices for Essential Energy's water, sewerage and other services in Broken Hill

From 1 July 2014

Water — Issues Paper
June 2013

© Independent Pricing and Regulatory Tribunal of New South Wales 2013.

This work is copyright. The *Copyright Act 1968* permits fair dealing for study, research, news reporting, criticism and review. Selected passages, tables or diagrams may be reproduced for such purposes provided acknowledgement of the source is included.

ISBN 978-1-925032-20-8 DP160

The Tribunal members for this review are:

Dr Peter J Boxall AO, Chairman

Mr James Cox PSM, Chief Executive Officer and Full Time Member

Mr Simon Draper, Part Time Member

Inquiries regarding this document should be directed to a staff member:

Rebecca Bishop (02) 9113 7764

Joyce Tapper (02) 9290 8464

Independent Pricing and Regulatory Tribunal of New South Wales

PO Box Q290, QVB Post Office NSW 1230

Level 8, 1 Market Street, Sydney NSW 2000

T (02) 9290 8400 F (02) 9290 2061

www.ipart.nsw.gov.au

Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

A submission from Essential Energy is due by 13 September 2013, and submissions from other stakeholders are due by 11 October 2013.

We would prefer to receive them electronically via our online submission form <http://www.ipart.nsw.gov.au/Home/For_Consumers/Having_your_say/Lodge_a_submission>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

Review of prices for Essential Energy's water and sewerage services in Broken Hill
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office NSW 1230

Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

Contents

Invitation for submissions	iii
1 Introduction	1
1.1 IPART's role and core functions	1
1.2 Purpose of this Issues Paper	2
1.3 Scope of this review	2
1.4 The review process	4
1.5 List of issues for stakeholder comment	6
1.6 Structure of this Issues Paper	8
2 Essential Energy's role and regulatory framework	9
2.1 Essential Energy's role	9
2.2 Essential Energy's customers	10
2.3 Essential Energy's services	10
2.4 Essential Energy's operations	11
2.5 Regulatory framework	14
2.6 Essential Energy's performance over the 2010 Determination period	15
3 The determination period and the revenue requirement	19
3.1 Length of the determination period	19
3.2 The building block approach to determining the revenue requirement	20
3.3 Operating and capital costs	21
3.4 The return on capital	24
3.5 The return of capital (depreciation)	25
4 Setting prices	26
4.1 Potential difference between notional revenue requirement and target revenue	26
4.2 The structure of prices	26
4.3 Forecasting metered water sales and customer numbers	32
4.4 Customer consultation and service quality standards	34
4.5 Assessing the impact of pricing decisions	36
5 Other issues for this review	37
5.1 Setting prices for the mines	37
5.2 NSW Government subsidy	39
5.3 Possible changes to our approach for setting prices in future reviews	40

Appendices	43
A Matters to be considered by IPART under Section 15 of the IPART Act	45
B Information required from Essential Energy	46

1 Introduction

The Independent Pricing and Regulatory Tribunal of NSW (IPART – hereafter referred to as “we”, “us” or “our”) regulates the charges or prices for the provision of water and sewerage monopoly services.¹

In June 2010, we made our first Determination of Country Energy’s water and sewerage charges for the residents of Broken Hill and surrounding areas.² Since Country Energy’s name was changed to Essential Energy (and its water and sewer business to Essential Water) from 1 March 2011,³ we refer to Essential Energy as the regulated entity in this review.

The current Determination for Essential Energy was released in June 2010 and set prices for the period 1 July 2010 to 30 June 2013. In June 2012,⁴ we decided to defer the review for 12 months to allow Essential Energy to deal with structural changes in its business related to the NSW Government’s decision to merge the NSW electricity businesses from 1 July 2012. Prices remain constant in nominal terms until we make a new Determination effective from 1 July 2014.

In this review, we will determine Essential Energy’s charges for water and sewerage services to apply from 1 July 2014. Before setting prices, we will examine Essential Energy’s water and sewerage functions, its regulatory requirements and the appropriate level of revenue needed to support these activities in an efficient and effective manner.

1.1 IPART’s role and core functions

In this review, we aim to set prices that will allow Essential Energy’s water and sewerage business to recover an amount of revenue that is equal to the full efficient costs of providing its regulated water and associated services.

¹ This can also include trade waste, treated effluent water, and ancillary and miscellaneous services.

² IPART, *Review of prices for Country Energy’s water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010.

³ Country Energy, *Commencement of ‘Essential Energy’ – Media Release*, 24 February 2011.

⁴ http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro_Pricing/Review_of_prices_for_Essential_Energys_Broken_Hill_water_and_sewerage_services_from_1_July_2014.

Much of our role is defined by various matters that we are legally required to take into account in making our price determination. These matters are prescribed by Section 15 of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act), which is outlined in Appendix A.

1.2 Purpose of this Issues Paper

This Issues Paper has been released with the aim of obtaining Essential Energy's and stakeholders' views on the issues that are raised in it. To assist stakeholders in making submissions, the Issues Paper explains how the review is to be undertaken, provides background information and outlines issues on which we particularly seek comments. All submissions from stakeholders received by the respective due dates will be considered in making our draft and final Determinations.

1.3 Scope of this review

This review will be conducted under Section 11 of the IPART Act, which gives us power and responsibility to determine prices for specified water utilities. As mentioned above, we are also to have regard to a range of matters under Section 15 of the IPART Act (see Appendix A), in addition to any other matters we consider relevant when making a determination.

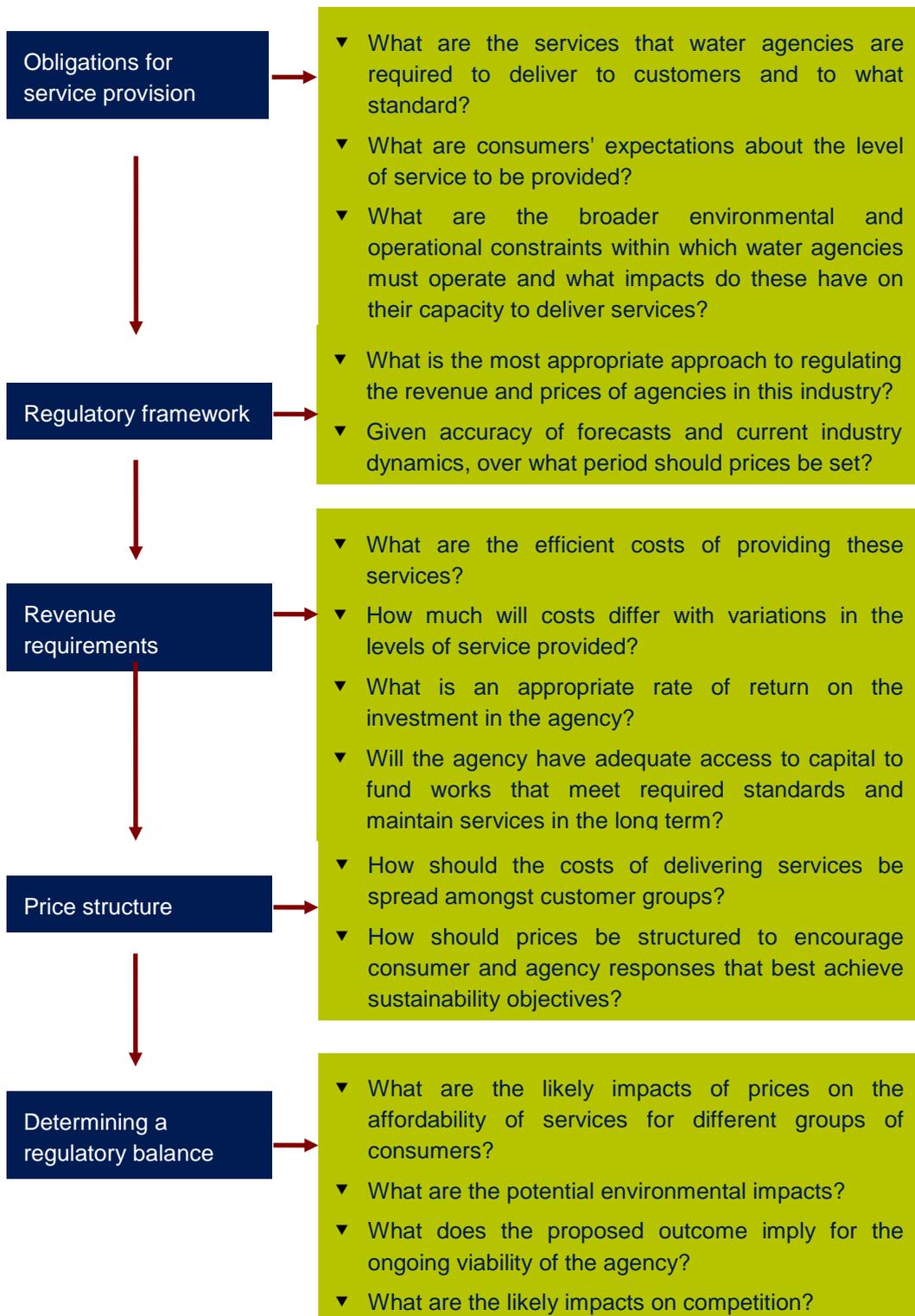
In considering these matters, we must balance the diverse needs and interests of stakeholders – such as customer affordability, environmental impact and maintenance of overall customer service quality – and ensure that Essential Energy receives an allowance only for the efficient costs of the services it provides and not for any unnecessary expenditure.

We aim to set prices that are cost-reflective. Setting cost-reflective prices signals to consumers the costs of their consumption decisions and results in an efficient allocation of resources. In this review, we will also need to consider the implications of a decision by the NSW Government on any direct subsidy to Essential Energy's water and sewerage business and Essential Energy's decision not to seek renewal of the Mines Charges Agreement (see Chapter 5 for further details).

We will also take into account principles issued by the Council of Australian Governments (COAG) and contained in the National Water Initiative.⁵

Our general approach to determining monopoly prices for water agencies is outlined in Figure 1.1.

⁵ The National Water Initiative was built on the principles established in the 1994 COAG Water Reform Framework.

Figure 1.1 IPART's determination process

We also note that we are currently conducting 2 separate reviews of our methodology. This includes our approach to:

- ▼ The **Return on Capital** ‘building block’, ie, *The Review of Method for Determining the Weighted Average Cost of Capital*⁶ (see section 3.4).
- ▼ **Assessing the impact of pricing decisions**, ie, *Financeability Test in Price Regulation*⁷ (see section 4.5).

These reviews are due to be completed by the end of 2013 and we intend to implement the decisions when we set prices for Essential Energy from 1 July 2014. Information on these reviews is available on our website.

1.4 The review process

In undertaking this review, we will conduct our own research and analysis, using selected consultant investigations⁸ and public consultation. We invite submissions to the review as part of our consultation process. We may not accept late submissions. Submissions will be published on our website as they are received.

This Issues Paper assists us to identify and understand the key issues for the review and to elicit stakeholder comment. A range of issues are raised throughout the paper and in consolidated lists in Section 1.5 (for the response of all stakeholders) and Appendix B (for Essential Energy’s response). However, Essential Energy and all stakeholders may raise and discuss any other issues they believe are of relevance to the review. Details on how stakeholders can make submissions are given at the front of this Paper (on the page preceding the Table of Contents).

Throughout the course of our review, stakeholders will have 3 opportunities to express their views. Stakeholders can:

- ▼ provide a submission to this Issues Paper
- ▼ attend the public hearing in Broken Hill, and/or
- ▼ provide a submission in response to our Draft Report.

We will consider the comments received from all stakeholders before making our Final Determination and publishing our Final Report.

⁶ See IPART’s website:

http://www.ipart.nsw.gov.au/home/industries/research/reviews/WACC/review_of_method_for_determining_the_WACC.

⁷ See IPART’s website:

http://www.ipart.nsw.gov.au/Home/Industries/Research/Reviews/Financeability_Tests/Financeability_test_in_price_regulation_-_2012.

⁸ We will publish the outcomes of any consultant’s investigations on our website.

An indicative review timetable is set out in Table 1.1.

Table 1.1 Indicative review timetable

Task	Timeframe
Release Issues Paper	18 June 2013
Receive and publish Essential Energy's submission	13 September 2013
Receive public submissions	11 October 2013
Public hearing	19 November 2013
Release Draft Report	March 2014
Receive submissions to Draft Report	April 2014
Release Final Report	June 2014

Note: These dates are indicative and are subject to change.

In the past, we have sometimes encountered difficulties completing our price reviews on time because of delays in the provision of necessary information by regulated entities. Delays and the late provision of supplementary information can result in work being suspended or revised to take into account new information received. Delays and new information not only add to our workload and that of our consultants, but also limits stakeholders' ability to participate and provide input into our processes and decisions.

To ensure Essential Energy can provide all the information we require, we have undertaken a number of measures and have been in close communication with Essential Energy. In October 2012 and again in June 2013, we informed Essential Energy of the upcoming review and our information requirements.⁹ We outlined the information we require in Essential Energy's submission to ensure that Essential Energy has ample time to prepare its submission. The information we seek from Essential Energy is discussed in this Issues Paper, and listed in Appendix B. We also note that IPART's document titled *Guidelines for Water Agency Pricing Submissions*,¹⁰ which is available on our website, should be used by Essential Energy as the basis for developing its submission to this review.

⁹ IPART, Letter to Essential Energy, *Information requirements*, October 2012.

¹⁰ http://www.ipart.nsw.gov.au/Home/Industries/Water/Water_Pricing/Guidelines_for_Water_Agency_Pricing_Submissions_-_April_2011.

To allow us to better manage potential delays in the provision of information and supplementary information, we will establish mechanisms that allow us to ‘stop the clock’ if we do not receive necessary information from Essential Energy on time. Under ‘stop the clock’ arrangements, we will exercise our discretion and may extend the timetable by the length of the delay. This may result in a delay of the commencement of new prices. In the event that we make a decision to ‘stop the clock’, we will announce that this is taking place and publish a revised timetable on our website. If Essential Energy provides new or revised information, we may need to ‘reset the clock’, reflecting the need to rework and reconsider matters to take this new information into account.

In addition to the timely provision of information, Essential Energy will be required to justify its forecast costs and sales and proposed prices through the provision of sufficiently comprehensive information. In particular, proposals should be accompanied by sufficient information, explanation and justification to support any changes. Essential Energy’s submission should also identify the potential customer impacts of its proposals, how the impacts are distributed, and options to mitigate or minimise these impacts. Further information on our requirements of Essential Energy’s submission are outlined in IPART’s *Guidelines for Water Agency Pricing Submissions*.

1.5 List of issues for stakeholder comment

To assist in identifying and understanding the key issues for this review, we seek comment on the following issues, which are explained and discussed throughout this paper (the page numbers are listed below). These issues are grouped according to the relevant section of the Issues Paper. They should be considered in response to Essential Energy’s submission, which will be published on IPART’s website soon after it is received on 13 September 2013.

The determination period and notional revenue requirement

- | | | |
|---|--|----|
| 1 | What is the appropriate length of the price path for the upcoming determination period? | 20 |
| 2 | Have Essential Energy’s operating costs over the period 2010/11 to 2013/14 been efficient? | 22 |
| 3 | Are Essential Energy’s forecast operating costs over the upcoming determination period efficient? | 22 |
| 4 | Has Essential Energy’s capital expenditure over the over the period 2010/11 to 2013/14 been prudent and efficient? | 23 |

5	What are your views on Essential Energy's projected capital expenditure program over the upcoming determination period, including expenditure drivers, proposed service outcomes and scope for efficiency gains?	23
6	What are your views on Essential Energy's strategic business planning and the robustness of its decision-making processes? Is Essential Energy's proposed timing and prioritisation of capital expenditure projects appropriate?	23
7	What scope is there for Essential Energy to enhance its efficiency in the provision of its water and sewerage services over the upcoming determination period?	23
8	How can we regulate prices to enhance the incentives for Essential Energy to pursue efficiency gains over the upcoming determination period?	23
9	What are your views on the rate of return Essential Energy is seeking and its justification for this rate of return?	24
10	What is an appropriate rate of return for Essential Energy?	24
11	What are your views on Essential Energy's proposed methodology and assumptions for the assessment of asset lives and calculation of depreciation?	25

Setting prices

12	What are your views on Essential Energy's proposed price structures and levels for the upcoming determination period?	32
13	Is the current 2-tiered water usage charge, including the 'summer tariff' where the usage threshold increases in summer, appropriate?	32
14	Are Essential Energy's proposed prices for the different types of water services (eg, treated, chlorinated, untreated and effluent water services) reflective of the costs it incurs in providing these services?	32
15	What are your views on Essential Energy's forecasts of water sales and customer numbers, including its methodologies and assumptions used to derive these forecasts?	34
16	What are your views on the introduction of a demand volatility adjustment mechanism?	34
17	Are Essential Energy's current water and sewerage service standards appropriate?	35
18	Has Essential Energy adequately consulted with its customers on its expenditure programs and pricing proposals?	35

19	Has Essential Energy adequately consulted with its customers about incurring discretionary expenditure (if it has proposed to undertake any of this expenditure)? Has Essential Energy provided sufficient evidence to justify its discretionary expenditure proposals?	35
20	Are customers willing to pay for Essential Energy's service levels and proposed expenditures?	35
21	What are the impacts of Essential Energy's proposed prices on customers?	36

Other issues for this review

22	How should prices for the mines be set?	39
23	What are your views on Essential Energy's proposed prices for the mines, including its justification for these prices?	39
24	For future price reviews, what is the best price setting option for Essential Energy, given its size, performance and other characteristics?	42
25	If we were to move to a lighter-handed regulatory regime such as price monitoring, what criteria or pre-condition(s) should Essential Energy first meet?	42
26	Do you wish to comment on any other issues relevant to this review?	42

1.6 Structure of this Issues Paper

This paper is structured as follows:

- ▼ Chapter 2 summarises the role of Essential Energy, its water and sewerage operations, its regulatory framework, and its expenditure and water sales over 2010/11 to 2012/13 compared to expenditure and water sales provided for when IPART set prices in the 2010 Determination
- ▼ Chapter 3 provides an overview of our approach to determining Essential Energy's notional revenue requirement (that is, the efficient costs of service provision)
- ▼ Chapter 4 outlines issues to consider in setting prices to recover Essential Energy's revenue requirement, including the structure of prices
- ▼ Chapter 5 discusses other issues for this review, including Essential Energy's prices for the mines and a decision by the NSW Government on any subsidy to Essential Energy's water and sewerage operations.

2 Essential Energy's role and regulatory framework

In this chapter, we provide an outline of Essential Energy's water and sewerage operations, services, customer base and regulatory framework. We also consider Essential Energy's actual expenditure over 2010/11 to 2012/13 compared to expenditure allowed when we set prices in our 2010 Determination. Further, we compare Essential Energy's actual water sales and revenue over the 2010/11 to 2012/13 to forecast water sales and target revenue in our 2010 Determination.

2.1 Essential Energy's role

Essential Energy is a NSW Government-owned corporation, primarily responsible for building, operating and maintaining one of Australia's largest electricity networks.¹¹

Essential Water¹² is a small operating division of Essential Energy, delivering water services to around 19,000 people in Broken Hill, Menindee, Sunset Strip and Silverton, and sewerage services to Broken Hill.¹³

Essential Energy exercises its water supply functions under the *Water Management Act 2000*. Essential Water's objectives are to:¹⁴

- ▼ provide safe reliable drinking water in accordance with the Australian Drinking Water Guidelines
- ▼ provide water and sewerage services that meet customers' needs for reliability, environment protection and performance
- ▼ maintain a water and sewerage system that is safe for the community, customers and employees
- ▼ provide a service for the discharge of trade waste
- ▼ provide a high level of customer service
- ▼ minimise costs to Essential Water and consequent impacts on pricing for its customers.

¹¹ Essential Energy website, <http://www.essentialenergy.com.au/content/our-energy-network-electricity>, accessed 11 June 2013.

¹² From 1 March 2011, the NSW Government changed the name of Country Energy to Essential Energy. Country Water is now known as Essential Water, <http://www.abc.net.au/local/stories/2011/03/01/3152083.htm>.

¹³ Essential Energy, *Annual Report 2011-2012*, p 5.

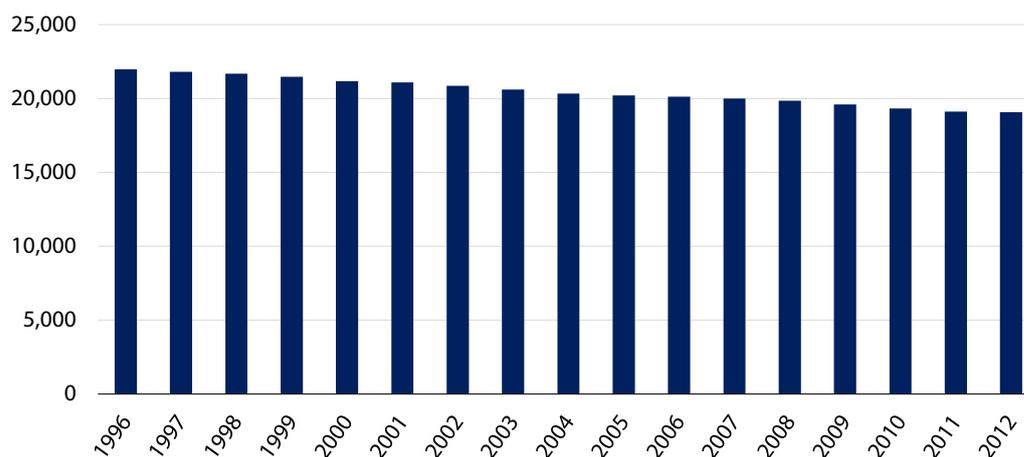
¹⁴ Essential Energy, *Essential Water Customer Charter*, p 3.

2.2 Essential Energy's customers

Figure 2.1 presents Broken Hill's population over the period 1996 to 2012. It shows that Broken Hill's population has declined by 13.3% over this period. In addition, over one third of Essential Energy's customers are pensioners.

The Australian Bureau of Statistics (ABS) Local Government Area Index of Relative Socio-economic Disadvantage¹⁵ for Broken Hill in 2011 shows that Broken Hill has a relatively greater disadvantage than many other local government areas in Australia. In the decile range of 1 to 10, where 1 represents the most disadvantaged and 10 represents a relative lack of disadvantage, Broken Hill recorded a ranking of 2.¹⁶ This information suggests that Broken Hill's customers have a limited capacity to pay substantial increases in water and sewerage charges.

Figure 2.1 Broken Hill – population – 1996 to 2012



Data source: Australian Bureau of Statistics, *3218.0 Regional Population Growth*, Australia.

2.3 Essential Energy's services

Essential Energy's water-related functions include providing water, sewerage, liquid trade waste and miscellaneous services. The sections below provide an overview of these services.

¹⁵ The Index of Relative Socio-economic Disadvantage (IRSD) is a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area. The index is derived from attributes that reflect disadvantage such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations.

¹⁶ Australian Bureau of Statistics, *2033.0.55.001 – Socio-economic Indexes for Areas (SEIFA), 2011, Local Government Area Index of Relative Socio-economic Disadvantage, Distribution of Statistical Area Level 1 (SA1) Deciles*, 2011.

2.3.1 Water supply services

Essential Energy supplies treated water to Broken Hill, Menindee and Sunset Strip, and chlorinated (but presently unfiltered) water to Silverton. Essential Energy supplies a total of 5,200 ML of water per year to around 10,000 residential customers and around 600 non-residential customers. Essential Energy also provides non-potable water to rural users along the Menindee to Broken Hill pipeline for stock and domestic purposes.

The largest non-residential customer is the mining company, Perilya Ltd (Perilya), which uses approximately 20% to 25% of the total water supplied.¹⁷ CBH Resources, a second mine, also operates in Broken Hill.

2.3.2 Sewerage services

Essential Energy also provides sewerage services to approximately 10,000 properties in the city of Broken Hill, including some houses and other buildings in the Perilya lease area.

Essential Energy operates 2 sewage treatment plants. Around half the treated effluent is sold for non-drinking purposes. The remaining half is discharged to the environment through evaporation ponds.

2.3.3 Trade waste and miscellaneous services

Essential Energy provides liquid trade waste services to non-residential customers in the city of Broken Hill only.

Essential Energy provides a range of miscellaneous services to its water and sewerage customers. These are generally for one-off services such as connections and disconnections, replacing damaged services, plumbing inspections, site inspections and building plan approvals. Charges for these miscellaneous services are levied on a relatively small number of customers, and are charged on an as needed basis.

2.4 Essential Energy's operations

The following sections describe the key areas of Essential Energy's water and sewerage operations.

¹⁷ Meeting with Essential Energy, 4 September 2012.

2.4.1 Water operations

Essential Energy's service area is the most arid in the state, experiencing extreme climatic variations. This includes more frequent drought than coastal areas. Eight in every 10 years, the town water supply is dependent on water sourced from the Darling River off-take at the Menindee Lakes Scheme. Water is pumped over 116km of pipeline to Broken Hill. These unique operational circumstances, combined with drought, cause salinity and other water quality problems in the raw water that Essential Energy must treat.¹⁸

Essential Energy is an end water user and is licensed to extract 10 GL of high security water per year from the Menindee Lakes Scheme. Essential Energy also has a licence to extract 29ML per year of raw water for Menindee. The water has to be pumped a height of 287 metres over a distance of 116km from its source at the Darling River to the Mica Street water treatment plant.¹⁹

During drought²⁰, the management of the Menindee Lakes Scheme, and hence the availability of Essential Energy's water licence entitlements, rests with the NSW Office of Water. At all other times, the management of the lakes scheme rests with the Murray Darling Basin Authority.²¹

There are 3 other sources of water managed by Essential Energy:²²

- ▼ Stephens Creek Reservoir, which has a capacity of 19,000 ML. It receives water from its own catchment, as well as water pumped from the Darling River.
- ▼ Umberumberka Reservoir, which has a capacity of 7,800 ML. It has a deep and efficient storage facility.
- ▼ Imperial Lake Dam, which has a capacity of 670 ML and collects from its own catchment, including part of the Broken Hill urban area. It is used as an emergency storage only.

Figure 2.2 shows a schematic of Essential Energy's water supply in Broken Hill and surrounding areas.

¹⁸ Essential Energy, *Essential Water Customer Charter*, p 3.

¹⁹ Essential Energy, *Essential Water History and Operations*, March 2011, p 7.

²⁰ When the total storage in the scheme falls below 480GL and until it returns to 640GL.

²¹ Essential Energy, *Essential Water History and Operations*, March 2011, p 7.

²² Essential Energy, *Essential Water History and Operations*, March 2011, p 8.

Figure 2.2 Essential Energy's water supply network in Broken Hill and surrounding areas



Data source: Essential Energy.

2.4.2 Sewerage operations

Essential Energy has 2 wastewater treatment plants – Wills Street and South Broken Hill. Sewage is treated to primary, secondary and tertiary levels and further disinfection is provided via an ultraviolet treatment system at the Wills Street plant. Sewage is piped through a network of 195 km of mains (20 km of rising mains and 175 km of gravitation mains) and 11 pumping stations to the wastewater treatment plants.

2.5 Regulatory framework

There are a number of regulators that oversee Essential Energy's water and sewerage functions. Essential Energy's primary regulators include:

- ▼ **IPART**, which is responsible for setting the maximum prices that can be charged by Essential Energy for its monopoly services.
 - In the 2010 Determination, we did not determine prices for water supply services provided to the mining company Perilya Ltd, as prices had been set by the NSW Government under an agreement until 30 June 2012.²³ Essential Energy has advised IPART that it does not seek to renew this agreement. We will therefore set the maximum prices applicable to all water users including the mines in this review (see Chapter 5).
- ▼ The **Department of Primary Industries**, which includes:
 - **NSW Office of Water (NOW)**, which has primary responsibility for the management of water resources throughout NSW. NOW licences the extraction of water from surface and groundwater sources under the *Water Management Act 2000* and the *Water Act 1912*. NOW also oversees the performance of Local Water Utilities using a 'light handed regulatory framework', based on the requirements of the '*Best-Practice Management of Water Supply and Sewerage Guidelines*'.²⁴
 - **Dams Safety Committee**, which is responsible for formulating measures to ensure the safety of dams, and maintaining surveillance of prescribed dams, including those under the management of Essential Energy. This function is conducted under the *Dams Safety Act 1978*. Under the *Mining Act 1992*, the Dams Safety Committee has statutory functions, through advice to the responsible Minister, in determining the type and extent of mining allowed near dams and their storages.²⁵
- ▼ **NSW Health**, which is responsible for regulating the quality and safety of Essential Energy's drinking water.²⁶
- ▼ **Office of Environment and Heritage**, which is responsible for monitoring and regulating sewage discharges from Essential Energy's sewerage system.

²³ We set Essential Energy's notional revenue requirement based on its efficient costs. We then subtracted from the revenue requirement the estimated revenue from the Mines, established under the Mines Charges Agreement, before setting prices for the remaining customers.

²⁴ NOW, *Best-Practice Management of Water Supply and Sewerage Guidelines*, August 2007.

²⁵ Dams Safety Committee NSW website, http://www.damsafety.nsw.gov.au/Dams/Education/dam_safety.shtml, accessed 1 May 2013.

²⁶ Essential Energy publicly reports on compliance with the *Australian Drinking Water Guidelines 2011*, on an annual basis (Essential Water Customer Charter).

2.6 Essential Energy's performance over the 2010 Determination period

The prices we determined for Essential Energy in 2010 were set to recover a certain level of forecast costs.

For this review, we will be seeking from Essential Energy a reconciliation of its actual costs over the 2010 Determination period against the costs we allowed for when we set prices in the 2010 Determination, and an explanation of the variances.

2.6.1 The 2010 Determination

The 2010 Determination,²⁷ which applies for the period 1 July 2010 to 30 June 2013, set prices to generate target revenue over the period of \$43.9 million (\$2012/13). This equates to an average of \$14.7 million (\$2012/13) per annum. This reflected our assessment of Essential Energy's efficient costs of supplying water and sewerage services to its customers, less the value of the NSW Government's subsidy to Essential Energy – as discussed in Chapter 5. Due to the significant increase in prices required to achieve the target revenue in the first year of this Determination, we used a glide path approach²⁸ in determining the level of revenue to be recovered each year.

The effect of the 2010 Determination²⁹ was that the bill of a household with average water consumption increased by 24.7% in real terms by the end of the determination period. This is an average increase of 7.6% per year excluding the effects of inflation.

²⁷ IPART, *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, p 32. Figures adjusted to \$2012/13.

²⁸ The glide path approach works by increasing revenue (and hence prices) gradually over the determination period so that in the final year of the determination period the target revenue requirement is the same as the notional revenue requirement.

²⁹ IPART, *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, p 7.

Our 2010 Determination report³⁰ indicated that the decisions made on prices would allow Essential Energy to:

- ▼ more accurately reflect the efficient costs of providing water and sewerage services
- ▼ maintain its water and sewerage networks
- ▼ improve water security through a variety of projects, including refurbishing the Umberumberka Dam and Umberumberka and Imperial Lake pipelines and replacing various sections of the Menindee to Broken Hill pipeline
- ▼ fund sewerage works, including replacement of the Wills Street Wastewater Treatment Plant
- ▼ ensure that Essential Energy received sufficient revenue to enable it to continue to invest in its water business at Broken Hill.

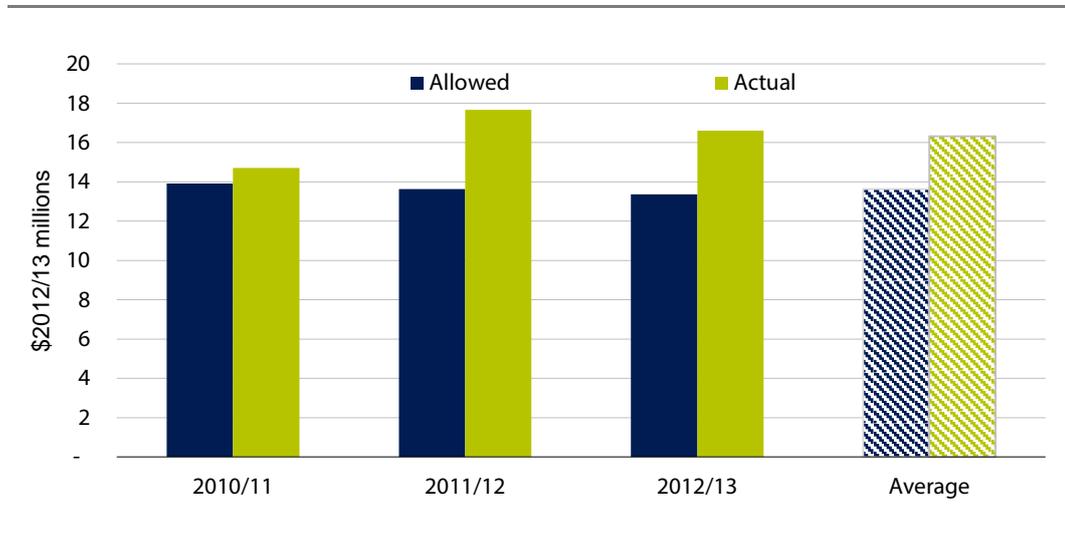
2.6.2 Essential Energy's actual expenditure, sales and revenue over the 2010 determination period

Essential Energy's actual performance over the 2010 determination period compared to forecasts made in our Determination is summarised below:

- ▼ Operating expenditure was on average 19.7% greater than we allowed for in the 2010 Determination (see Figure 2.3).
- ▼ Capital expenditure varied each year. On average, however, it was 4.0% less than we allowed for over the 2010 determination period (see Figure 2.4).
- ▼ Water sales were largely on target, with actual water sales around 2.8% below forecast water sales over the 2010 determination period (Figure 2.5).
- ▼ Actual revenue is forecast to be around 5.5% below the target revenue we set over the 2010 determination period (Figure 2.6).

³⁰ IPART, *Prices for Water and Sewerage Services provided by Country Energy in the Broken Hill area*, Factsheet, based on *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, p 1.

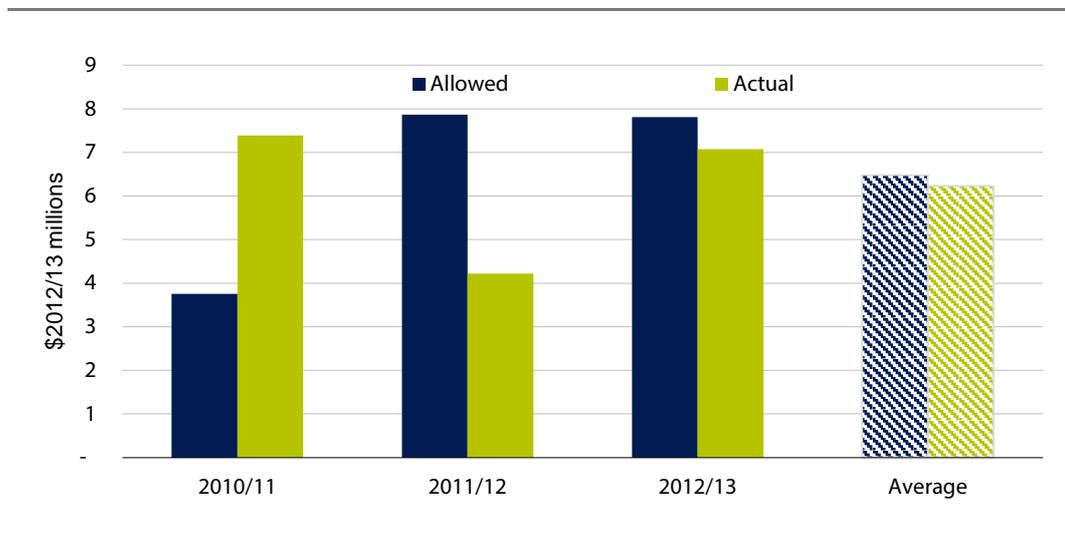
Figure 2.3 Essential Energy – actual v allowed operating expenditure (\$million, \$2012/13)



Note: 2012/13 year is a forecast.

Data source: 2010 Determination and Essential Energy information return.

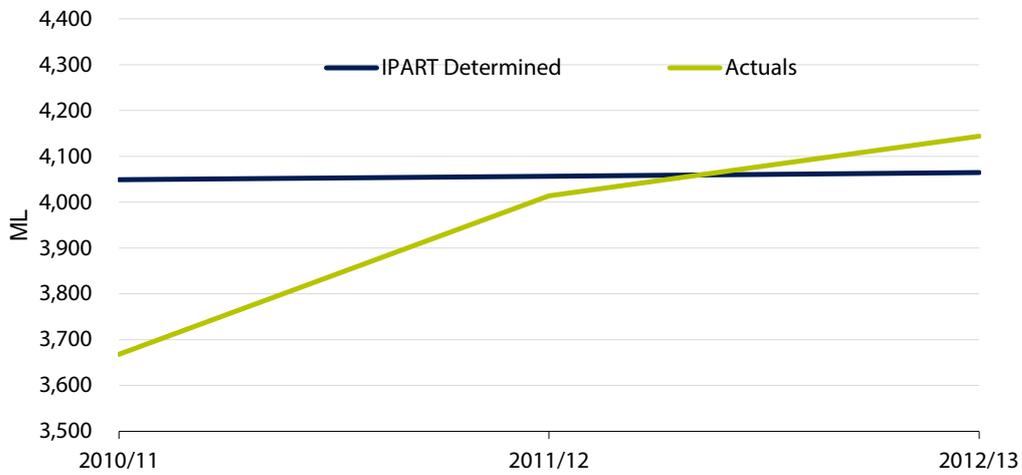
Figure 2.4 Essential Energy – actual versus allowed capital expenditure (\$million, \$2012/13)



Note: 2012/13 year is a forecast.

Data source: 2010 Determination and Essential Energy information return.

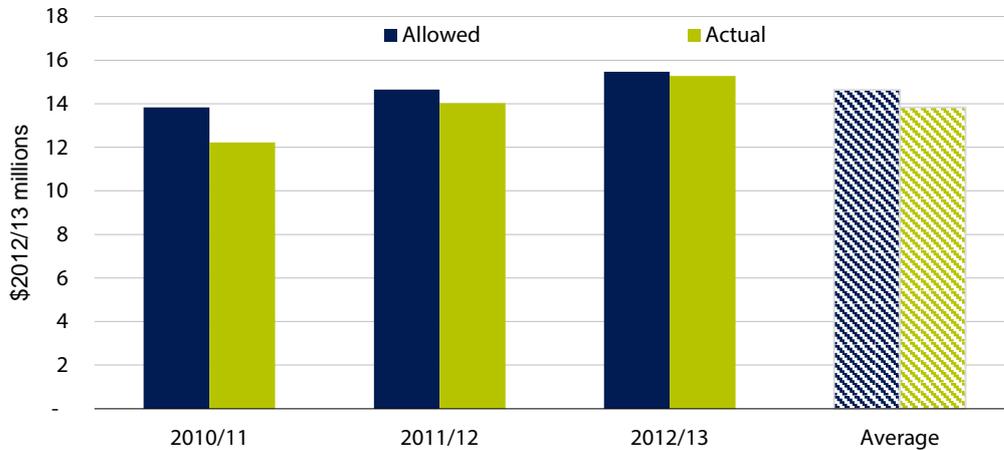
Figure 2.5 Essential Energy – actual versus allowed water sales (ML)



Note: 2012/13 year is a forecast.

Data source: 2010 Determination and Essential Energy information return.

Figure 2.6 Essential Energy – actual revenue versus target revenue (\$million, \$2012/13)



Note: 2012/13 year is a forecast.

Data source: 2010 Determination and Essential Energy information return.

3 The determination period and the revenue requirement

Our approach to price regulation includes several key steps:

- ▼ first, determining the length of the determination period
- ▼ second, determining the utility's revenue requirement over the determination period – ie, the revenue it requires to cover its efficient costs of providing the monopoly water and sewerage services
- ▼ third, setting prices to recover that revenue from water and sewerage customers over the determination period (subject to other considerations under Section 15 of the IPART Act – see Appendix A).

This chapter discusses the first 2 steps – ie, how we determine the length of the determination period, and then the utility's revenue requirement over that period. The next chapter discusses our approach to setting prices (ie, the third step).

3.1 Length of the determination period

An early step in the price determination process is to determine the length of the price path. In recent metropolitan water determinations, we have opted for a 4 year price path (eg, the 2012 Sydney Water Determination and the 2013 Hunter Water and Central Coast Councils Determinations).³¹

We have generally considered that a 4 year price path strikes an appropriate balance between providing certainty to the regulated business and limiting delays in customers benefitting from efficiency gains. We will consider a number of factors when deciding on the length of the determination period, including:

³¹ IPART, *Review of prices for Sydney Water Corporation's water, sewerage, drainage and other services, from 1 July 2012 to 30 June 2016*, June 2012. IPART, *Gosford City Council and Wyong Shire Council, Prices for water, sewerage and stormwater drainage services from 1 July 2013 to 30 June 2017*, IPART, *Final Report: Hunter Water – Prices for water, sewerage, stormwater drainage and other services from 1 July 2013 to 30 June 2017*, June 2013.

- ▼ the confidence we can place in Essential Energy's forecasts
- ▼ the risk of structural changes in the industry
- ▼ the need for price flexibility and incentives to increase efficiency
- ▼ the need for regulatory certainty and financial stability.

The advantages of a longer determination period include stronger incentives for Essential Energy to increase efficiency; greater stability and predictability (which may lower Essential Energy's business risk and assist investment decision making); and reduced regulatory costs. Disadvantages include increased risk associated with inaccuracies in the data used to make the determination; possible delays in customers benefitting from efficiency gains (because prices are not set to account for these gains until the next determination); and the risk that changes in the industry will affect the appropriateness of the determination.

We are interested in obtaining Essential Energy's view and those of stakeholders in deciding on an appropriate length of the upcoming determination period.

IPART seeks comment on:

- 1 What is the appropriate length of the price path for the upcoming determination period?

3.2 The building block approach to determining the revenue requirement

We plan to use the 'building block' methodology to calculate Essential Energy's revenue requirement over the determination period. The 'building block' costs of service provision include:

- ▼ operating costs
- ▼ return of capital (depreciation)
- ▼ return on capital
- ▼ a tax allowance.³²

The sum of these amounts represents the total revenue requirement (or efficient costs) that prices will be set to recover. *Operating costs* comprise the ongoing expenses of running and maintaining the utility, including maintenance and administration costs. *Return of capital* and *return on capital* are calculated with reference to the Regulatory Asset Base (RAB). The RAB includes all prudent and efficient capital expenditure. Elements of the building block approach are discussed further below.

³² Since the last price review for Essential Energy, we made the decision to set prices using a post-tax Weighted Average Cost of Capital (WACC). Therefore, a tax allowance is now one of the building blocks included to determine the revenue requirement.

We note that we deduct government subsidies or contributions from the revenue requirement, for the purposes of calculating prices. This means that, all other things being equal, the greater the level of government subsidy, the lower the level of revenue required to be provided by water and sewerage customers. That is, a higher government subsidy will result in lower prices.

3.3 Operating and capital costs

The calculation of the above 'building blocks' of costs – and hence the utility's revenue requirement – is primarily based on our analysis of the **efficient operating and capital costs** Essential Energy would incur in providing appropriate levels of service over the determination period.

3.3.1 Operating expenditure

We will need to determine Essential Energy's efficient operating costs of providing water and sewerage services over the upcoming determination period, having regard to service quality standards.

We are therefore seeking information from Essential Energy on its forecast operating costs, including drivers of this expenditure, expected service outcomes and potential efficiency gains (see Appendix B).

To determine Essential Energy's efficient operating expenditure in the 2010 Determination³³, we compared Essential Energy's performance with a number of other regional water utilities in NSW using indicators from the National Performance Report.³⁴ We intend to apply a similar approach in this review. We will also compare Essential Energy's forecast operating expenditure over the upcoming determination period to its actual expenditure over recent years, including its explanation for any proposed changes between historic and forecast operating expenditure.

We note that Essential Energy's operating expenditure over the current determination period is significantly greater than we allowed for when setting prices in 2010 (see section 2.6.2 – Figure 2.3). Therefore, we are considering engaging a consultant to review the efficiency of Essential Energy's operating expenditure. This would include a more detailed examination of Essential Energy's operating expenditure over the current determination period (2010/11 to 2012/13) and its forecast operating expenditure over the upcoming determination period.

³³ IPART, *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, pp 39-45.

³⁴ National Water Commission, *National Performance Report 2008-2009: urban water utilities*, April 2010.

IPART seeks comment:

- 2 Have Essential Energy's operating costs over the period 2010/11 to 2013/14 been efficient?
- 3 Are Essential Energy's forecast operating costs over the upcoming determination period efficient?

3.3.2 Capital expenditure

At the 2010 Determination,³⁵ we engaged consultants to undertake a review of Essential Energy's capital expenditure. This was due to the size of Essential Energy's proposed capital expenditure at the time.

If Essential Energy proposes a similar sized capital expenditure program in this review, we plan to engage independent consultants to undertake a review of the efficiency and prudence of Essential Energy's actual capital expenditure over the current determination period (2010/11 to 2012/13) and its forecast capital expenditure over the upcoming determination period. This includes, amongst other factors, examination of Essential Energy's:

- ▼ longer term strategic business and financial planning³⁶
- ▼ allocation of shared costs from the consolidated business to the water and sewerage business
- ▼ allocation of administrative costs to capital expenditure projects
- ▼ Contingency allowances included in capital expenditure project forecasts.

Our report accompanying our 2010 determination noted that the overhead allocation to capital projects was too high. For example, for some projects, the allowances for contingencies and corporate overheads of between 74% and 102% were found to be too high relative to the normal rate for the water industry, which was between 15% and 20% of direct costs.³⁷

We will review Essential Energy's actual and forecast capital expenditure to assess whether it is based on sound asset management practices and is adequately justified with reference to mandatory standards. Based on all available information, we will consider whether the:

³⁵ IPART, *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, p 49.

³⁶ The NSW Office of Water has produced *NSW Water and Sewerage Strategic Business Planning Guidelines*. The plan documents the utility's proposed management of assets and resources required to achieve the target levels of service.

³⁷ IPART, *Review of prices for Country Energy's water and sewerage services from 1 July 2010 to 30 June 2013 – Determination and Final Report*, June 2010, p 50.

- ▼ level and timing of capital expenditure is appropriate
- ▼ decisions to invest are reasonable and appropriate
- ▼ Decision making processes are robust.

The outcomes of such analysis will determine whether the capital expenditure is prudent and efficient, and hence whether it will be included in the Regulatory Asset Base and recovered through prices.

IPART seeks comment:

- 4 Has Essential Energy's capital expenditure over the over the period 2010/11 to 2013/14 been prudent and efficient?
- 5 What are your views on Essential Energy's projected capital expenditure program over the upcoming determination period, including expenditure drivers, proposed service outcomes and scope for efficiency gains?
- 6 What are your views on Essential Energy's strategic business planning and the robustness of its decision-making processes? Is Essential Energy's proposed timing and prioritisation of capital expenditure projects appropriate?

3.3.3 Scope and incentives for efficiency gains

In calculating the notional revenue requirement, we will form a view on the efficiency gains Essential Energy can reasonably achieve over the determination period. The purpose of incorporating efficiency gains into the notional revenue requirement is to provide Essential Energy with guidance on its potential to improve the efficiency of its operating and capital expenditures without reducing the quality of the services it delivers. Essential Energy also has an incentive to pursue further gains because prices are set for the determination period and are based to a large extent on forecast rather than actual costs. If Essential Energy can achieve better than expected cost savings during the determination period, it can also expect to earn a higher return than we forecast.

IPART seeks comment:

- 7 What scope is there for Essential Energy to enhance its efficiency in the provision of its water and sewerage services over the upcoming determination period?
- 8 How can we regulate prices to enhance the incentives for Essential Energy to pursue efficiency gains over the upcoming determination period?

3.4 The return on capital

There are several approaches for calculating the appropriate return on the RAB.³⁸ In past determinations, we have used the real pre-tax Weighted Average Cost of Capital (WACC) to determine an appropriate range for the rate of return. The WACC is the weighted average of the cost of debt and equity. We use the Capital Asset Pricing Model (CAPM) to derive the cost of equity, and calculate the cost of debt as a margin over the risk-free rate.

We are currently reviewing our WACC methodology to address concerns that the use of current market data to estimate the expected cost of debt and long-term average data to estimate the expected cost of equity may be problematic in more uncertain and changeable market conditions.³⁹ The purpose of our WACC methodology review is to determine how we can improve the way we calculate the WACC to ensure it enables us to meet our regulatory objectives in a range of financial market conditions and industry circumstances.

We used an interim methodology in our 2013 price determinations,⁴⁰ which gives greater weight to the WACC estimated using the long-term averages.

We are releasing an interim report on the WACC methodology after this Issues Paper and we invite stakeholder comments on that report. We expect to use our final decision on the WACC methodology in this review of Essential Energy's water and sewerage prices in Broken Hill.

As part of our approach to incorporate company tax,⁴¹ for the first time for Essential Energy we will use a real post-tax WACC. In December 2011, we decided to move to the use of a real post-tax WACC because we consider it provides a superior estimate of the tax liability that an efficient privately owned business would pay. The decision to adopt a post-tax WACC methodology was subject to a public process.⁴² Under this approach, tax will be included as a separate building block.

IPART seeks comment:

- 9 What are your views on the rate of return Essential Energy is seeking and its justification for this rate of return?
- 10 What is an appropriate rate of return for Essential Energy?

³⁸ The Regulatory Asset Base (RAB) is our valuation of water utility's asset base used to set prices.

³⁹ IPART, *Review of method for determining the WACC - Discussion Paper*, December 2012.

⁴⁰ IPART, Gosford City Council and Wyong Shire Council, *Prices for water, sewerage and stormwater drainage services from 1 July 2013 to 30 June 2017*, May 2013, Appendix E. IPART, *Final Report: Hunter Water - Prices for water, sewerage, stormwater drainage and other services from 1 July 2013 to 30 June 2017*, June 2013, p 90.

⁴¹ We have applied this approach to our most recent water determinations including Sydney Water, Hunter Water and Gosford City and Wyong Shire Council.

⁴² IPART, *The incorporation of company tax in pricing determinations - Final Decision*, December 2011.

3.5 The return of capital (depreciation)

The return of capital building block (depreciation) reimburses the water utility for the cost of the wear and tear on its assets. Depreciation is largely a function of the value assigned to the agency's assets (the RAB) and the expected or assumed life of those assets.

At the last determination, we calculated the depreciation requirement based on the total value of the RAB and using a straight line approach over the average life of the assets. This means that the total value of the RAB is recovered evenly over that period. We consider that the straight line depreciation method is superior to alternatives in terms of simplicity, consistency and transparency.⁴³

IPART seeks comment:

- 11 What are your views on Essential Energy's proposed methodology and assumptions for the assessment of asset lives and calculation of depreciation?

⁴³ IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013, Determination and Final Report*, p 60.

4 | Setting prices

Chapter 3 explained our approach to determining the length of the determination period and the utility's revenue requirement over that period. This chapter explains our approach to setting prices to reflect this revenue requirement, including key issues or questions that we must consider.

4.1 Potential difference between notional revenue requirement and target revenue

In regulating prices, we are required to take into account the matters set out in Section 15 of the IPART Act (see Appendix A), including Essential Energy's financial viability and the impact of its prices on customers.

Balancing these competing interests may mean that target revenue (ie, the forecast revenue based on the prices we set and forecast sales volumes and customer numbers) may vary from the determined notional revenue requirement (discussed in Chapter 3).

4.2 The structure of prices

A water utility's prices can potentially be structured along the following lines:

- ▼ fixed charges (eg, \$ per connection) and/or usage charges (eg, \$ per kL of water consumed) – which can be set to reflect the utility's fixed costs of service provision and its costs per unit of water (or sewerage service) supplied
- ▼ residential and non-residential charges – which can be set to reflect the costs of providing services to different classes of customers
- ▼ geographically varied or uniform charges – which can be set to reflect the costs of supplying different areas or geographical regions within the utility's area of operations.

The sections below consider some high level principles relating to price structures, as well as the current structure of Essential Energy's prices.

Subject to Essential Energy's proposal, other stakeholder comments, and our own analysis, we will consider whether the structure of Essential Energy's prices should be maintained or amended.

4.2.1 Pricing principles

In March 2012, we completed a review of price structures⁴⁴ for the metropolitan retail water authorities that we regulate. The review defined a set of principles for the structure of each agency's prices (see Box 4.1). This review, however, excluded Essential Energy.

Theoretically, prices should be structured to reflect the utility's cost structure. This ensures that the utility recovers its costs of service provision; each consumer pays the true cost of servicing them (ie, there is no or minimal cross-subsidies between customers and therefore prices are equitable); consumers receive the correct price signals; and resources are used and allocated efficiently.

However, in practice, the principle of truly cost-reflective prices often needs to be balanced against practical and broader policy concerns. A lack of information or the costs of developing and administering the pricing regime may limit the extent to which prices can be structured to reflect the costs of service provision. Similarly, prices may be structured to reflect, at least in part, government policy and/or the preferences of consumers. Further, as discussed above, section 15 of the IPART Act requires us to consider a number of factors when setting prices, including costs, economic efficiency and the social impact of determinations.

Sydney Water's prices, for example, are structured to reflect its costs in the sense that it has **fixed water service charges** (\$ per residential property, based on meter size⁴⁵) and **usage charges** (\$ per kL of water consumed), with the usage charge set to reflect its long-run marginal cost of supply⁴⁶ and the fixed charge set to recover its remaining costs. This 2-part tariff signals to consumers the costs imposed (or avoided) if they increase (or reduce) their consumption of water, and allows Sydney Water to recover its efficient costs of service provision (including its fixed costs). However, Sydney Water's prices are not purely structured to reflect its costs in the sense that its prices are uniform throughout its area of operations, even though its costs of supply vary by region. This form of uniform pricing is known as 'postage stamp' pricing and is well supported by Sydney Water's customers.⁴⁷

⁴⁴ IPART, *Review of price structures for metropolitan water utilities*, March 2012.

⁴⁵ \$ per residential connection; and \$ per non-residential connection, based on meter size (IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services from 1 July 2012 to 30 June 2016*, p 107).

⁴⁶ We usually set the usage price of water for retail customers with reference to the long run marginal cost of the next increment of supply augmentation (LRMC) to provide a price signal of the incremental cost of consumption. To determine LRMC, we calculate the net present value of the capital and operating costs of the augmentation project over its expected life and divide this by the net present value of the benefits over the same period.

⁴⁷ Sydney Water, 2010, http://www.pc.gov.au/__data/assets/pdf_file/0003/104475/sub068.pdf, p 7.

Box 4.1 IPART's principles for price structures for metropolitan water utilities

General principles

- ▼ Changes to the structure of water and sewerage prices are to be phased in over a transition period, where necessary, to minimise customer impacts.
- ▼ The total revenue collected from residential customers is to reflect the costs incurred in serving those customers. The total revenue collected from non-residential customers is to reflect the costs incurred in serving those customers.
- ▼ Customers imposing similar costs on the system should pay similar charges.

Residential and non-residential water usage charges

- ▼ The water usage charge is to be a standard variable charge for all customers – residential and non-residential – and be set with reference to the utility's long run marginal cost of supply.

Residential water and sewerage service charges

- ▼ The residential water service charge is to be a standard annual charge for all residential dwellings, unless there is evidence that there are material differences in the costs of servicing different residential property types.
- ▼ The residential sewerage service charge is to be a standard annual charge for all residential dwellings, unless there is evidence that there are material differences in the costs of servicing different residential property types.

Non-residential water service charges and sewerage usage and service charges

- ▼ The non-residential sewerage usage charge is to be a standard variable charge for all customers set with reference to, but not necessarily equal to, the utility's short run marginal cost of transporting, treating and disposing of domestic-strength effluent.
- ▼ The total sewerage revenue (usage and service charges) collected from non-residential customers is to reflect the costs incurred in servicing those customers.
- ▼ The total water revenue (usage and service charges) collected from non-residential customers is to reflect the costs incurred in servicing those customers.

IPART, *Review of price structures for metropolitan water utilities*, March 2012, p 3.

4.2.2 Essential Energy's current price structures

Water charges

Table 4.1 summarises the current water price structures for Essential Energy's water business in Broken Hill. Its prices vary by water quality/type. For most water types, Essential Energy levies a fixed service charge (based on the size of each property's meter) and usage charges (\$ per kL of water supplied). The usage charges are split into tiers: a lower 'Tier 1' price up to a specified threshold (600kL per year in summer, and 400kL per year any other time); and a higher 'Tier 2' price above this consumption threshold. This 2-tiered approach is also known as an 'inclining block tariff'. The extent to which the charges were reflective of Essential Energy's costs was an issue in the 2010 review, and we seek comment on this issue.

Table 4.1 Summary of current water price structures

Charge	Description and customer types
Single Tier water usage charges	Applies as follows: Treated water for exempt land Untreated water for non-residential customers Effluent water for non-residential customers
2-Tier water usage charges	Applies as follows:
Tier 1 usage	
– 600kL per year in summer period	▼ Treated (residential and non-residential)
– 400kL per year at any other time	▼ Chlorinated (residential and non-residential)
Tier 2 usage	
– >600kL per year in summer period	▼ Untreated water for pipeline customers
– >400kL per year at any other time	
Water service charges	
Standard meter-based charge for all customers.	Residential and non-residential customers

Source: IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013*, Determination and Final Report, p 65.

Essential Energy's 2-tiered approach to pricing water usage was consistent with the NSW Government's 2007 *Best-Practice Management of Water Supply and Sewerage Guidelines*.⁴⁸ To encourage water conservation, these guidelines promoted a step increase in prices for incremental usage above a specified threshold. The Guidelines also allowed for an increased threshold to account for the high incidence of evaporative air coolers.

⁴⁸ NSW Office of Water (formerly Department of Water and Energy), *Best-Practice Management of Water Supply and Sewerage Guidelines*, August 2007, p 8.

We note that as of March 2011,⁴⁹ the NSW Government has removed the need for the use of inclining block tariffs by Local Water Utilities. The NSW Government encourages Local Water Utilities to use a 2-part tariff, with a uniform water usage charge per kL for all water use. This is consistent with how we have regulated prices for other water utilities (eg, Sydney Water, Hunter Water) in recent years.

For this price review, we will consider whether the 2-tiered approach to water usage charges remains appropriate in Broken Hill. Moreover, at the 2010 Determination,⁵⁰ we committed to reviewing the effectiveness of the 'summer tariff' aspect of the 2-tiered water usage charge - ie, where the threshold for the Tier 1 usage charge is increased over the summer period to account for the increased water consumption in this period. We are seeking stakeholder feedback on whether the 2-tiered water usage charges - including the increased threshold in the summer period - is appropriate given Essential Energy's costs of water supply and the price signals being sent to consumers.

Charges applicable to the mines

The mines in Broken Hill are subject to the prices set in our 2010 Determination, with the exception of Perilya, the largest mine in Broken Hill. It paid charges under an agreement that was established by the NSW Government in 2002 and continued until 30 June 2012, with provisions for review at that time. For this review, we will therefore be required to consider whether Perilya (and possibly other mines and other types of non-residential customers) should be subject to standard water and sewerage prices, or whether it should be subject to different charging arrangements. This issue is discussed further in Chapter 5.

Sewerage charges

The structure of Essential Energy's sewerage prices differs for residential and non-residential customers. Residential customers pay a fixed service charge only. Non-residential customers pay a fixed service charge, based on the size of the water meter fitted to the property in question, plus a usage charge based on the volume of water used multiplied by the discharge factor⁵¹. Discharge factors differ between non-residential properties. This is broadly consistent with our price structure principles.

⁴⁹ NSW Office of Water, *2011-12 NSW Water Supply and Sewerage Performance Monitoring Report*, March 2013, p 6.

⁵⁰ IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013*, Determination and Final Report, p 65.

⁵¹ Discharge factors are an estimate of how much of the water consumed is discharged to the sewerage system. The estimated discharge volume divided by the metered water consumption is known as the discharge factor (IPART, *Review of price structures for metropolitan water utilities*, Final Report, March 2012, p 20).

We note that while we did not set water charges for Perilya Ltd in the 2010 Determination,⁵² we did set prices for sewerage services to the houses and other buildings located within the Perilya lease area. We adopted the same tariffs as we applied to the other residential and non-residential properties serviced by Essential Energy.

Table 4.2 summarises Essential Energy's current sewerage price structures.

Table 4.2 Summary of current sewerage price structures

Charge and customer type	Description
Sewerage service charge	
Residential	Standard sewerage service charge
Vacant land	
Non-residential	Meter based service charge
Sewerage usage charge (\$/kL)	
Residential	n/a
Non-residential	Calculated by multiplying the water consumed by the estimated discharge factor
Exempt properties	

Note: Discharge factor is the estimated discharge volume divided by the metered water consumption.

Source: IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013*, Determination and Final Report, pp 67-68.

Trade waste and miscellaneous charges

Fixed and variable charges apply for trade waste and miscellaneous charges. Our approach to setting these charges is discussed below.

Trade waste

For trade waste, the NSW Government has developed *Liquid Trade Waste Regulation Guidelines*.⁵³ Amongst other goals, these aim to ensure that trade waste fees and charges are set to recover the full efficient costs for the provision of these services. Essential Energy's trade waste charges are largely based on these guidelines.

Since trade waste and miscellaneous services tend to be paid by only a subset of customers or paid on a one-off or infrequent basis, we generally apply a different approach to setting these prices relative to the water and sewerage charges discussed above. We usually set these charges by considering how these charges should change relative to their current level.

⁵² IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013*, Determination and Final Report, p 68.

⁵³ NSW Office of Water (formerly the Department of Water and Energy), *Liquid Trade Waste Regulation Guidelines*, April 2009.

At the 2010 Determination,⁵⁴ we increased Essential Energy's trade waste charges by 7% per year, excluding the effects of inflation, in line with the increase in the sewerage service charge for a 20mm non-residential customer.

Miscellaneous charges

Essential Energy provides a range of miscellaneous services to its water and sewerage customers on an infrequent basis. Similar to trade waste charges, we usually set these charges by considering how these charges should change relative to their current level. At the 2010 Determination,⁵⁵ we increased Essential Energy's miscellaneous charges by increases in the Consumer Price Index. This was consistent with the decisions we applied to the other metropolitan water utilities we regulate.

IPART seeks comment:

- 12 What are your views on Essential Energy's proposed price structures and levels for the upcoming determination period?
- 13 Is the current 2-tiered water usage charge, including the 'summer tariff' where the usage threshold increases in summer, appropriate?
- 14 Are Essential Energy's proposed prices for the different types of water services (eg, treated, chlorinated, untreated and effluent water services) reflective of the costs it incurs in providing these services?

4.3 Forecasting metered water sales and customer numbers

Forecasting water sales and customer (property) numbers are key factors in setting prices for Essential Energy's regulated services. If sales volumes and customer number forecasts are understated, customers will pay prices that exceed efficient levels, while unduly high forecasts may result in the water business not earning a sufficient revenue stream over the determination period.

We will review Essential Energy's forecast sales volumes and customer numbers, including its methodology and assumptions used. We will also take into account the views of other stakeholders in relation to these forecasts.

⁵⁴ IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013, Determination and Final Report*, p 69.

⁵⁵ IPART, *Review of Country Energy's water and sewerage services, from 1 July 2010 to 30 June 2013, Determination and Final Report*, p 70.

Approach to addressing the risk of significant variation between actual and forecast water sales

Over the 2010 determination period, we note that Essential Energy's actual water sales varied from forecast water sales (see section 2.6.2 – Figure 2.5). These variances were mostly caused by the increased rainfall, which led to a reduction in consumption.

In our most recent determinations for Sydney Water,⁵⁶ Hunter Water⁵⁷ and Gosford City and Wyong Shire Councils,⁵⁸ we addressed the risk that actual and forecast water sales are significantly different over the determination period by introducing a demand volatility adjustment mechanism. This mechanism aims to mitigate possible over/under-recovery due to material variation between the net level of actual sales over the determination period and the forecast sales we used in making the determination.

The demand volatility adjustment mechanism could be implemented by comparing the forecast and actual water sales over the determination period and adjusting either the revenue requirement or the regulatory asset base over the next determination, as decided by the Tribunal at a future date. In our recent metropolitan water determinations, we decided that only the level of over/under-recovery that exceeds a 10% dead-band would be considered for adjustment.

We may consider whether such a mechanism could be introduced for Essential Energy. The mechanism has the benefit of:

- ▼ allowing some flexibility in how the adjustment to prices would be implemented in the following determination
- ▼ being relatively simple to implement and contributing towards reducing revenue over/under-recovery
- ▼ being symmetric and therefore protecting customers from over-recovery resulting from excess sales and Essential Energy from under-recovery if it sells less than expected.

The use of the mechanism has some limitations, however, as it is not binding on the Tribunal, and the amount by which prices may change is not known in advance. These limitations arise because it is not until the time of the next price review that the Tribunal can determine whether, and how, any adjustment to prices is made.

⁵⁶ IPART, *Review of prices for Sydney Water Corporation's water, sewerage, drainage and other services, from 1 July 2012 to 30 June 2016*, June 2012, p 38.

⁵⁷ IPART, *Final Report: Hunter Water – Prices for water, sewerage, stormwater drainage and other services from 1 July 2013 to 30 June 2017*, June 2013, p 90.

⁵⁸ IPART, *Gosford City Council and Wyong Shire Council Prices for water, sewerage and stormwater drainage services from 1 July 2013 to 30 June 2017*, pp 45-46.

IPART seeks comment on:

- 15 What are your views on Essential Energy's forecasts of water sales and customer numbers, including its methodologies and assumptions used to derive these forecasts?
- 16 What are your views on the introduction of a demand volatility adjustment mechanism?

4.4 Customer consultation and service quality standards

In developing its expenditure programs and pricing proposals, we consider that a water utility should take into account its customers' views on the appropriate level and allocation of expenditure, as well as the level and structure of prices. To facilitate customer consultation, Essential Energy's submission should be accompanied by a short, plain English, non-technical summary of its price proposal that contains a clear statement of the impacts on customers.

Under our customer engagement guidelines,⁵⁹ Essential Energy should provide evidence of any customer consultation that has occurred in developing its expenditure programs and pricing proposals, and outline the mechanisms that it uses for undertaking customer consultation, as relevant.

We set out below our approach to assessing the appropriateness of expenditure to meet service quality standards and expenditure that exceeds service quality standards.

4.4.1 Meeting service quality standards

In determining Essential Energy's prices, we will consider the relationship of actual and proposed expenditure to service quality outcomes, and seek to ensure an appropriate matching of service quality levels with customers' willingness to pay and impacts on price affordability.

⁵⁹ IPART, *Customer engagement on prices for monopoly services – Final Report*, August 2012.

We expect that Essential Energy's existing required standards of service will, at a minimum, be maintained as a result of our price determination process. Performance monitoring of non-metropolitan Local Water Utilities is undertaken annually by the NSW Office of Water in the *NSW Water Supply and Sewerage Benchmarking Report*. That Office also provides Best Practice Guidelines for the management of water supply and sewerage, which requires utilities to provide annual performance data and allows utilities to be benchmarked against other similar utilities. In addition, the National Water Commission (NWC) has developed a set of performance indicators to be applied across water utilities throughout Australia.⁶⁰ We will use the results of these reports to assess Essential Energy's performance against other similar water utilities and determine whether its levels of performance are appropriate.

4.4.2 Exceeding service quality standards (discretionary expenditure)

Some levels of performance are not regulated by us or other authorities but are left to water utilities to determine. In these instances, the performance by water utilities may exceed regulatory standards or there may not be prescribed standards. We consider this to be 'discretionary' expenditure. Any proposals for discretionary expenditure should be supported by evidence of customer engagement.

We are interested in obtaining information from Essential Energy about any customer consultation it has undertaken and any proposed discretionary expenditure.

IPART seeks comment:

- 17 Are Essential Energy's current water and sewerage service standards appropriate?
- 18 Has Essential Energy adequately consulted with its customers on its expenditure programs and pricing proposals?
- 19 Has Essential Energy adequately consulted with its customers about incurring discretionary expenditure (if it has proposed to undertake any of this expenditure)? Has Essential Energy provided sufficient evidence to justify its discretionary expenditure proposals?
- 20 Are customers willing to pay for Essential Energy's service levels and proposed expenditures?

⁶⁰ National Water Commission, *National performance report 2011-12 Urban water utilities*, March 2013.

4.5 Assessing the impact of pricing decisions

As part of this review, we will consider the potential implications of our pricing decisions on Essential Energy and its customers. Our approach is discussed below.

4.5.1 Impact on Essential Energy

In many of our reviews we conduct a financeability test⁶¹ to assess the implications of our pricing decisions for the financial sustainability of the water utility. The financeability test helps us to assess the impact of our price determination on Essential Energy's ability to:

- ▼ fund the provision of services
- ▼ service and repay debt
- ▼ access debt markets for new borrowing requirements.

The objective of the financeability test is to enhance the transparency, consistency and certainty of the regulatory regime. We are currently undertaking a review to establish an appropriate framework for the test.⁶² The review of the financeability test is to be completed by late 2013 and we will use the decisions from the review when assessing the impacts of our pricing decisions on Essential Energy.

4.5.2 Impact on customers

In conducting this review, we will also assess the impact on customers of pricing decisions. This may also include potential means of mitigating impacts.

We may consider transitioning any price increases over the determination period using a 'glide path' approach. We have done this in the past where there have been significant increases in prices (and customer impacts). Under a glide path approach, we calculate the prices required in the final year of the determination period and set prices in the interim years to transition to those prices. This approach reduces price shocks to customers, but also allows Essential Energy to recover its required revenue by the final year of the determination period.

IPART seeks comment:

21 What are the impacts of Essential Energy's proposed prices on customers?

⁶¹ IPART, *Financeability test in price regulation – Discussion Paper*, September 2012, p 1.

⁶² See IPART's website:

http://www.ipart.nsw.gov.au/Home/Industries/Research/Reviews/Financeability_Tests/Financeability_test_in_price_regulation_-_2012

5 Other issues for this review

This chapter outlines some specific issues for this review and invites comment from stakeholders in response to them. These issues include Essential Energy's prices for the mines, and the NSW Government subsidy previously provided to Essential Energy. This chapter concludes by outlining potential future approaches to regulating Essential Energy's water and sewerage prices.

5.1 Setting prices for the mines

In 2002, the NSW Government established arrangements for funding water supply services in Broken Hill. The Mines Charges Agreement set the charges payable by the only mining company operating at the time, Perilya Limited. This agreement set prices until June 2012, when mining operations were expected to have ceased. If mining operations continued past 2012, the NSW Government would conduct a review and charges would be maintained at the 2012 level.⁶³

Essential Energy recognised that the status of the Mines Charges Agreement was an important factor requiring resolution prior to the commencement of this review. In response, a Mines Price Review Working Group was formed to address the future of the Mines Charges Agreement. This working group included representation from Essential Energy, the NSW Office of Water, the Division of Resources and Energy, NSW Treasury, the Office of Finance and the Department of Premier and Cabinet.

Essential Energy has recently advised that:

After consideration of the mines agreement in conjunction with the outcomes of the working group, Essential Energy does not plan to pursue renewal of the mines agreement.⁶⁴

For this review, Essential Energy will need to advise us its proposed prices for all customers, including the mines. In doing so, it will need to provide justification and explanation for its pricing proposals.

⁶³ Essential Energy, Water Treasury Subsidy and Mines Agreement, Memorandum, 28 September 2011, p 14.

⁶⁴ Correspondence, *Letter received from Essential Energy on 19 April 2013*.

5.1.1 Is there a case for moving away from ‘postage stamp’ pricing with regard to the mines?

When setting prices we usually set uniform prices, and this is known as ‘postage stamp pricing’. This means that all customers pay the same tariffs for the services provided, regardless of the individual assets used to provide the service. So while the costs may differ, we average the price across all customers. We would only consider moving away from postage stamp pricing where there are substantial differences in costs to service different customers, and the costs can be separately identified in a way that would warrant setting different prices.

An example of where we moved away from postage stamp pricing was the charges we set the Councils in the 2012 Sydney Catchment Authority (SCA) Determination.⁶⁵ In that review, we set prices according to the usage share of assets. Specifically, prices for the Councils were based on the cost of assets identified by the SCA to supply water to the local councils, and the costs were apportioned to each council based on their water demand.

If we were to consider applying the approach we used in the 2012 SCA Determination, then Essential Energy would be required to identify the cost of assets that are used to supply Perilya Ltd or other large customers – including the methodology and assumptions used to attribute these costs. We note that given Perilya uses around 25% of total water supplied, there may be a case for using an alternative approach for setting prices for the mines.

The next section provides further discussion on some potential options for setting prices for the mines.

5.1.2 Options for setting prices for the mines

We consider that there are 3 potential options for setting prices for the mines:

1. Setting standard non-residential charges for all non-residential customers, including the mines. This is the approach we applied in the 2010 Determination; with the exception that Perilya was excluded from these charges due to the existence of the separate Mines Charges Agreement discussed above. This is our base case, unless sufficient evidence is provided to justify an alternative approach.
2. Introducing a separate non-residential customer category for the mines as the largest non-residential customers, and setting standard prices applicable to all mines operating in Broken Hill. Under this approach, the costs to service the mines would be separately identified and prices would be set based on these costs.
3. Setting specific prices for individual mines operating in Broken Hill.

⁶⁵ IPART, *Review of prices for the Sydney Catchment Authority from 1 July 2012 to 30 June 2016*, Final Report, March 2012, pp 101-102.

The key difference between the 3 options is the level of disaggregation of costs to set cost-reflective prices. Under option 1, the costs associated with the non-residential sector including the mines would be recovered from all non-residential customers. Under option 2, the costs associated with the mines would be separated from the non-residential sector with specific prices set for the mines. Under option 3, the costs associated with individual mines would be identified with prices set for each mine on this basis.

In general, the level of disaggregation of prices that is appropriate will depend on a number of factors, including:

- ▼ whether there is a significant difference in costs to service the mines – if so, there may be a case for setting a mines price or individual prices for each mine
- ▼ the availability and accuracy of cost information at a disaggregated level - including the ring fencing of costs associated with the supply of services to the mines
- ▼ an appropriate methodology for allocating the costs to service the mines from other customers
- ▼ whether the benefits of setting more cost-reflective prices outweigh the costs associated with increasing information requirements.

IPART seeks comments on:

- 22 How should prices for the mines be set?
- 23 What are your views on Essential Energy's proposed prices for the mines, including its justification for these prices?

5.2 NSW Government subsidy

When the NSW Government established the Mines Charges Agreement in 2002, it also established a 'Treasury Subsidy' under which the NSW Government subsidised Essential Energy for water services provided in Broken Hill. This agreement is to expire on 30 June 2013. However, prices from 1 July 2012 will remain unchanged for 2 years, until we set new prices from 1 July 2014.

In the 2010 Determination, we subtracted the Treasury subsidy from Essential Energy's notional revenue requirement (that is, its efficient costs) to establish the target revenue. We then set prices to reflect this target revenue. On average, the Treasury subsidy represented around 10% of the notional revenue requirement each year.

With the Treasury subsidy due to expire at the end of June 2013, we propose to set prices to reflect efficient costs. However, we may transition to cost-reflective prices over time, where appropriate. This may mean that prices increases are phased in.

5.3 Possible changes to our approach for setting prices in future reviews

As noted in chapters 3 and 4, we intend to apply a form of our standard building block approach for setting the notional revenue requirement and prices for Essential Energy's water and sewerage services. In future reviews, however, depending on the circumstances at the time, we may consider alternative regulatory approaches that may better balance the costs of regulation with the size of the organisations being regulated.

We have identified 4 potential options for setting prices:

1. **Price caps.** This is our standard approach. Price caps are set for each service to recover the notional revenue requirement that we have determined using the building block methodology.
2. **Weighted average price caps.** The price cap is applied to a basket of services and the business has the flexibility to set prices for each service as long as it conforms to the maximum allowed weighted average. We would set the weighted average price cap based on our assessment of the notional revenue requirement using the building block methodology.
3. **Revenue caps.** Under this option, we do not set an explicit price. We set the target revenue and the regulated business has the flexibility to set its own prices to achieve the target revenue.
4. **Price monitoring.** Under this option, we do not determine the notional revenue requirement using the building block methodology or the maximum allowable price increases. But we would need to develop a price monitoring regime, subject to certain pricing principles, before being able to implement this approach.

We are seeking stakeholder feedback on the possibility of transitioning, over the longer term, from our current approach of setting prices to a more light-handed approach such as price monitoring. We are seeking stakeholder views on which options provide the right balance between providing appropriate controls on the business, while ensuring that our regulatory approach is proportionate to the size of the entity that we regulate.

Table 5.1 below presents a high level analysis of the strengths and weaknesses of the 4 potential options.

Table 5.1 Analysis of different approaches for setting prices

Options	Strengths	Weaknesses
<p>1. Price caps</p> <p>This means setting individual charges for each service (our current approach)</p>	<ul style="list-style-type: none"> ▼ IPART controls the prices charged. ▼ This ensures that efficient outcomes are achieved, customers are protected and price signals are appropriate. 	<ul style="list-style-type: none"> ▼ The regulatory costs (time, review) are relatively high. ▼ The business has an incentive to under-forecast water sales and customer numbers.
<p>2. Weighted average price caps</p> <p>A weighted average price cap is applied to a basket of services and the business must calculate prices that conform to the maximum allowed weighted average.</p> <p>Side constraints are typically imposed to maintain a degree of price stability by restricting how much any one price can change in a year.</p>	<ul style="list-style-type: none"> ▼ Gives the business some flexibility in pricing. ▼ Rewards the business for selling more of its services, if the business chooses to set higher usage charges. ▼ We will still review and approve the annual prices to ensure the changes are in line with the weighted average price cap. 	<ul style="list-style-type: none"> ▼ This option allows the business the flexibility to maximise revenue. This could mean prices are more volatile eg, usage charges increase when demand increases (subject to any side constraints). ▼ The business has an incentive to under-forecast water sales and customer numbers.
<p>3. Revenue caps</p> <p>A revenue cap refers to a regulator not setting explicit prices.</p> <p>Regulated businesses are allowed to set their own prices to achieve the target revenue set by the regulator. Typically these include automatic adjustments for over/under recovery and side constraints to maintain a degree of price stability.</p>	<ul style="list-style-type: none"> ▼ The regulatory costs (information requirements, review) are reduced. ▼ Reduced business risk by allowing business to adjust prices to react to changes in demand. 	<ul style="list-style-type: none"> ▼ IPART must establish mechanisms and protocols to ensure that businesses do not consistently over-recover their revenue caps.
<p>4. Price monitoring</p> <p>Under this approach, prices and revenues are not set by the regulator. Typically, pricing principles are established and the regulator monitors the appropriateness of the charges levied by the business.</p>	<ul style="list-style-type: none"> ▼ We would establish principles or a framework, which the business would use in setting its prices. ▼ Reduced regulatory cost, after IPART has established a price monitoring framework. 	<ul style="list-style-type: none"> ▼ Without using a building block approach to determine the notional revenue requirement, we would have less ability to actively ensure that prices are cost-reflective and equitable.

Source: IPART analysis.

IPART seeks comment:

- 24 For future price reviews, what is the best price setting option for Essential Energy, given its size, performance and other characteristics?
- 25 If we were to move to a lighter-handed regulatory regime such as price monitoring, what criteria or pre-condition(s) should Essential Energy first meet?
- 26 Do you wish to comment on any other issues relevant to this review?



Appendices

A Matters to be considered by IPART under Section 15 of the IPART Act

In making determinations, IPART is required, under Section 15 of the IPART Act, to have regard to the following matters (in addition to any other matters IPART considers relevant):

- a) the cost of providing the services concerned
- b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services
- c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales
- d) the effect on general price inflation over the medium term
- e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers
- f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment
- g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets
- h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body
- i) the need to promote competition in the supply of the services concerned
- j) considerations of demand management (including levels of demand) and least cost planning
- k) the social impact of the determinations and recommendations
- l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).

B Information required from Essential Energy

This appendix outlines the information that should be contained within Essential Energy's submission to IPART. As we have previously advised Essential Energy:⁶⁶

- ▼ IPART's *Guidelines for Water Agency Pricing Submissions* should be used as the basis for developing its price submission.
- ▼ The information provided in Essential Energy's submission should include the current determination period 1 July 2010 to 30 June 2013, the interim year 2013/14 when prices will be unchanged in nominal terms, and the subsequent 5 years from 2014/15 to 2018/19.

We note that, as throughout this Issues Paper, when we refer to 'Essential Energy' we are referring to its water operations (ie, Essential Water).

We seek information from Essential Energy on the following:

Operating expenditure and capital expenditure over the current and upcoming determination periods

- 1 Essential Energy's actual operating expenditure by year over 2010/11 to 2013/14 compared to that allowed in the 2010 Determination, and justifications for any differences.
- 2 Drivers of Essential Energy's operating expenditure over 2010/11 to 2013/14, and service outcomes achieved.
- 3 Essential Energy's forecast operating expenditure by year over 2014/15 to 2018/19, drivers of this expenditure, the potential for efficiency gains, specific efficiency programs, service outcomes to be achieved and stakeholders' willingness to pay for service levels.
- 4 The methodology and major assumptions used to develop Essential Energy's forecast operating expenditures.

⁶⁶ Letter to Essential Energy, *Information requirements*, 4 October 2012.

- 5 Essential Energy's projected capital expenditure for 2014/15 to 2018/19 (by year), including: drivers of this expenditure; expected service outcomes; levels of certainty/uncertainty of estimates; and information on stakeholder willingness to pay (for discretionary expenditure).
- 6 Essential Energy's systems and planning approaches to ensure its expenditure decisions (including timing and priority) are prudent and efficient. This includes the extent to which Essential Energy has carried out options analysis for proposed service delivery expenditures (eg, cost benefit analysis and business case analysis).
- 7 Essential Energy's asset management framework and the relationship between its asset management framework and capital expenditure program.
- 8 The value, timing and description of any contributions (including contributed assets) to Essential Energy from government and/or other sources, by year.
- 9 Explanation of the methodology Essential Energy has used to separate costs between Essential Energy and Essential Water. This should include explanation of Essential Energy's methodology for allocating overheads or shared costs between its energy and water (Essential Water) operations, and the value of the overheads or shared costs allocated to its water operations.
- 10 The methodology Essential Energy has used to allocate overheads and contingency allowances (if any) to its capital expenditure projects, and the values of these overheads and allowances.
- 11 Explanation of how Essential Water's operating and capital costs have been allocated between its different water services or customers (eg, treated, chlorinated, untreated and treated effluent customers), including the value of these allocations and information and explanation of cost allocation methodologies.
- 12 The appropriateness of comparing Essential Energy's performance with other similar sized water utilities to determine efficient operating expenditure.

Determining the rate of return

- 13 The proposed post-tax rate of return and the justification for this rate of return.
- 14 Essential Energy's proposed allowance for taxation, including assumptions.

Determining the return of capital

- 15 Essential Energy's proposed methodology and assumptions for the calculation of depreciation, including assessment of asset lives.

Length of the Determination Period

- 16 The appropriate length of the upcoming determination period.

Metered water sales and customer numbers

- 17 Essential Energy's actual metered water sales and customer numbers over 2010/11 to 2013/14; and its forecast metered water sales and customer numbers over 2014/15 to 2018/19. A description of the reasons for any significant variation should be provided.
- 18 Essential Energy's methodologies and assumptions used in developing these forecasts.
- 19 Essential Energy's views on the introduction of a demand volatility adjustment mechanism to address the risks of under/over recovery of revenue due to differences in actual and forecast water sales.

Price structures and price levels

- 20 Essential Energy's proposed price structures and levels for the upcoming determination for each tariff included in the 2010 Determination. If Essential Energy proposes that a tariff is no longer required, Essential Energy should give reasons.
- 21 The reasoning or justification for each of Essential Energy's proposed tariffs that address the following factors:
 - The relationship between the proposed tariff and the forecast costs of service provision.
 - The impact of the proposal on customers (eg, actual and annual percentage changes to bills).
 - Analysis of any customers 'willingness to pay' information available to Essential Energy, and/or a discussion of any customer consultation in its pricing proposals.
 - The methodology for calculating the tariff, including major assumptions.

The impact of Essential Energy's proposed prices on its customers

- 22 The impact on Essential Energy's proposed prices on its customers (by customer type, where relevant).
- 23 Essential Energy's proposed means of mitigating any potentially significant adverse impacts on customers.

Service quality standards and discretionary expenditure

- 24 The means by which Essential Energy has ascertained the appropriate service levels to be provided over the upcoming determination period, and the relationship between these service levels and costs.
- 25 Any proposals for the upcoming determination period to undertake expenditure above regulatory requirements, or where there are no standards – ie, 'discretionary' expenditure.
- 26 Evidence of customer willingness to pay for discretionary expenditure.

Mines Charges

- 27 Essential Energy should provide all the necessary information to support its proposal regarding prices for mines in Broken Hill. Where relevant, this should include methodologies for allocating costs to the mines.

Treasury subsidy

- 28 Whether a NSW Government subsidy (or other form of third party contribution) has been included in its price proposals and, if so, the value and status of this subsidy.

Possible changes to our approach for setting prices in future reviews

- 29 Essential Energy's view (and explanation) on the best approach to regulating its prices at future determinations.