IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of prices for WaterNSW

Rural bulk water services from 1 July 2017

Water — Issues Paper
September 2016

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Invitation for submissions

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

Submissions are due by 17 October 2016.

We would prefer to receive them electronically via our online submission form www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission .

You can also send comments by mail to:

WaterNSW Rural Bulk Water Prices
Independent Pricing and Regulatory Tribunal
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Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au> as soon as possible after the closing date for submissions. 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.

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1 Introduction

The Independent Pricing and Regulatory Tribunal of NSW (IPART[1]) is conducting a review of the maximum prices that WaterNSW (formerly State Water) can charge for its monopoly rural bulk water services.

WaterNSW delivers bulk water to irrigators and other licence holders on regulated rivers across NSW.[2] WaterNSW operates 42 large dams and weirs, delivery infrastructure such as pipelines, and the State's rivers, to deliver water to its 6,300 customers.

We regulate WaterNSW's prices for its rural bulk water services, which relate primarily to storing and delivering water to entitlement holders in 13 valleys across NSW.

We also regulate its meter servicing charges and other 'miscellaneous' charges that are set on a fee for service basis, such as the trade processing charge.

On 30 June 2016, we received WaterNSW's proposal for its regulated prices to apply from 1 July 2017.

This Issues Paper sets out the context for this price review, summarises key elements of WaterNSW's pricing proposal and describes our approach to reviewing and regulating WaterNSW's prices. We also provide preliminary positions where possible and ask for specific feedback from stakeholders.

All dollar figures in this Issues Paper are $2016-17, unless specified otherwise.

1.1 Regulating WaterNSW's prices for bulk water services

From 1996 to 2014, IPART regulated the then State Water Corporation's (State Water) prices for its services across NSW under the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW) (the IPART Act).

1 Hereafter referred to as 'we', 'us' or 'our'.

2 The difference between unregulated and regulated rivers is that regulated rivers are controlled by a major storage or dam to supply water.

From 1 July 2014, the Australian Competition and Consumer Commission (ACCC) set WaterNSW's maximum charges for its services in the Murray-Darling Basin (MDB) under the *Commonwealth Water Act 2007* (the Water Act).[3] Under the Water Act, the ACCC became responsible for regulating prices of large water infrastructure businesses across the MDB, including State Water, to enhance consistency in pricing across the MDB States.

1.1.1 Murray-Darling Basin valleys

There are nine valleys located in the MDB in inland NSW. The prices of WaterNSW's bulk water services to the MDB valleys as well as customers in the Fish River Scheme (other than Oberon and Lithgow councils) are regulated under:

- the *Water Act 2007* (Cth)
- the Water Charge (Infrastructure) Rules 2010 (WCIR) made under section 92 of the *Water Act 2007,* and
- the ACCC's *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010* of July 2011 (ACCC Pricing Principles).

The current prices for MDB valleys were established in the ACCC's 2014 Decision and updated by the ACCC in 2 annual reviews (the 2015-16 and 2016-17 annual reviews).

IPART is now accredited by the ACCC under the WCIR to set maximum water prices for WaterNSW in the MDB.

The ACCC is currently reviewing the WCIR. The ACCC has proposed handing back regulatory pricing responsibilities to state-based regulators.[4] If the WCIR are amended in accordance with the ACCC's draft advice, we would regulate WaterNSW's maximum prices for the MDB valleys under the IPART Act. Currently, for the MDB valleys, we are required to conduct this price review under the WCIR and the ACCC Pricing Principles.

In the event that the WCIR are amended during this price review we will inform stakeholders and include details of any resultant changes in prices in our Draft Report. We would also discuss these issues in our public hearing in April 2017.

[3] The MDB includes 9 inland valleys: Border, Gwydir, Namoi, Peel, Lachlan, Macquarie, Murray, Murrumbidgee and the Lowbidgee. The Fish River Scheme is a separate area for pricing purposes.

[4] ACCC, *Review of Water Charge Rules Draft Advice*, November 2015, p 141.

1.1.2 Coastal valleys

As part of this review, we will also determine WaterNSW's prices in three coastal valleys (the Hunter, North Coast and South Coast) as well as its prices for Oberon and Lithgow Councils (which are part of the Fish River Scheme).

We regulate the prices for bulk water services to the three coastal valleys and Oberon and Lithgow councils under section 11 of the IPART Act.

The current prices for coastal valleys were set in IPART's 2010 Determination. This 2010 Determination was scheduled to conclude on 30 June 2014. However, after requests from WaterNSW, IPART decided to defer the next review of prices in coastal valleys until now, to align with the MDB valleys. Consequently, WaterNSW's prices for the coastal valleys have remained unchanged at 2013-14 levels in nominal terms.

1.2 Summary of WaterNSW's pricing proposal for its rural bulk water services

Under WaterNSW's proposal, the cost of supplying its rural bulk water services will reduce in real terms. WaterNSW's proposed revenue requirement over the next four years averages $103.63 million a year.

Its proposed user share of costs to be recovered from water prices is around 70% or $72.89 million per year. This is 6.9% lower than the allowed user share of $78.84 million for the current 2016-17 year.[5]

The lower overall cost is driven by reductions in operational expenditure and lower return on capital. Proposed operating expenditure is $38.73 million per year over the 2017 determination period, which is about 16% less than allowed operating expenditure in 2016-17.

At the same time, WaterNSW's proposed total capital expenditure (an average of $48.43 million per year) is higher than that allowed in current determinations.

WaterNSW's proposed revenue requirement includes a user share for the pass-through of Dumaresq-Barwon Border Rivers Commission (the BRC) and Murray-Darling Basin Authority (the MDBA) costs of $61.65 million over the next four years, which is around $15.41 million per year.[6] Under the ACCC's 2014 Pricing Decision, the average annual allowed BRC and MDBA costs passed through to customers were $13.72 million per year.[7] WaterNSW proposes that

5 Estimates of regulatory allowances are based on IPART's 2010 Determination (coastal valleys) and the ACCC's 2014 Decision (MDB valleys).

6 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 145, and IPART calculations.

7 ACCC annual price control model 2016-17.

these costs be passed through to customers via a fixed price per ML of entitlement in the Border, Murrumbidgee and Murray valleys.[8]

WaterNSW has also proposed:

- A 4-year determination period for MDB and Coastal valleys in line with WCIR requirements.
- Maintenance of the current form of price control – ie, a price cap, with provision for annual reviews of MDB prices to reflect updated sales forecasts, and an Unders and Overs Mechanism (UOM) to manage risks associated with sales volatility.
- An additional cost item to allow it to recover the costs of managing risks associated with revenue volatility.
- Maintaining the two-part tariff and the current split between fixed charges ($ per ML of entitlement) and usage charges ($ per ML of usage) – ie, setting prices so that 60% of target revenue is recovered through usage charges and 40% through entitlement charges. High security entitlements holders would continue to pay a proportionally higher share of the 40% of revenue recovered from fixed charges based on the relative reliability of entitlements in each valley.
- Retaining the current 20-year rolling average of actual water sales to forecast water sales.

Proposed Prices

WaterNSW's proposed approach would result in **final prices** that are comprised of WaterNSW's rural bulk water charges in all 13 valleys plus BRC/MDBA pass-through charges in three of these valleys (Border, Murrumbidgee and Murray). Under WaterNSW's proposal:

- **High security fixed entitlement charges would decrease in 7 out of 11 valleys**, however customers in the Murray, North Coast and South Coast valleys would experience considerable bill increases.
- **General security fixed entitlement charges would increase in 10 out of 12 valleys**, with substantial increases in the Border, Murray and Murrumbidgee valleys.
  - The large increases in the Murray and Murrumbidgee valleys would result from WaterNSW's proposal to recover BRC and MDBA costs through fixed entitlement charges rather than a 40:60 fixed to usage split as is the case currently.

8 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 145.

  - In other valleys (eg, the Lachlan, Namoi and Gwydir valleys), the general security fixed entitlement charges would increase as WaterNSW's proposed cost of managing revenue volatility would be added to these charges.

- **Usage prices would generally decrease**, with prices declining in 9 out of 11 valleys.
  - Usage prices would increase in the North Coast and South Coast valleys, where WaterNSW is proposing to transition prices towards full cost recovery.
- All price increases in the North Coast and South Coast valleys (ie, entitlements and usage charges) would be capped at 10% per annum.

WaterNSW's proposed fixed entitlement and usage prices are set out in Chapter 12. For each valley, we present the proposed WaterNSW price, the proposed BRC/MDBA pass-through price and the proposed combined final prices. Chapter 13 outlines WaterNSW's proposed metering service and miscellaneous charges.

1.2.2 Key issues for this review

We will examine a number of key issues in this review that have been raised in WaterNSW's proposal. This includes reviewing:

- the efficiency of WaterNSW's proposed expenditure, including capital expenditure on maintaining capability
- WaterNSW's proposed BRC and MDBA pass-through costs
- WaterNSW's proposal for a cost allowance to manage its risks of revenue volatility
- WaterNSW's proposed allocation of costs between users and the NSW Government
- WaterNSW's proposed approach to allocate shared or common costs between its business areas (eg, its rural business vs its bulk water supply functions for Greater Sydney), and
- potential alternative approaches to cost recovery and pricing in the North Coast and South Coast valleys.

An overview of each of these key issues is provided in the sections below.

Capital expenditure

Over the four years to 2016-17, WaterNSW underspent its regulatory allowance for the user share of its capital expenditure by 3.3%, or around $1.9 million.

For the 2017 determination period, WaterNSW is proposing to increase its user share of capital expenditure.

WaterNSW's proposed user share capital expenditure over 2017-18 to 2020-21 is $148.68 million (or an average annual user share of capital expenditure of $37.17 million). The user share is 77% of its forecast total capital expenditure over this period. For the three years 2014-15 to 2016-17, the approved user share of capital expenditure was $15.74 million. In its 2014 Decision, the ACCC allowed a user share of capital expenditure of 49.8%.[9]

As part of our review, we will engage an expert consultant to review the prudence and efficiency of WaterNSW's forecast capital expenditure. We will also review the allocation of costs between users and the Government. Capital expenditure is discussed in Chapter 6.

Border Rivers Commission and Murray Darling Basin Costs

The proposed BRC and MDBA contributions apply in three valleys (Border, Murray and Murrumbidgee). In its pricing proposal for rural bulk water charges, WaterNSW has incorporated the BRC's and MDBA's costs in the information it has submitted based on advice from DPI Water.[10]

In its 2014 Decision, the ACCC concluded that the recovery of BRC and MDBA costs was a "regulatory obligation" for State Water as a result of a direction from the NSW Treasurer to State Water and allowed these costs to be passed through to customers.[11] WaterNSW has not yet received a direction from the NSW Treasurer under the Public Finance and Audit Act for the 2017 determination period. However, WaterNSW anticipates receiving a direction from the NSW Government regarding BRC and MDBA costs for the 2017 Determination.[12]

Our preliminary position is that we will review the prudence and efficiency of the proposed MDBA and BRC costs, and only prudent and efficient costs should be included in prices. If WaterNSW were to receive a direction from the NSW Government to fund the BRC and MDBA costs, we would allow the costs referred to in the direction to be passed through to users via prices on the basis it constitutes a regulatory obligation on WaterNSW.

We will also examine WaterNSW's proposal to recover BRC and MDBA costs through a fixed change per ML of entitlement, as opposed to the current 40:60 split between fixed and usage charges.

BRC and MDBA costs are discussed in Chapter 8.

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9 ACCC, *Final Decision on State Water Pricing Application 2014-15 to 2016-17,* June 2014, p 31.
10 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 145.
11 ACCC *Final decision on State Water Pricing Application: 2014-15 – 2016-17,* June 2014, p 9.
12 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 17.

Additional Mechanism to Address Revenue Volatility

WaterNSW has carried out consultation on its proposed retention of the 40:60 fixed to variable price structure with customers. Specifically, it discussed the potential trade-off between customer cash-flow benefits and the costs of managing its revenue volatility under the current structure.[13] According to WaterNSW, customers supported the retention of the current price structure.

To manage its revenue volatility, WaterNSW has proposed to purchase a risk transfer product from a third party. This risk transfer product (RTP) would replicate an 80:20 fixed to variable price structure, so that only 20% of WaterNSW's revenue would be tied to water sales. The annual costs of this RTP would represent around an additional 5% per year on the user share of its notional revenue requirement (NRR). It proposes to include this cost in setting prices for general security entitlement holders for each valley.

WaterNSW's proposal to introduce an RTP effectively transfers the cost of managing its risk onto customers, as customers would be expected to pay for the cost of the RTP under WaterNSW's proposal. Currently, WaterNSW bears the risks and costs (or gains) that result from the mismatch of its pricing structure (40:60 fixed to usage charge ratio) with its cost structure, which is largely fixed. We note that under the ACCC's 2014 Decision there is currently an unders and overs mechanism designed to reduce the impacts on WaterNSW arising from the mismatch of price and cost structures. We will consider the appropriate approach to addressing revenue volatility and the sharing of risk over this determination.

We discuss mechanisms to address revenue volatility in Chapter 7.

Cost shares

Costs are currently allocated to water users or the Government (on behalf of the broader community) based on the 'impactor' pays principle. This principle seeks to allocate costs to different individuals or groups in proportion to the contribution that each individual or group makes to creating the costs (or the need to incur the costs).

Under the current approach, the majority of WaterNSW's costs are allocated to users (65% for WaterNSW's NRR over the proposed determination period).[14] The user share under the ACCC's 2014 Decision was 62%.[15]

We will undertake a review of cost shares for this determination to ensure they continue to accurately reflect the share of costs imposed by each party under the impactor pays approach. Cost shares are discussed in Chapter 4.

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13 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 24.
14 IPART, *Review of Rural Water Charging Systems - Final Report*, August 2012, p 7.
15 ACCC, *Final Decision on State Water Pricing Application 2014-15 to 2016-17,* Attachments, p 15.

Cost Allocation

WaterNSW's business comprises:

- bulk water services supplied to **rural** customers, which is the subject of this review, and
- bulk water supplied to Sydney Water and other customers in the **Greater Sydney** region, which is subject to a separate IPART (WaterNSW Greater Sydney) Determination - with prices for the most recent determination having commenced on 1 July 2016.

Therefore, WaterNSW must allocate shared or common costs between these businesses in determining its proposed revenue requirement for this determination. This allocation will be reviewed by our expenditure consultants.

Cost allocation is discussed in Chapter 4.

Cost recovery

In most valleys, prices are set to recover efficient costs. WaterNSW's prices currently recover about 12% and 45% of the users' share of its efficient costs for the North Coast and South Coast valleys, respectively.[16] In our 2010 Determination, we maintained that State Water's prices in the North Coast and South Coast valleys should continue to transition towards levels that would achieve full cost recovery, but with real price increases capped at 10% per year.[17]

For this review, we will examine alternative approaches for setting prices in valleys such as the North Coast and South Coast where full cost recovery is unlikely to be achieved.

We discuss cost recovery in Chapter 15.

1.3 How will we undertake this review?

In undertaking this review, we will engage with stakeholder by holding public hearings and providing opportunities for stakeholders to make submissions on our Issues Paper and Draft Report. We will take all stakeholders' submissions into account in making decisions.

When we regulate prices under the IPART Act, we must have regard to a range of matters, such as the costs of providing the services concerned, customer affordability, environmental impacts and the maintenance of customer service quality as outlined in section 15 of the IPART Act.

16 IPART modelling from the 2010 State Water Determination.

17 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 - Final Report*, June 2010, p 149.

In determining charges for the MDB valleys under the WCIR, we are required to have regard to whether the regulated charges would contribute to achieving the Basin Water Charging Objectives and Principles (BWCOP) of the Commonwealth Water Act.[18]

We aim to set prices to allow WaterNSW to recover only the efficient costs of the services that it provides. Cost-reflective prices signal to consumers the costs of their consumption decisions and result in an efficient use and allocation of resources. However, we will also consider the potential impacts on customers of our pricing decisions.

Our review involves a sequence of steps. Each step involves making decisions on methods and key parameters. Key steps include:

- Establishing total efficient costs, or the notional revenue requirement (NRR). We use the **building block approach** to establish the NRR required by WaterNSW to provide its monopoly services over the determination period.
- Allocating the total efficient costs between water entitlement holders ('users') and the Government (on behalf of the broader community), based on the '**impactor pays'** principle.
- Assessing the **user share** of total efficient costs for each valley and then setting prices to recover the user share of costs for each valley.
- Establishing the forecast volume of **entitlement and usage** for each valley source to use as a basis of distributing the user share of the NRR for each valley.
  - We endeavour to set cost-reflective prices, so that the revenue raised through charges covers the user share of the NRR for each valley.
  - Water charges can be set so that revenue matches the user share of the NRR in each year of the determination period, or they can be set so that revenue matches the user share of the NRR on a present value basis over the determination period. These prices are called 'full cost recovery prices' (FCRP). We may choose to set prices below FCRP to mitigate impacts on customers.
  - The 'target revenue' is the amount of revenue we expect to be recovered through the prices we set. The share of target revenue as a percentage of the user share of the NRR is called 'the level of cost recovery'. The shortfall is funded by the Government as a Community Service Obligation (CSO). We evaluate the level of cost recovery and the amount of CSO, to establish the impact of our pricing decisions on WaterNSW.
  - We also set some charges on an incremental cost basis, such as meter service charges and miscellaneous charges.
- Undertaking bill analysis to evaluate the impact of our pricing decisions on water users.

[18] Section 15 of the IPART Act and the BWCOP are outlined in Appendix A.

1.4 How can stakeholders provide input to this review?

In undertaking this review, we will consult with stakeholders and conduct our own research and analysis. WaterNSW has provided a pricing proposal supported by detailed operating and capital expenditure forecasts.

Stakeholders will have opportunity to express their views by attending the public hearings and/or providing written submissions to this Issues Paper and our Draft Report. We will consider the comments received from all stakeholders before making our Final Determination and publishing our Final Report.

Table 1.1 sets out an indicative review timetable, and page iii explains how stakeholders can make submissions. We will publish submissions on our website after the submissions due date. We may not accept late submissions.

Table 1.1 Review timetable

Milestone	Date
Pricing Proposal from WaterNSW received	30 June 2016
Release IPART Issues Paper	13 September 2016
Public submissions due	17 October 2016
Public Hearing – Northern NSW - Moree	31 October 2016
Public Hearing – Sydney	7 November 2016
Public Hearing – Southern NSW - Coleambally	14 November 2016
Release Draft Determination and Draft Report	7 March 2017
Public Hearing – Sydney	4 April 2017
Receive submissions on Draft Determination and Draft Report	10 April 2017
Release Determination and Final Report	6 June 2017

Note: These dates are indicative and subject to change.

1.5 The structure of this issues paper

Our Issues Paper is structured as follows:

- Chapters 2 and 3 provide background and context for the review, as well as addressing the length of the determination
- Chapters 4 to 8 set out revenue requirement and costs
- Chapters 9 and 10 address the form of price control and price structures
- Chapter 11 focusses on the approach to sales forecasts
- Chapters 12 to 14 set out prices and price impacts
- Chapter 15 deals with cost recovery, and
- Chapter 16 addresses output measures.

1.6 List of issues for stakeholder comment

To help identify and clarify the key issues for this review, we seek comment on the following issues (which are discussed in this paper as per the listed page numbers). They are grouped according to the relevant section of this Issues Paper. Stakeholders are also welcome to raise any other issues they consider relevant to this review.

We will add sub-heading to this list in the next stage of production

Regulatory framework and services

1 Given we are obliged to follow the Water Charge Infrastructure Rules when setting prices in the Murray-Darling Basin valleys, are there issues where we should apply the same approach when determining prices for the three coastal valleys? 19

2 Are WaterNSW's proposed monopoly services for the 2017 Determination appropriate? 25

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Notional revenue requirement

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6 Is WaterNSW's approach to allocating indirect costs between its Greater Sydney and rural operations appropriate? 31

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9 Has WaterNSW's capital expenditure in Coastal valleys over the previous determination period been prudent? 49

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Form of regulation and price structures

Water sales and entitlement forecast

Proposed prices

Other charges

Impacts of prices

Other issues

2 WaterNSW's role and regulatory framework

In regulating WaterNSW's rural bulk water prices, IPART aims to set prices so they recover the costs incurred by WaterNSW in making available and supplying bulk water to extractive users. This chapter outlines the role of WaterNSW and describes its water storage and river operation activities. We also provide an overview of WaterNSW's general regulatory framework for its rural bulk water services and previous pricing determinations.

2.1 WaterNSW's role

WaterNSW was formed on 1 January 2015 under the *Water NSW Act 2014* (NSW), effecting a merger of the former Sydney Catchment Authority and the former State Water Corporation. WaterNSW is responsible for raw water supply and the development and delivery of raw water infrastructure solutions for rural NSW and the Greater Sydney area. This Issues Paper and price review applies to services provided by WaterNSW to rural customers. We recently completed a review for WaterNSW's prices for services provided to the Greater Sydney area - these prices took effect from 1 July 2016.

In rural NSW, WaterNSW maintains, manages and operates major infrastructure to deliver bulk water to licensed water users on the State's regulated rivers. There are about 6,300 customers in 14 regulated river systems. WaterNSW owns and operates 20 dams and more than 280 weirs and regulators to deliver water for town water supplies, industry, irrigation, stock and domestic use, riparian and environmental flows. It provides services to various customers including irrigation corporations, country town water supply authorities, farms, mines and electricity generators.[19]

The roles and responsibilities of WaterNSW are prescribed by the *Water NSW Act 2014*. Under Section 6 of the Act, WaterNSW is required to meet the following primary objectives:[20]

- capture, store and release water in an efficient, effective, safe and financially responsible manner
- supply water in compliance with appropriate standards of quality

19 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, pp 10-12.
20 *Water NSW Act 2014*, Section 6.

- ensure that declared catchment areas and water management works in such areas are managed and protected so as to promote water quality, the protection of public health and public safety, and the protection of the environment
- provide for the planning, design, modelling and construction of water storages and other water management works, and
- maintain and operate the works of WaterNSW efficiently and economically and in accordance with sound commercial principles.

It also has other objectives, including: to be a successful business; exhibit a sense of social responsibility towards the community and regional development; and conduct its operations in compliance with the principles of ecologically sustainable development.

WaterNSW is also responsible for the Fish River Water Supply Scheme (Fish River Scheme), which sources water from Oberon Dam and supplies bulk water to four major customers (EnergyAustralia, Lithgow City Council, Oberon Council and WaterNSW Greater Sydney) and approximately 240 smaller customers.

WaterNSW also recovers a portion of the NSW Government's contributions to the Murray Darling Basin Authority (MDBA) and the Border Rivers Commission (BRC) through its water prices. The MDBA and the BRC have responsibility for coordinating and managing water resource management activities as well as water storage and delivery-related activities where the issues involve more than one state, with the costs of managing and maintaining assets under these arrangements jointly paid for by the signatory states.

2.2 Regulatory framework

WaterNSW operates under the *Water NSW Act 2014*, which defines its functions and objectives. WaterNSW must also comply with the terms of its operating licence, which contains performance standards, reporting obligations and requirements imposed by relevant legislation.[21]

Concurrent to this price review, IPART is also conducting a review of WaterNSW's operating licence, and will recommend the terms and conditions of the new operating licence to the Minister[22] in May 2017, with the new licence to apply from 1 July 2017. Information on IPART's review of WaterNSW's operating licence is available on our website.[23]

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21 IPART audits WaterNSW's performance annually against the terms and conditions of the licence and reports the results to the portfolio Minister.

22 NSW Minister for Water.

23 http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Licensing_-_WaterNSW

WaterNSW provides services in the Murray-Darling Basin (MDB) and Coastal valleys. These operational areas are regulated under different legislation. The pricing of bulk water services to the MDB valleys as well as customers in the Fish River Scheme (other than Oberon and Lithgow councils) are regulated under:

- the *Water Act 2007* (Cth)
- the *Water Charge (Infrastructure) Rules 2010* (WCIR) made under section 92 of the *Water Act 2007*, and
- the ACCC's Pricing Principles for price approvals and determinations under the *Water Charge (Infrastructure) Rules 2010* of July 2011 (ACCC Pricing Principles).

The pricing of bulk water services to the three Coastal valleys and Oberon and Lithgow councils is regulated under section 11 of the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW) (IPART Act).

Up until 2014, IPART determined the charges that WaterNSW (then State Water) could levy for all its services, but in July 2014 the ACCC assumed responsibility and then set prices for the MDB valleys (from 1 July 2014 to 30 June 2017) under the *Water Act 2007* (Cth) and the Water Charge (Infrastructure) Rules 2010 (WCIR).

IPART retained responsibility for setting charges for customers in three coastal valleys of NSW (ie, Hunter, North Coast, South Coast) under the IPART Act, but after requests from WaterNSW, decided to defer determining prices until 30 June 2017.

In June 2015, IPART applied to the ACCC for accreditation under the WCIR to allow us to again set prices for WaterNSW's MDB valleys. In September 2015, the ACCC granted IPART accreditation, which officially commenced on 1 June 2016.

Under the conditions of our accreditation, we are obliged to follow the WCIR and the associated Pricing Principles when setting prices in the MDB valleys. IPART as the regulator will determine the regulated charges under rule 29 of the WCIR.

The WCIR and associated Pricing Principles differ from IPART's typical approach in a number of areas. For example, under the WCIR:

- the length of the determination is fixed at four years for WaterNSW
- the regulatory asset base (RAB) and the weighted average cost of capital (WACC) are calculated differently to our usual approach
  - the rules for including historical capital expenditure in the RAB are different (See Chapter 6)
  - the parameters we must use in determining the WACC differ from our usual approach (See Chapter 7)

- after setting indicative prices over the 4-year price path, prices can be reviewed and adjusted annually to account for actual water demand and changes in forecast demand
- the factors for considering the potential impacts of prices on customer bills differs from our approach
  - in setting prices for the MDB valleys, we are required to take into account the Basin Water Charging Objectives and Principles set out in schedule 2 of the Water Act (2007).

For certain issues, including those listed above, IPART will need to decide during the review whether to apply a uniform approach to all valleys (MDB and coastal), or to take a separate approach from the WCIR in the coastal valleys.

IPART seeks comments on the following

1 Given we are obliged to follow the Water Charge Infrastructure Rules when setting prices in the Murray-Darling Basin valleys, are there issues where we should apply the same approach when determining prices for the three coastal valleys?

2.3 Previous price reviews

There are two price determinations/decisions that are relevant to WaterNSW rural bulk water services:

- the current IPART Determination set prices for the MDB and Coastal valleys for the 1 July 2010 to 30 June 2014 period (the **2010 IPART Determination**)[24]
  - for the MDB valleys, this determination was replaced by the 2014 ACCC Decision (see below)
  - for the Coastal valleys, this determination is still in place
- the current ACCC Decision set prices for the MDB valleys for the period 1 July 2014 to 30 June 2017 (the **2014 ACCC Decision**).

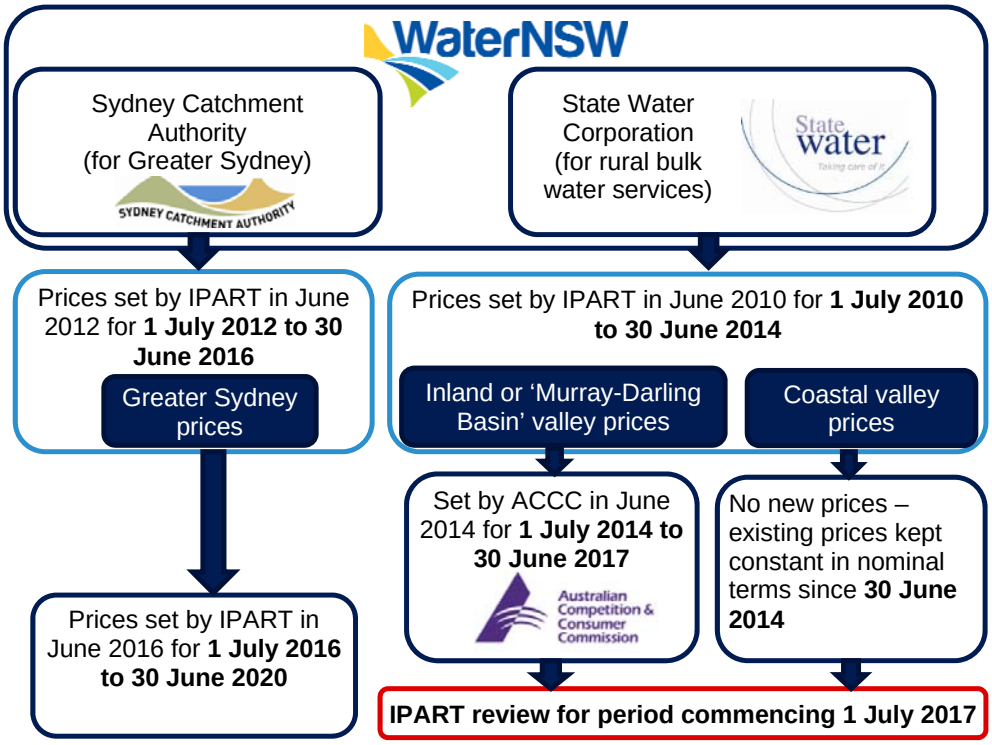
IPART has continued to have responsibility for the Coastal valleys' prices, but the commencement of the review of prices for the three Coastal valleys (and Lithgow and Oberon councils) from 1 July 2014 was deferred for three years following requests from WaterNSW (then State Water Corporation). Prices prevailing at 30 June 2014 in the Coastal valleys remained constant in nominal terms in 2014-15 and 2015-16, and will continue to do so in 2016-17.

IPART's accreditation under the WCIR means that, for this review, we will set prices for WaterNSW's rural bulk water services for all regulated river valleys (MDB and Coastal).

24 IPART, R*eview of Bulk Water Charges for State Water Corporation*, June 2010.

Figure 2.1 below outlines the sequence of pricing reviews for WaterNSW rural bulk water services and its Greater Sydney bulk water services.

Figure 2.1 WaterNSW's price regulation regime



2.4 Related price determinations

Other pricing determinations that are relevant to this WaterNSW rural price review are:

- WaterNSW's Greater Sydney 2016 Determination,[25] which set prices from 1 July 2016 to 30 June 2020 for WaterNSW's services previously provided by the Sydney Catchment Authority.
- Water Administration Ministerial Corporation (WAMC) 2016 Determination,[26] which set water management prices from 1 July 2016 to 30 June 2020.

The allocation of common costs across WaterNSW's Greater Sydney and rural operations will be an important issue for this review. In our review of prices for WaterNSW, we will determine the allocation of costs across WaterNSW's two businesses.

25 IPART, *Review of prices for WaterNSW Greater Sydney*, June 2016.
26 IPART, *Review of prices for the Water Administration Ministerial Corporation*, June 2016.

WaterNSW and WAMC serve water entitlement holders on regulated rivers (WAMC also serves entitlement holders on unregulated rivers and groundwater). WAMC is the resource manager, responsible for managing the water entitlement system (and ultimately protecting the property rights of entitlement holders).

Issues common to both the WAMC and WaterNSW reviews include:

- The approach to forecasting entitlement and water usage forecasts used to set prices on regulated rivers.
- The structure of water prices – WAMC also has valley-based pricing and two-part tariffs ($ per ML of water taken and $ per ML of water entitlement).
- Meter service charges – metering service charges are levied for users of WaterNSW owned meters on regulated rivers. DPI Water provides metering services to licence holders in unregulated rivers and groundwater sources for WAMC.

2.5 Review of Rural Water Charging Systems (2012)

In May 2012, the then NSW Government asked IPART to conduct a review into bulk water charges to:

- examine options for the billing of bulk water charges that might be better matched to business cash flows
- identify options for determining the NSW Government's cost share for bulk water charges in NSW, and
- make recommendations that will maintain the viable provision of services to customers, taking into account the potential impact of future pricing arrangements on customers, State Water Corporation (now WaterNSW) and the NSW Office of Water (WAMC).

Our Final Report in August 2012[27] included the following recommendations:

- regarding business cash flows:
  - provide regulated river customers the option to conditionally defer the payment of fixed charges, with interest, in times of low water availability
- regarding cost shares:
  - IPART to review the cost share ratios and activities prior to every second ACCC determination (ie, every 8 years), starting in 2017
- regarding the viability of costs to be recovered for State Water Corporation:
  - maintain the tariff structure of 40:60 fixed to variable
  - install a volatility allowance
  - maintain the rebate to large users (irrigation corporations).

[27] IPART, *Review of Rural Water Charging Systems*, August 2012.

The Government, in its response to our Review of Rural Water Charging Systems, generally agreed with our recommendations. Specifically, the NSW Government agreed with our recommendations to:[28]

- provide State Water and NOW regulated river customers the option to conditionally defer the payment of fixed charges, with interest, in times of low water availability
- request NOW to develop a conditional deferral of fixed charges policy for unregulated river customers
- maintain the existing tariff structure for State Water, however this was subject to State Water seeking to maintain its existing tariff structure if it could be maintained in a commercially sound manner allowing it to maintain a consistent level of services to customers
- maintain the approach to user cost shares, with IPART to review the cost share ratios and activities prior to every second ACCC determination (every 8 years)

We will take these recommendations and the reasoning behind them into account in our determination of the final charges for WaterNSW. We will also consider updated information and proposals from all stakeholders in making our decisions.

[28] NSW Government, *Response to the IPART Review of Rural Water Charging Systems*, 23 October 2012.

3 Services and length of determination

We start our review by making a decision on the scope of monopoly services provided by WaterNSW. These are the services for which we regulate prices. We then decide on the length of the determination period.

The following sections summarise WaterNSW's monopoly services and our approach to determining the length of the determination period.

3.1 WaterNSW's proposed monopoly services

The services subject to WaterNSW's pricing proposal are for the storage and delivery of bulk water and the making available of water (amongst other things) as provided under the *Independent Pricing and Regulatory Tribunal (Water Services) Order 2004* and section 4 of the IPART Act.

For the MDB valleys, we will set WaterNSW's prices under the WCIR. Under these rules, WaterNSW is a Part 6 operator. In determining charges for the valleys, we are required to have regard to whether the regulated charges would contribute to achieving the Basin Water Charging Objectives and Principles (BWCOP) of the Commonwealth Water Act 2007.[29]

WaterNSW manages and operates a range of water storage and delivery assets, including 20 dams and more than 280 weirs and regulators. It delivers water for town water supplies, industry, irrigation, stock and domestic use, and riparian and environmental flows.[30]

WaterNSW's proposed bulk water charges for its monopoly services include:

- **water charges**, for the storage and delivery of water, which:
  - are set on a valley basis
  - are comprised of two-part tariffs: $ per ML of water entitlement and $ per ML of water taken
  - for some valleys (ie, Border, Murray and Murrumbidgee), include the addition of MDBA and BRC costs

[29] Under the WCIR, a 'regulated charge' is defined as a charge of a kind referred to in paragraph 91(1)(a), (b) or (d) of the Water Act, subject to certain exclusions: see WCIR, rule 3(1).

[30] State Water Corporation, *Pricing application to the Australian Consumer and Competition Commission for regulated charges to apply from 1 July 2014*, June 2013, p 6.

- **metering service charges,** which are levied for users of WaterNSW owned meters on regulated rivers, and
- **six miscellaneous charges,** to recover the cost of non-routine services. These are discussed in detail in Chapter 13.

IPART's response

We will assess WaterNSW's proposed monopoly services for the 2017 determination period and determine which services are monopoly services for which we will set prices under the IPART Act 1992 (NSW) and the *Water Act 2007* (Cth).[31]

This will include an assessment of the expenditure under taken by the MDBA and BRC, which are cross-jurisdictional bodies that undertake certain water and infrastructure management functions within the Murray, Murrumbidgee and Border valleys.

In its 2014 Decision, the ACCC concluded that the recovery of these costs was a "regulatory obligation" for State Water as a result of a direction from the NSW Treasurer to State Water under section 59B of the *Public Finance and Audit Act 1983* (NSW) (PFA Act). The direction notified the then State Water that the NSW Treasurer required it pay to the Consolidated Fund, by way of dividend, certain amounts equal to the MDBA Costs.

WaterNSW states in its Pricing Proposal that it has been advised by DPI Water of the maximum charges the NSW Government requires WaterNSW to collect (in relation to the MDBA Costs) during the 2017-21 regulatory period (see Appendix D).[32]

WaterNSW anticipates that it will shortly receive a direction from the NSW Government to collect a certain proportion of the MDBA and BRC charges from customers.[33]

The explanatory text introducing the ACCC Pricing Principles on operating and capital expenditure assessments relevantly states as follows:[34]

> A regulator must not approve the regulated charges set out in a pricing application unless the regulator is satisfied that the total forecast revenue used to calculate those charges for each year of the regulatory period recovers the prudent and efficient costs of providing infrastructure services, including costs incurred in complying with regulatory obligations and requirements.

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31 Rule 29 of the WCIR specifies that the regulator must determine or approve "regulated charges" that are "reasonably likely to meet the prudent and efficient costs of providing infrastructure services."

32 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, p 17.

33 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, p 17.

34 ACCC, *Pricing Principles for Price Approvals and Determinations Under the Water Charge (Infrastructure) Rules 2010,* July 2011, p 40.

It is our view that under the legislative framework (the Water Act and the WCIR), if a direction is provided from the NSW Government to WaterNSW under section 59B of the PFA Act that directs WaterNSW to collect MDBA and BRC costs from customers, then IPART must allow WaterNSW to recover an amount equal to these costs from users.

In the absence of a direction, we will assess the MDBA and BRC costs to determine the prudent and efficient level of these costs and whether these costs should be recovered through WaterNSW's prices.

IPART seeks comments on the following

2 Are WaterNSW's proposed monopoly services for the 2017 Determination appropriate?

3 What further information should be provided to stakeholders in relation to Murray-Darling Basin Authority and Border Rivers Commission contributions?

3.2 Length of the determination period

An early step in a price determination is to determine the length of the price path. Under the current WCIR, the prescribed length of WaterNSW's subsequent determinations is four years. WaterNSW is proposing a 4-year determination period for MDB and coastal valleys.

We consider it is appropriate to align the price path for WaterNSW's MDB and coastal valleys, and that a 4-year price path is appropriate.

IPART seeks comments on the following

4 Is there is any reason why the price path for WaterNSW's Murray-Darling Basin and coastal valleys should not be aligned at four years?

4 WaterNSW's revenue requirement

WaterNSW has supported the continued use of the building block approach to derive its notional revenue requirement. It stated that it has prepared its revenue allowance using the building block approach.[35] However, WaterNSW has proposed to add additional building blocks for this determination, as well as treating MDBA costs as an uncontrollable cost pass-through. The building block approach to determining the revenue requirement, and WaterNSW's proposals, are discussed below.

4.1 The building block approach to determining the revenue requirement

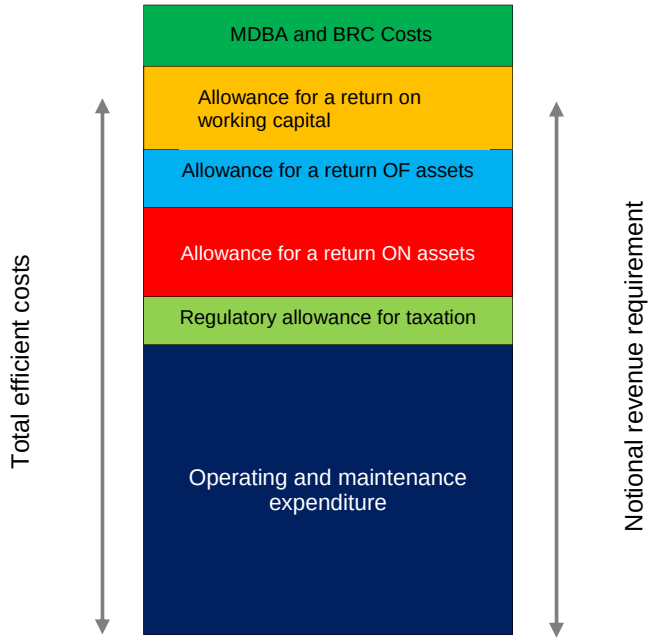
As is our standard approach, we plan to use the 'building block' method to calculate WaterNSW's revenue requirement over the determination period. The building block costs of service provision include:

- The **revenue required for operating expenditure** over the period, which represents our estimate of WaterNSW's forecast efficient operating, maintenance and administration costs.
- An **allowance for a return on assets** used to provide the regulated services, which represents our assessment of the opportunity cost of the capital invested in WaterNSW by its owner, and ensures WaterNSW can continue to make efficient investments in capital.
- An **allowance for a return of assets (regulatory depreciation),** which recognises the revenue needed to recover the cost of maintaining the RAB, because a water utility's capital infrastructure will wear out over time.
- A **regulatory allowance for tax,** which is needed under a post-tax rate of return model.[36]
- An **allowance for working capital**, which represents the holding cost of net current assets.

35 WaterNSW Rural submission to IPART, 1 July 2016, p 16.
36 IPART, *The incorporation of company tax in pricing determinations – Final Decision*, December 2011.

Normally, the sum of these amounts represents our view of WaterNSW's total efficient costs over the determination period, or its notional revenue requirement. However, for the 2017 Determination WaterNSW has proposed to include MDBA and BRC costs as a separate cost block for some valleys, as it argues that these costs are an unavoidable cost pass through and are outside its control. Figure 4.1 shows this revised approach with the MDBA and BRC cost block. WaterNSW has also proposed additional cost blocks to incorporate its costs of managing revenue volatility. We have not incorporated these in the diagram below as we will consider the appropriate approach to managing revenue volatility over the course of the determination.

Figure 4.1 Building block approach



Note: MDBA and BRC costs only apply to the Border, Murray and Murrumbidgee valleys.

We establish separate building block requirements and set prices for each valley. While prices recover the users' share of WaterNSW's full efficient costs for most valleys, the current water prices in the North Coast and South Coast valleys do not fully recover the users' share of WaterNSW's efficient costs of servicing these valleys. This under-recovery both reflects the high costs relative to water demand (and entitlements) and recognises the customer impacts of setting prices at full cost recovery.

4.1.1 WaterNSW's proposed revenue requirement

Table 4.1 shows WaterNSW's total proposed notional revenue requirement including MDBA costs. Relative to the current year (2016-17), WaterNSW's total notional revenue requirement is decreasing, despite higher MDBA costs.

Table 4.1 WaterNSW proposed notional revenue requirement ($2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	Total 2017-18 to 2020-21
Operating and maintenance	46,335	40,442	38,731	38,282	37,481	154,936
MDBA and BRC costs	14,638	19,383	15,204	14,714	14,780	64,081
Return of capital (depreciation)	16,093	15,141	16,043	16,826	17,459	65,469
Return on capital	34,327	27,167	28,576	29,606	30,403	115,752
Tax allowance	0	1,325	1,406	1,476	1,535	5,742
UOM allowance	1,104	1,147	1,147	1,147	1,147	4,587
ICD rebates	2,030	1,013	977	977	963	3,931
Total NRR	**114,527**	**105,618**	**102,084**	**103,027**	**103,769**	**414,498**

Note: We have included MDBA costs which were excluded from WaterNSW's proposed notional revenue requirement. 2016-17 figures are ACCC allowed amounts for MDB valleys or 2010 IPART Determination amounts held constant in nominal terms for the coastal valleys.

Source: WaterNSW Pricing Proposal June 2016; AIR June 2016; and IPART calculations.

Table 4.2 shows WaterNSW's proposed user share of notional revenue requirement for the 2017 Determination period, as well as the ACCC's allowance for 2016-17. The user share of costs is the costs that are funded by users through prices. The remainder of costs are funded by Government.

Table 4.2 shows that WaterNSW has significantly reduced its proposed user share of operating and maintenance costs compared to the ACCC's allowance for 2016-17. WaterNSW's proposed average yearly allowance for user share operating and maintenance costs over the 2017 determination period is 17.2% lower than the ACCC's allowance for 2016-17. By contrast, the proposed average MDBA and BRC costs over the same period are 9.4% higher than the ACCC's allowance for these costs in 2016-17. WaterNSW stated that it is required to collect a certain proportion of MDBA and BRC charges from customers. These charges are beyond its control and it has treated these charges as a cost pass-through.[37] Our proposed approach to considering MDBA and BRC costs in this review is discussed in Chapter 8.

[37] WaterNSW Rural submission to IPART, 1 July 2016, p 58.

Table 4.2 WaterNSW proposed user share notional revenue requirement ($2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	Total 2017-18 to 2020-21	Average 2017-18 to 2020-21	Average compared to 2016-17
Operating and maintenance	42,485	36,834	35,173	34,738	34,026	140,771	35,193	-17.2%
MDBA and BRC costs	14,638	19,383	15,204	14,714	14,780	64,081	16,020	9.4%
Return of capital (depreciation)	6,394	5,652	6,406	7,085	7,633	26,775	6,694	4.7%
Return on capital	12,186	10,507	11,689	12,737	13,539	48,472	12,118	-0.6%
Tax allowance	0	638	711	777	832	2,957	739	NA
UOM allowance	1,104	1,147	1,147	1,147	1,147	4,587	1,147	3.9%
ICD rebates	2,030	1,013	977	977	963	3,931	983	-51.6%
Total NRR	**78,838**	**75,173**	**71,308**	**72,173**	**72,921**	**291,575**	**72,894**	**-7.5%**

Note: We have included MDBA costs which were excluded from WaterNSW's proposed notional revenue requirement. 2016-17 figures are ACCC allowed amounts for MDB valleys or 2010 IPART Determination amounts held constant in nominal terms for the coastal valleys. MDBA and BRC costs include a smoothed recovery of costs not recovered in the ACCC's 2014 Decision.

Source: WaterNSW Pricing Proposal June 2016; AIR June 2016; and IPART calculations.

The change in user share notional revenue requirement from the previous decision or determination period is shown in Table 4.3 below.

Table 4.3 Change in user share notional revenue requirement from previous decision or determination ($2016-17)

	Annual average Proposed	Annual average previous decision/determination	Change
Border	2,214	2,373	-6.7%
Gwydir	5,411	5,283	2.4%
Namoi	5,674	5,585	1.6%
Peel	1,167	1,392	-16.1%
Lachlan	7,201	7,614	-5.4%
Macquarie	6,126	7,219	-15.1%
Murray	17,811	20,271	-12.1%
Murrumbidgee	13,047	15,874	-17.8%
Lowbidgee	629	597	5.5%
North Coast	1,017	934	8.9%
Hunter	4,067	5,581	-27.1%
South Coast	867	822	5.4%
Fish River	7,661	10,261	-25.3%
Total	**72,894**	**83,807**	**-13.0%**

Note: Annual average proposed is for the period 2017-18 to 2020-21. Annual average previous decision or determination is for the period 2014-15 to 2016-17 for all valleys except North Coast, South Coast and Hunter where the period is 2010-11 to 2013-14.

Source: IPART calculations.

We are seeking feedback from stakeholders on WaterNSW's proposed revenue requirement for the 2017 Determination.

IPART seeks comments on the following

5 Is WaterNSW's proposed user share revenue requirement for the 2017 Determination appropriate?

4.2 Allocating costs between WaterNSW's Greater Sydney and rural operations

WaterNSW's overall business comprises:

- the bulk water services supplied to rural customers, which is the subject of this review to set prices from 1 July 2017 (**WaterNSW's rural bulk water services**), and
- raw water services supplied to Sydney Water and customers in the greater Sydney region, which was subject to a separate price review in 2015-16, with new prices determined for the period 1 July 2016 to 30 June 2020 (**WaterNSW's Greater Sydney bulk water services**).

To determine the revenue requirement and prices for WaterNSW's rural bulk water services, we will review its proposed allocation of indirect costs (overhead or shared costs, such as corporate costs) between its rural and Greater Sydney operations.

WaterNSW's method for allocating overhead costs is as follows:

- identify total overhead within the period
- deduct from total overhead the amount of overhead to be capitalised - the remaining balance is termed net overhead
- split net overhead to the regions (divided overhead) - the split is 55% to Greater Sydney and 45% to rural valleys, and
- pro-rate regional divided overhead on the direct salary incurred per project relative to total salary costs.[38]

WaterNSW has stated that its cost allocation method complies with the ACCC Pricing Principles.[39] The ACCC's cost allocation requirements are set out in Box 4.1 below.

[38] WaterNSW Rural submission to IPART, 1 July 2016, p 67.
[39] WaterNSW Rural submission to IPART, 1 July 2016, p 66.

Box 4.1 ACCC cost allocation requirements

Charges are to be approved or determined on the basis of a cost allocation methodology that:

- identifies which costs arise from providing infrastructure services (to which regulated charges apply) and which costs arise from other activities undertaken by the operator
- attributes direct costs to the service to which they relate and not more than once to any category of service
- uses an appropriate allocator when a causal allocator for shared costs can be identified
- only uses a non-causal allocator for shared costs where those costs are immaterial or no causal relationship could be established without undue cost and effort, and
- allocates shared costs such that the full amount of those costs, no more or no less, is allocated to the services to which it relates.

Source: WaterNSW Rural submission to IPART, 1 July 2016, p 66.

We are seeking stakeholder feedback on WaterNSW's approach to allocating costs between its Greater Sydney and Rural operations.

IPART seeks comments on the following

6 Is WaterNSW's approach to allocating indirect costs between its Greater Sydney and rural operations appropriate?

4.3 Allocating costs between users and the community

Since IPART's 2001 Bulk Water Price Determination, WaterNSW (previously State Water Corporation) has operated under a framework that allocates its costs between water users and the broader community based on the impactor pays principle. Under the impactor pays approach, costs are allocated to different individuals or groups in proportion to the contribution that each individual or group makes to creating the costs (or the need to incur the costs). More information is provided in Appendix C.

Under this framework, water users' share of costs is recovered via prices, whereas the community's share is funded by the NSW Government. Table 4.4 below lists WaterNSW's proposed user shares of costs, by cost item or activity.

Table 4.4 WaterNSW's proposed user shares of operating and capital expenditures

Cost item or activity	User Share
Operating expenditure	
Customer Support Customer Billing, Metering & Compliance, Water delivery & Other Operations, Corrective Maintenance, Routine Maintenance, Asset Management Planning, Insurance	100%
Hydrometric Monitoring	90%
Flood Operations, Water Quality Monitoring, Dam Safety Compliance, Environmental Planning & Protection	50%
Dam Safety Compliance Capital Projects pre 1997	0%
Capital expenditure	
Asset Management Planning, Routine Maintenance, Structural and Other Enhancement, Corporate Systems, Office Accommodation Capital Projects, Information Management Projects, Water Delivery and other operations	100%
Renewal & Replacement	90%
Dam Safety Compliance, Environment Planning and Protection, Flood operations	50%
Dam Safety Compliance - Pre 1997 Construction	0%

Source: WaterNSW Rural submission to IPART, 1 July 2016, pp 68-70.

The proposed user shares in Table 4.4 are the same as those applied by the ACCC in its 2014 decision.[40] These cost share ratios were established in our 2006 Determination and have remained constant since that time.

However, the total expenditure for each activity to which these shares (percentages) apply generally changes to some extent over time, which means the total user share as a percentage of notional revenue requirement can also change over time. For the 2017 determination period, WaterNSW's proposed user share of its notional revenue requirement is 70% (including MDBA costs). This compares to the user shares of notional revenue requirement under the 2014 ACCC determination and the 2010 State Water determination of 62% and 60%, respectively.[41,42]

In 2012, the NSW Government asked IPART to conduct a review into bulk water charges to identify options for determining the NSW Government's cost share for bulk water charges in NSW. IPART recommended the continuation of the current approach to determining government cost shares, using the cost allocation ratios applied in the 2010 Determination until 1 July 2017. IPART recommended a review of the cost share ratios every second pricing determination.[43] WaterNSW stated that such a review is best conducted after the conclusion of this determination process.[44]

40 ACCC, *Final Decision on State Water Pricing Application 2014-15 to 2016-17,* Attachments, pp 17-18.
41 ACCC, *Final Decision on State Water Pricing Application 2014-15 to 2016-17,* Attachments, p 15.
42 IPART, *Review of Bulk Water Charges for State Water Corporation,* Final Report, June 2010, p 48.
43 IPART, *Review of Rural Water Charging Systems,* Final Report, August 2012, p 8.
44 WaterNSW Rural, *Submission to IPART,* 1 July 2016, p 70-71.

We will undertake a review of cost shares for this determination to ensure that they continue to accurately reflect the share of costs imposed by each party under the impactor pays approach.

We seek feedback from stakeholders on the appropriate user shares of cost items.

5 Operating expenditure

The allowance for operating expenditure within the notional revenue requirement reflects our view of the efficient level of operating costs WaterNSW will incur in providing its bulk water services over the 2017 determination period. These include, amongst others, the costs of labour, service contractors, energy, materials, plant and equipment.

This chapter outlines WaterNSW's actual operating expenditure over the 2010 and 2014 determination periods, and then discusses its proposed operating expenditure for the 2017 determination period and our preliminary response to this proposal.

All figures and discussion in this chapter exclude WaterNSW's contributions to the Murray-Darling Basin Authority (MDBA) and Border Rivers Commission (BRC). WaterNSW's MDBA and BRC costs and proposed charges are discussed in detail in chapter 8.

5.1 WaterNSW's actual operating expenditure has been lower than forecast

WaterNSW's actual operating expenditure has decreased since IPART's 2010 Determination and it is also lower than that in 2013-14, the first year of the ACCC's 2014 Decision.[45]

Total actual annual operating costs have declined by $2.9 million per year (or 6.8%) between 2010-11 and 2016-17. The user share component of operating costs has decreased by $3.0 million per year, or 7.5% over the same period. In 2016-17, the user share of operational expenditure is estimated to be 91%.

In its proposal, WaterNSW stated that its total actual operating expenditure has been consistently below that used to set prices by the ACCC in its 2014 decision, as well as IPART's 2010 determination.

[45] For comparison purposes, the operating expenditure in coastal valleys used to set prices in our 2010 Determination has been kept constant in nominal terms for the deferred years.

In the four years between 2013-14 and 2016-17, the cumulative user share of its actual operating expenditure will be $157.2 million, which is around $12.2 million (7.2%) less than the operating expenditure allowed for in IPART's 2010 Determination (for 2013-14) and the ACCC's 2014 Decision (for 2014-15 to 2016-17).

Table 5.1 shows WaterNSW's user share of operating expenditure relative to the allowances included in IPART's 2010 Determination and the ACCC's 2014 Decision. The operating costs for 2016-17 are forecast to be $6.09 million or 14.3% less than the allowed operating expenditure.

Table 5.1 WaterNSW user share of operating expenditure compared with IPART Determination and ACCC Decision ($ millions, $2016-17)

	2013-14[a]	2014-15	2015-16	2016-17	Total
Allowed	39.81	43.76	43.36	42.49	**169.42**
Actual	42.85	38.78	39.21	36.40	**157.24**
Difference	3.04	-4.98	-4.15	-6.09	**-12.18**
Difference %	7.6%	-11.4%	-9.6%	-14.3%	**-7.2%**

a Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have also held the allowance for operating expenditure for these valleys constant in nominal terms.

Note: Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for Murray-Darling Basin valleys is from the ACCC's 2014 Decision.

Source: WaterNSW Information Return to IPART, June 2016; IPART, *Review of bulk water charges for State Water Corporation – From 1 July 2010 to 30 June 2014,* June 2010, pp 78-79.

WaterNSW's information to IPART suggests that this lower operating expenditure than the determined allowance is due partly to:

- $1.9 million from savings arising from lower costs as a result of the merger with the former Sydney Catchment Authority
- $1.5 million due to lower demand related costs in the Fish River Water Supply.

5.2 WaterNSW forecasts lower operating expenditure

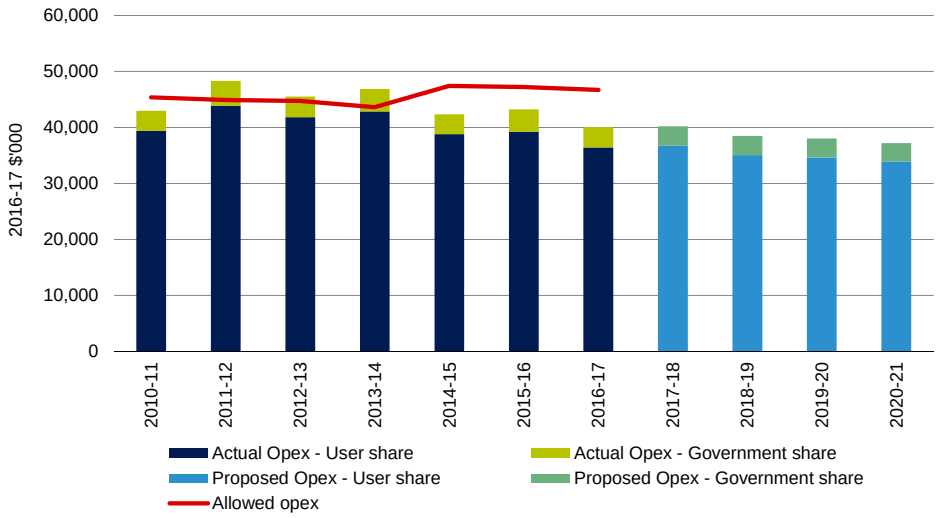
Total operating expenditure is declining

WaterNSW has proposed total operating expenditure of around $154 million over the four years of the 2017 determination period (see Figure 5.1).[46] This compares to actual operating expenditure of $172 million over the four years from 2013-14 to 2016-17. According to WaterNSW, it has realised significant savings from integration and restructure of the former State Water Corporation and Sydney Catchment Authority.

46 WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, p 95.

WaterNSW expects total operating expenditure to decline each year over the next four years. By 2020-21, WaterNSW forecasts that total annual operating expenditure will be $37.5 million, compared to its expenditure in 2015-16 of $43.2 million.[47]

Figure 5.1 WaterNSW's past and proposed operating expenditure ($2016-17)



Data source: WaterNSW pricing proposal and AIR, IPART calculations.

In its pricing proposal to IPART, WaterNSW attributes its forecast savings to a range of activities, including:[48]

- routine maintenance
- asset management planning
- hydrometric monitoring, and
- environmental planning and protection.

These savings are partially off-set by higher expenditure on:

- customer support and compliance
- water delivery and other operations, and
- corporate systems.

47 WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, p 97.
48 WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, Chapter 14 and WaterNSW AIR.

The user share of operating expenditure is forecast to be lower

In line with its proposed reduction in total operating expenditure, WaterNSW forecasts that the user share of those operating costs will also be lower.

Over the four years 2017-18 to 2020-21, WaterNSW's proposed user share of operating expenditure is $140.8 million.[49] This is around $16.5 million (10.5%) lower than the user share of actual operating expenditure over the four years to 30 June 2017,[50] and about $28.6 million (16.9%) less than the regulatory allowance for user share over the same period. This reduction will have a downward impact on prices (all other things being equal).

Table 5.2 below shows WaterNSW's proposed user share of operating expenditure in each year of the 2017 determination period, compared with its allowed and forecast user share of operating expenditure in 2016-17.

Table 5.2 WaterNSW's proposed user share of operating expenditure for the 2017 determination period ($ millions, $2016-17)

	2016-17[a]	2017-18	2018-19	2019-20	2020-21	Total
Allowed	42.49	-	-	-	-	
Forecast/Proposed	36.40	36.83	35.17	34.74	34.03	**140.77**
Difference	-6.09	-	-	-	-	
Difference %	-14.3%	-	-	-		

a Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have also held the allowance for operating expenditure for these valleys constant in nominal terms.

Note: Allowed expenditure is drawn from IPART's 2010 Determination for coastal valleys and from the ACCC's 2014 Decision for MDB valleys.

Source: WaterNSW Pricing Proposal, June 2016, p 99; IPART calculations.

WaterNSW's proposed user share of annual average operating expenditure over the 2017 Determination is around $7.3 million lower than the regulatory allowance of $42.5 million used to set prices for 2016-17.

Table 5.2 above shows WaterNSW proposes to reduce its actual user share of operating expenditure from $36.40 million in 2016-17 to $34.03 million in 2020-21. This is a reduction of 6.5% over the 4-year period.

WaterNSW states in its pricing proposal that, in the 2017 determination period, it will:

> …be a leaner organisation compared to its predecessor [State Water Corporation]. Our forecast operating expenditure at the end of the determination period will reach its lowest point in the 12 year period…[51]

49 WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, p 99.

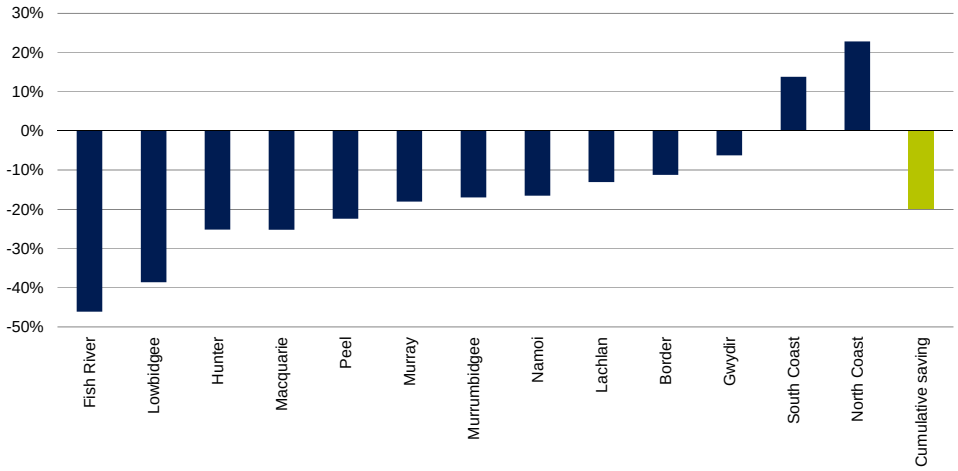
50 The "regulatory allowance" is the level of operating expenditure in the IPART (2010 Determination) for coastal valleys and the ACCC (2014 Decision) for MDB valleys used to set prices.

51 WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, p 96.

Operating expenditure is forecast to be lower in most valleys

WaterNSW's proposed total operating expenditure for 2020-21 is lower than the regulatory allowance for 2016-17 in most valleys. The exceptions are the North Coast and South Coast valleys, where WaterNSW proposes increases of around $138,000 and $92,000, respectively, between 2016-17 and 2020-21. Figure 5.2 shows WaterNSW's proposed distribution of total operating expenditure reductions between valleys. A similar pattern occurs for the user share of operating expenditure, with decreases for all valleys over the same period with the exception of the North and South Coast.

Figure 5.2 WaterNSW's proposed change in operating expenditure between regulatory allowance for 2016-17 and proposed 2020-21 (%)



Data source: WaterNSW's pricing proposal to IPART, June 2016, p 96.

The comparison between the regulatory operating expenditure allowance for 2016-17 and WaterNSW's proposed operating expenditure in 2020-21 is shown by valley in Table 5.3 below.

Table 5.3 WaterNSW's proposed change in operating expenditure between regulatory allowance for 2016-17 and 2020-21 ($'000s, $2016-17)

Valley	2016-17 allowed	2020-21 proposed	Change (%)
Border	1,344	1,175	-12.6%
Gwydir	3,866	3,728	-3.6%
Namoi	4,364	3,778	-13.4%
Peel	1,107	819	-25.9%
Lachlan	5,135	4,544	-11.5%
Macquarie	5,327	3,917	-26.5%
Murray	3,477	2,906	-16.4%
Murrumbidgee	7,167	6,075	-15.2%
Lowbidgee	564	354	-37.2%
North Coast	517	610	17.8%
Hunter	3,798	2,609	-31.3%
South Coast	550	625	13.7%
Fish River	5,269	2,885	-45.2%
Total	**42,485**	**34,026**	**-19.9%**

Source: WaterNSW's pricing proposal to IPART, June 2016, p 96; IPART calculations.

5.2.2 IPART's response on operating expenditure

While we welcome WaterNSW's proposed reductions in operating expenditure, we have not formed a view on the efficient level of operating expenditure we should include when setting prices over the 2017 determination period.

To inform our draft decision on WaterNSW's proposal, we will engage a consultant to review the efficiency of the proposed level of operating expenditure. This will involve examining whether the proposed expenditure is the best way of meeting customer needs for bulk water and related services.

In making our draft decision, we will also consider stakeholders' responses to this Issues Paper and the views and information provided at the public hearings.

In reviewing WaterNSW's proposal, we will particularly focus on the potential for further efficiency gains over the 2017 determination period. Given that operating costs make up almost half of WaterNSW's proposed revenue requirement (48.3% as set out in Chapter 4), setting prices based on the efficient level of operating expenditure is crucial.

IPART seeks comments on the following

7 Are WaterNSW's proposed operating costs over the 2017 determination period efficient, taking into account drivers of this expenditure and bulk water services delivered?

8 What scope is there for WaterNSW to achieve further efficiency gains over the 2017 determination period?

6 Capital expenditure

Under the building block method, there is no explicit allowance for capital expenditure in the notional revenue requirement. Instead, capital expenditure is added to the RAB and recovered through the allowances for a return on assets and regulatory depreciation (discussed in Chapter 8).

This chapter outlines WaterNSW's proposals on past and forecast capital expenditure and our preliminary response to these proposals.

6.1 Actual and forecast capital expenditure affect prices

Actual capital expenditure

The amount of capital expenditure added to the RAB may depend, in part, on whether we are setting prices under the WCIR or the IPART Act. Under the IPART Act, when rolling forward the RAB to the start of the new determination period, we only include in the RAB actual capital expenditure over the current determination period that we consider to be prudent. That is, we apply a prudence test to historical capital expenditure.

The prudence test assesses whether, in the circumstances that existed at the time, the decision to invest in the asset is one that the utility, acting prudently, would be expected to make. The test assesses both:

- the prudence of how the decision was made to invest, and
- the prudence of how the investment was executed (ie, the construction or delivery of the asset), having regard to information available at the time.

However, under the WCIR, we are required to include all historical capital expenditure in the RAB, where that capital expenditure has been on:

> …assets used by the operator to provide infrastructure services (net of actual customer and government capital expenditure contributions) in respect of each year of the preceding period.[52]

As such, in valleys where we set prices under the WCIR, we cannot make an adjustment to the RAB based on the prudence test.[53]

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52 *WCIR*, Schedule 2. See also *WCIR*, rule 29(2)(a),(3).

53 We are likely to be setting prices under the WCIR in all MDB valleys. However, the WCIR do not apply to WaterNSW's coastal valleys.

However, for actual capital expenditure in the three coastal valleys (which are subject to the IPART Act), we will review expenditure since 2009-10. Due to the deferral of the 2014 price determination in coastal valleys, this will include a review of the years from 2014-15 to 2016-17.

Forecast capital expenditure

For forecast capital expenditure, we will apply an efficiency test to WaterNSW's proposed capital expenditure for the 2017 determination period (forecast capital expenditure), for coastal and MDB valleys.

The efficiency test examines whether the proposed capital expenditure represents (over the life of the asset) the best way of meeting customers' needs, subject to the utility's regulatory requirements.

We will incorporate forecast prudent and efficient capital expenditure into the value of the RAB over the 2017 determination period, and then use this value in calculating the allowances for a return on assets and regulatory depreciation.

This chapter outlines WaterNSW's proposals on past and forecast capital expenditure and our preliminary response to these proposals.

6.2 WaterNSW's past and proposed capital expenditure

6.2.1 Past capital expenditure

Table 6.1 shows WaterNSW's actual user share of capital expenditure compared with the allowance in IPART's 2010 Determination (coastal valleys) and the ACCC's 2014 Decision (MDB valleys).

Table 6.1 WaterNSW user share of capital expenditure compared with IPART determination and ACCC decision ($ millions, $2016-17)

	2013-14[a]	2014-15	2015-16	2016-17	Total
Allowed	11.11	9.34	14.06	23.82	58.34
Actual	11.18	6.29	7.99	30.93	56.39
Difference	0.07	-3.05	-6.07	7.10	-1.95
Difference %	0.7%	-32.6%	-43.2%	29.8%	-3.3%

a Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have held the allowance for capital expenditure for these valleys constant in nominal terms since 2013-14.

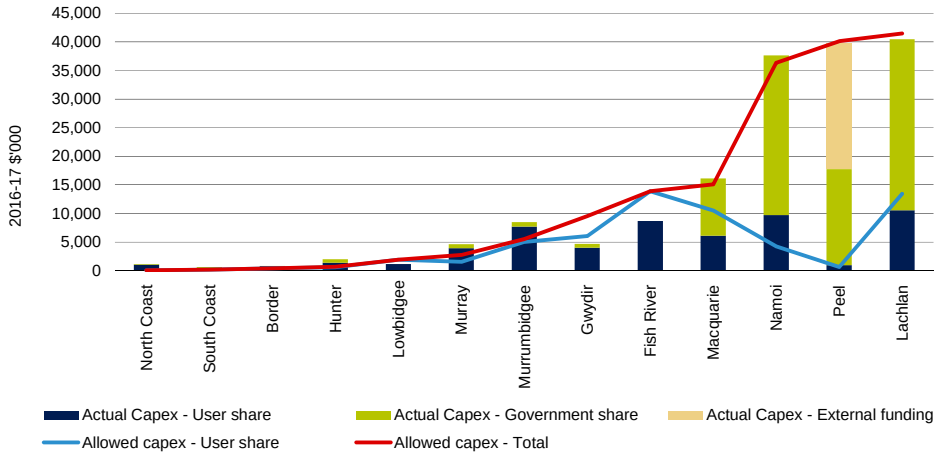
Note: Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for MDB valleys is from the ACCC's 2014 Decision.

Source: WaterNSW AIR to IPART, June 2016; IPART, *Review of bulk water charges for State Water Corporation – From 1 July 2010 to 30 June 2014,* June 2010, pp 97; ACCC, *State Water Corporation Post Tax Revenue Models,* June 2014.

Over the four years to 2016-17, WaterNSW underspent its allowance by 3.3%, or around $1.95 million.

WaterNSW's actual capital expenditure compared with the allowance in IPART's 2010 Determination (coastal valleys) and the ACCC's 2014 Decision (MDB valleys) on a valley basis is mixed. Figure 6.1 compares actual with the allowed capital expenditure over the four years to 2016-17 by valley.

Figure 6.1 WaterNSW's capital expenditure compared with IPART determination and ACCC decision ($2016-17)



Note: Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have held the allowance for capital expenditure for these valleys constant in nominal terms since 2013-14. Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for MDB valleys is from the ACCC's 2014 Decision.

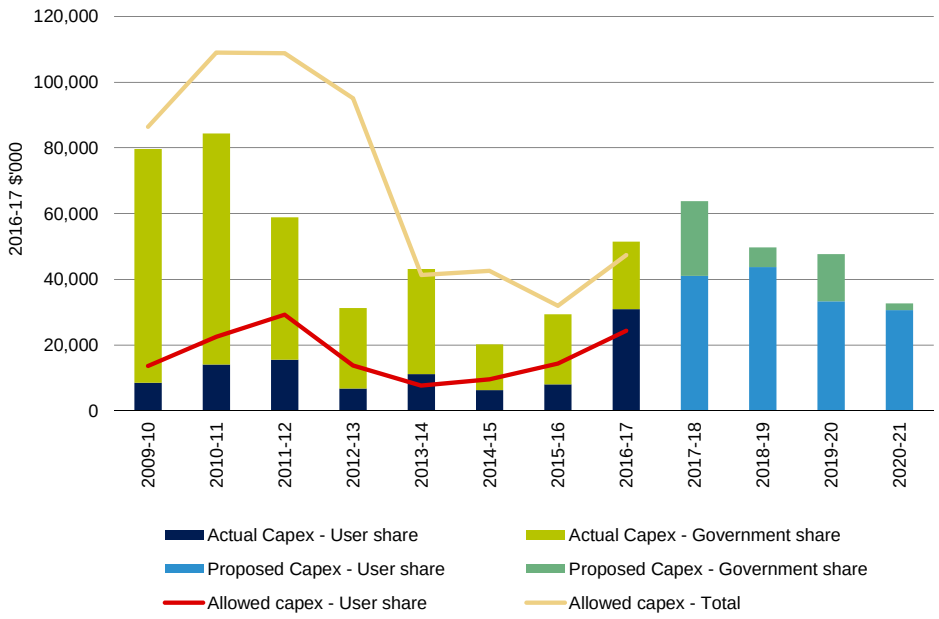
Data source: WaterNSW, Pricing Proposal, June 2016 and Annual Information Return; IPART calculations.

6.2.2 Forecast capital expenditure

WaterNSW has proposed total capital expenditure of $193.71 million over the period 2017-18 to 2020-21. On average, annual capital expenditure is $48.43 million.

WaterNSW's past and proposed total and user share of capital expenditure is shown below in Figure 6.2. This, along with a comparison of Table 6.1 and Table 6.2, shows that WaterNSW is proposing to increase its user share of capital expenditure. WaterNSW's actual user share of capital expenditure over the 4-year period of 2013-14 to 2016-17 was $56.4 million; compared to its proposed user share capital expenditure of $148.7 million over the upcoming 4-year period of 2017-18 to 2020-21. This is a 163.7% increase between the two periods.

Figure 6.2 WaterNSW's past and proposed capital expenditure ($2016-17)



Note: Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have held the allowance for capital expenditure for these valleys constant in nominal terms since 2013-14. Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for MDB valleys is from the ACCC's 2014 Decision.

Data source: WaterNSW, Pricing Proposal, June 2016 and Annual Information Return, June 2016 and IPART calculations.

WaterNSW's proposed user share capital expenditure of $148.68 million over 2017-18 to 2020-21 comprises 77% of its forecast total capital expenditure over this period (ie, a user share of 77%).

Table 6.2 WaterNSW's proposed user share of capital expenditure for the 2017 determination period ($ millions, $2016-17)

	2016-17[a]	2017-18	2018-19	2019-20	2020-21	Total
Allowed	23.82					
Forecast/Proposed	30.93	41.06	43.72	33.31	30.59	**148.68**
Difference	7.10					
Difference %	29.8%					

Source: WaterNSW Information Return to IPART, June 2016; WaterNSW pricing proposal, June 2016 and IPART calculations.

In the ACCC's 2014 Final Decision on Water NSW's prices, the ACCC approved a user share of capital expenditure of 49.8%.[54] WaterNSW's proposed user share of capital expenditure of 77% for the 2017 Determination period therefore represents a significant increase in the share of capital expenditure allocated to users.

WaterNSW identified the primary drivers of its capital program as:

- reduction of risk of asset related failure to the organisation, customers, and the community
- maintaining the required levels of service to customers
- reduction in health and safety related risks to our staff, customers and community, and
- reduction of risks associated with non-compliance with regulatory requirements.[55]

WaterNSW has also proposed a capital maintenance allowance over and above the depreciation of the RAB.[56] This would effectively provide WaterNSW with a fixed amount of revenue per annum for depreciation, as opposed to an assessment of the amount required over the determination for actual works based on need. We will assess WaterNSW's proposal with the assistance of our expenditure consultants.

WaterNSW comments that its capital expenditure program is primarily aimed at the renewal and replacement of assets that are used to collect, store and deliver raw water to customers. This is to ensure asset reliability and capability are properly maintained.[57] As such, users bear a high proportion of WaterNSW's proposed capital expenditure based on the impactor pays principle.

Capital expenditure is forecast to be higher for most valleys

WaterNSW's proposed total capital expenditure for the 2017 determination period is higher than the regulatory allowance in IPART's 2010 Determination (coastal valleys) and the ACCC's 2014 Decision (MDB valleys) over the four years to 2016-17 in most valleys.

The exceptions are the Peel and Lachlan valleys, where WaterNSW proposes a lower annual average capital expenditure of around $9.2 million and $4.9 million, respectively, over the 2017 determination period as compared to the allowed annual average capital expenditure for the four years to 2016-17. Figure 6.3 compares WaterNSW's proposed change in annual average total capital expenditure between valleys.

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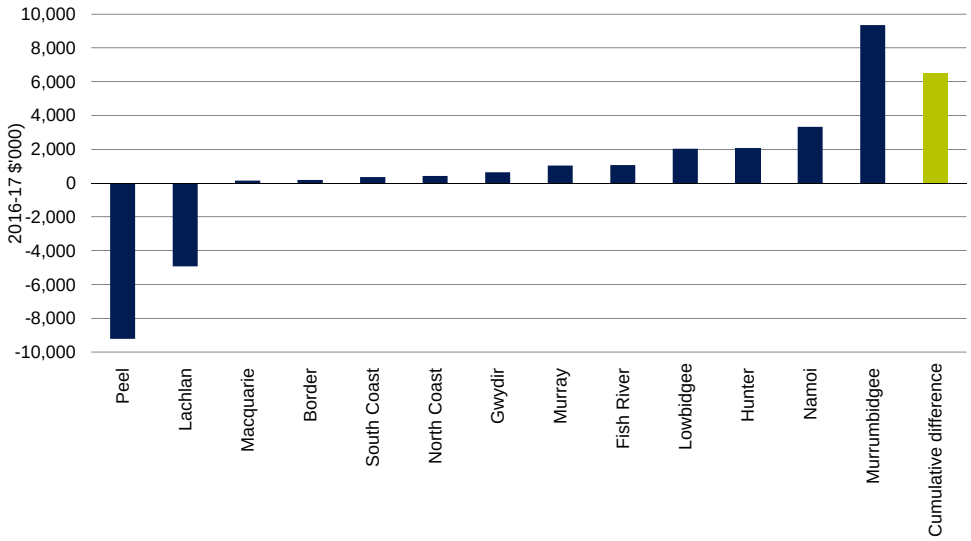
54 ACCC, *Final Decision on State Water Pricing Application 2014-15 to 2016-17,* June 2014, p 31.
55 WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, pp 80-94.
56 WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, pp 87-89.
57 WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, p 7.

Figure 6.3 WaterNSW's proposed change in total average annual capital expenditure between allowance for four years to 2016-17 and proposed over the 2017 determination period ($2016-17 '000)



Note: Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have held the allowance for capital expenditure for these valleys constant in nominal terms since 2013-14. Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for MDB valleys is from the ACCC's 2014 Decision.

Data source: WaterNSW, Pricing Proposal, June 2016 and AIR, June 2016 and IPART calculations.

The change in average capital expenditure relative to the average regulatory allowance for capital expenditure over the 2014 is set out by valley in Table 6.3 below.

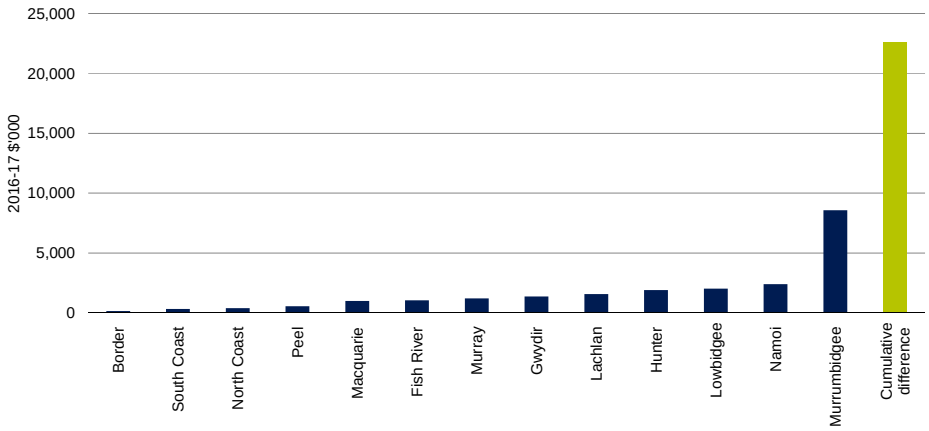
Table 6.3 WaterNSW's proposed average capital expenditure compared to regulatory allowance over four years to 2016-17 ($'000, $2016-17)

Valley	2016-17 allowed	2020-21 proposed	Change (%)
Border	100	267	167.2%
Gwydir	1,506	2,872	90.8%
Namoi	1,057	3,453	226.8%
Peel	153	717	367.7%
Lachlan	3,359	4,940	47.1%
Macquarie	2,622	3,634	38.6%
Murray	383	1,601	317.6%
Murrumbidgee	1,253	9,820	683.8%
Lowbidgee	476	2,506	426.8%
North Coast	12	410	3410.2%
Hunter	150	2,046	1262.6%
South Coast	41	366	796.4%
Fish River	3,473	4,538	30.7%
Total	14,584	37,170	154.9%

Source: WaterNSW, Pricing Proposal, June 2016 and AIR, June 2016 and IPART calculations.

While total proposed capital expenditure is increasing by 15% when compared to the past four years, the user share of capital costs is increasing by 155%. WaterNSW's proposed user share of capital expenditure for the 2017 determination period is higher than the regulatory allowance in IPART's 2010 Determination (coastal valleys) and the ACCC's 2014 Decision (MDB valleys) over the four years to 2016-17 in all valleys. Figure 6.4 compares WaterNSW's proposed change in annual average user share capital expenditure between valleys.

Figure 6.4 WaterNSW's proposed change in user share average annual capital expenditure between regulatory allowance for four years to 2016-17 and proposed over the 2017 determination period ($2016-17'000)



Note: Prices in coastal valleys have remained constant in nominal terms since 2013-14. For comparison purposes, we have held the allowance for capital expenditure for these valleys constant in nominal terms since 2013-14. Allowed expenditure in 2013-14 is from IPART's 2010 Determination; Allowed expenditure from 2014-15 for MDB valleys is from the ACCC's 2014 Decision.

Data source: WaterNSW, Pricing Proposal, June 2016 and Annual Information Return, June 2016 and IPART calculations.

IPART's response

To inform our decision in response to WaterNSW's proposal, we will engage an expert consultant to review the prudence of its past capital expenditure and the prudence and efficiency of its forecast capital expenditure. This will involve using the prudence and efficiency tests described above, where appropriate.[58]

We will also consider views and information provided by stakeholders in written submissions in response to this Issues Paper, and at the public hearings.

For this review, we are particularly interested in stakeholders' views on WaterNSW's proposed increase in the percentage share of capital expenditure allocated to users, and its proposal in relation to a capital maintenance allowance (in addition to its building block allowance for depreciation).

[58] We will not assess the prudence of WaterNSW's past (actual) capital expenditure in MDB valleys, if we are subject to the current WCIR rules.

IPART seeks comments on the following

9 Has WaterNSW's capital expenditure in Coastal valleys over the previous determination period been prudent?

10 Is WaterNSW's forecast capital expenditure for the 2017 determination period prudent and efficient?

11 Is WaterNSW's proposal to have a capital maintenance allowance in addition to its building block allowance for depreciation reasonable?

7 Return on assets, regulatory depreciation, taxation and other proposed building blocks

In addition to operating expenditure allowances, the building block model includes allowances for a return on assets, regulatory depreciation (or a return of its assets), taxation and return on working capital in determining WaterNSW's notional revenue requirement.

To calculate the allowances for a return on assets and regulatory depreciation in the revenue requirement, we need to determine three key inputs:

- the value of WaterNSW's RAB, which represents the economic value of the assets used to deliver the monopoly services
- the appropriate asset lives and depreciation method for WaterNSW's RAB, and
- the appropriate rate of return (eg, using the WACC) on WaterNSW's RAB.

The sections below discuss WaterNSW's proposals for these inputs, its proposed tax and return on working capital allowances, and our preliminary responses to these proposals.

In this chapter, we also outline and provide our preliminary responses to WaterNSW's proposed building blocks in relation to Irrigation Corporations Discounts (ICDs) and measures to manage its revenue volatility risk.

In the past IPART has included a revenue volatility allowance. WaterNSW's proposed allowance to purchase a risk mitigation product, which if adopted, may be included as an operational expenditure.

7.1 The value of the Regulatory Asset Base (RAB)

To determine the allowances for a return on assets and for regulatory depreciation, we will first calculate the opening value of WaterNSW's RAB at 1 July 2017. To do this, we will:

- review actual capital expenditure incurred for coastal valleys over the 2010 determination period, including for the three years that this review was deferred (2014-15 to 2016-17). This includes forecast expenditure for 2016-17
- include prudent and efficient capital expenditure for the coastal valleys over this period in the RAB, as is our usual practice, and

- include actual capital expenditure from the ACCC's 2014 Decision period for MDB valleys in the RAB, as this is required under the WCIR.

We will then calculate the value of WaterNSW's RAB[59] in each year of the 2017 determination period. To establish that value, we will roll forward the RAB by:

- including prudent and efficient capital expenditure
- making other necessary adjustments, including:
  - deducting any forecast capital contributions (for example, revenue received from government grants)
  - deducting regulatory depreciation[60]
  - deducting any forecast asset disposals
- indexing the annual closing RAB for actual inflation.[61]

WaterNSW's proposed opening and closing user share of its MDB RAB over the 2017 determination period and the percentage change in this since 2013-2014 is shown in Table 7.1 below. The opening RAB for 2017-18 is equal to the closing RAB for 2016-17.

Table 7.1 WaterNSW's proposed MDB user RAB ($2016-17, $000)

Valley	Opening RAB 2013-14[a]	Closing RAB 2016-17	Closing RAB 2020-21	Total change 2013-14 to 2020-21	% change 2013-14 to 2020-21
Border	2,952	3,472	4,227	1,274	43%
Gwydir	19,943	22,605	31,458	11,515	58%
Namoi	16,054	24,283	34,866	18,812	117%
Peel	3,827	4,509	6,825	2,998	78%
Lachlan	27,541	35,629	51,361	23,820	86%
Macquarie	25,065	29,156	40,756	15,692	63%
Murray	28,728	30,506	33,722	4,994	17%
Murrumbidgee	33,467	38,185	72,119	38,652	115%
Lowbidgee	0	1,129	10,840	10,840	100%
Fish River	76,383	79,422	92,004	15,621	20%
Total	233,960	268,897	378,177	144,217	62%

a The 2013-2014 RAB has been inflated to $2016-17 to enable comparison.

Source: WaterNSW pricing proposal to IPART.

59 The regulatory asset base (RAB) is our estimate of the economic value of a water utility's asset base.

60 We use regulatory depreciation, rather than actual depreciation.

61 We take this step because we use a real RAB (and real WACC). The ACCC does not index the RAB because it uses a nominal RAB (and nominal WACC). The real WACC excludes the inflation component.

WaterNSW's proposed opening and closing user share of its coastal RAB since 2009-2010 and over the 2017 determination period, and the percentage change in this since 2009-2010 is shown in Table 7.2 below. The opening RAB for 2017-18 is equal to the closing RAB for 2016-17.

Table 7.2 WaterNSW's proposed coastal valleys user RAB ($2016-17, $000)

Valley	Opening RAB 2009-10[a]	Closing RAB 2016-17	Closing RAB 2020-21	Total change 2013-14 to 2020-21	% change 2013-14 to 2020-21
North Coast	4,188	5,596	6,849	2,661	64%
Hunter	15,317	18,080	24,973	9,656	63%
South Coast	2,295	2,993	4,237	1,943	85%
Total	21,800	26,669	36,060	14,260	65%

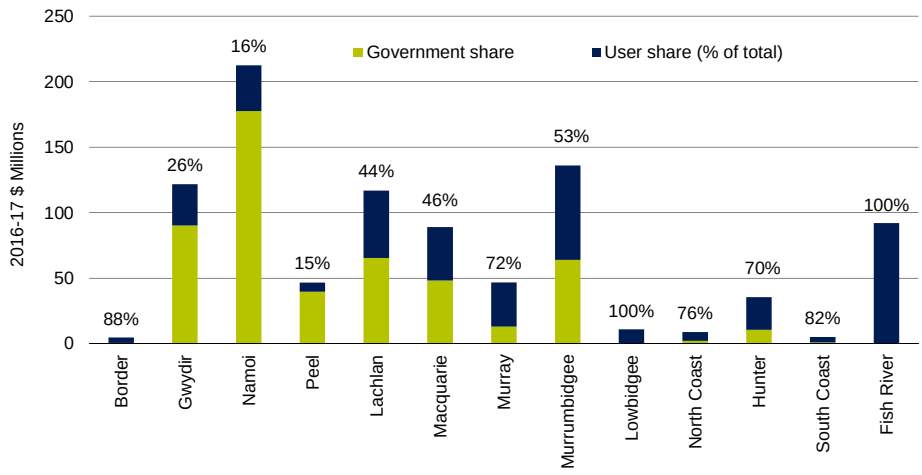
a The 2009-2010 RAB has been inflated to $2016-17 to enable comparison.

Note: Since the coastal valleys were not reviewed by the ACCC in the 2014 Decision, the relevant opening RAB for the coastal valleys for this review is from the 2010 IPART Determination.

Source: WaterNSW pricing proposal to IPART.

WaterNSW's proposed user and government shares of its closing RAB for the 2017 determination period (ie, its proposed RAB as at 30 June 2021) is shown in Table 7.1 below.

Figure 7.1 WaterNSW's proposed 2020-2021 user and government shares of its closing RAB ($2016-17)



Data source: WaterNSW pricing proposal and IPART calculations.

7.2 Rate of return

The revenue required for capital investment comprises 2 cost blocks: an allowance for a return on assets and an allowance for regulatory depreciation. To determine the allowance for a return on assets we need to decide on an appropriate rate of return. We then calculate the allowance for a return on assets by multiplying the rate of return by the value of the RAB in each year of the determination period.

Table 7.3 below sets out WaterNSW's proposed allowances for a return on total assets on a valley basis.

Table 7.3 WaterNSW's proposed return on assets by valley ($2016-17, $000)

Valley	2017-18	2018-19	2019-20	2020-21	Total
Border	137	142	150	157	587
Gwydir	3,855	3,909	3,937	3,932	15,633
Namoi	5,984	6,430	6,656	6,866	25,937
Peel	1,488	1,501	1,503	1,498	5,990
Lachlan	3,414	3,553	3,657	3,730	14,354
Macquarie	2,611	2,702	2,771	2,822	10,907
Murray	1,487	1,531	1,540	1,548	6,107
Murrumbidgee	3,555	3,845	4,088	4,292	15,779
Lowbidgee	69	148	229	304	750
North Coast	371	388	408	422	1,589
Hunter	1,409	1,497	1,600	1,677	6,183
South Coast	187	203	224	242	855
Fish River	2,600	2,727	2,842	2,912	11,080
Total	27,167	28,576	29,606	30,403	115,752

Note: The return on assets for the MDB valleys is calculated using a WACC which is different to that used for the coastal valleys. See the discussion below for further information.

Source: WaterNSW pricing proposal to IPART.

IPART's current approach to determining the WACC

To date, our standard approach when determining the rate of return has been to apply a real post-tax WACC to the RAB. We set our WACC range by choosing the midpoint of an estimate based on current parameters, and the midpoint of an estimate based on longer term averages. We then use a decision making framework to choose the point estimate of the WACC. We use an index of economic uncertainty (uncertainty index) to assess whether current economic conditions warrant a move above or below the midpoint of our WACC range. Our decision rule is that we consider a move from the midpoint if the uncertainty index is more than 1 standard deviation away from the mean. The uncertainty index and WACC decision rule improve the transparency and predictability of our WACC decisions.

We recently revised our approach for estimating the WACC's debt margin component, which we will now base on the RBA's method.[62]

WaterNSW has proposed a post-tax nominal WACC of 7.5% for its three coastal valleys over the 2017 determination period.

How the ACCC and IPART differ in determining the WACC

One of the conditions of our accreditation by the ACCC under the WCIR was that we apply the ACCC's *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010* (the ACCC Pricing Principles). These pricing principles set out the parameters we must use in determining the WACC for WCIR price determinations. These parameters differ from our standard approach set out above in the following ways.

- The WCIR WACC uses current market data to estimate the risk-free rate, whereas the IPART standard approach uses a midpoint of long-term average and current market data.
- The WCIR WACC uses a market risk premium of 6%,[63] which is an estimate of the long-term average. In contrast, IPART calculates the current market risk premium, which is 8.6%.

The combination of low current risk free rate and high current market risk premium means that the current nominal post-tax cost of equity (8.0%) is similar to the long-term average (8.6%). These two effects cancel each other out, to some degree, in the IPART standard calculation.

However, in the WCIR WACC calculation the low current interest rates are not compensated by the market risk premium. As a result, the WCIR WACC is presently lower than the IPART standard WACC by around 2%.[64]

In its submission, WaterNSW has proposed a post-tax nominal WACC of 5.9% for the MDB valleys.[65]

IPART's response

We will comply with the ACCC Pricing Principles in setting the WACC for the MDB valleys, while we are subject to the WCIR.

WaterNSW's proposed WACC in the MDB valleys is calculated in a manner that is consistent with the WCIR. The WACC value is 0.4% higher than the value that would be calculated based on July 2016 market data because the current risk free rate has fallen to 2.0%.

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62 IPART, *Fact Sheet - WACC – IPART's new approach to estimating the cost of debt,* April 2014.
63 WaterNSW, *Pricing Proposal for Rural Bulk Water Prices*, June 2016, p 78.
64 In a future high interest rate environment, this effect would be reversed, with WCIR WACC higher than the IPART standard WACC.
65 WaterNSW, *Pricing Proposal for Rural Bulk Water Prices*, June 2016, p 77.

For the Coastal valleys, we will have to decide whether we apply the same WACC methodology used for the MDB valleys, or maintain our standard approach.

Our preliminary view is that we will apply our standard approach in determining the WACC for the Coastal valleys. This is the approach we used in the recent determination of WaterNSW's prices for its Greater Sydney operations.

WaterNSW's proposed WACC for the Coastal valleys is calculated in a manner that is consistent with our standard approach. The WACC value is 0.5% higher than the value that would be calculated based on July 2016 market data because the current risk free rate has fallen by 0.8% since the February 2016 market update on which WaterNSW based its calculation. Our standard approach gives equal weight to current values (which have fallen) and long-term average values (which have remained about the same).

We will undertake further analysis before our draft decision.

IPART seeks comments on the following

12 Should we maintain our standard approach to setting the Weighted Average Cost of Capital (WACC) in the coastal valleys, or should we adopt the same approach as in the Murray-Darling Basin valleys?

13 What is an appropriate rate of return for WaterNSW's assets?

7.3 Regulatory depreciation

The return of capital allowance (regulatory depreciation) reimburses the water utility for the cost of the wear and tear of its assets. Depreciation is largely a function of the value assigned to the utility's assets (RAB) and the expected or assumed life of those assets. To calculate the allowance for regulatory depreciation, we first decide on a depreciation method and asset lives for new and existing assets.

Table 7.4 below sets out WaterNSW's proposed allowances for depreciation on a valley basis.

Table 7.4 WaterNSW's proposed depreciation by valley ($2016-17, $000)

Valley	2017-18	2018-19	2019-20	2020-21	Total
Border	75	80	86	92	334
Gwydir	2,116	2,206	2,281	2,333	8,936
Namoi	3,224	3,471	3,666	3,809	14,170
Peel	653	676	694	707	2,730
Lachlan	2,010	2,109	2,195	2,267	8,581
Macquarie	1,445	1,517	1,576	1,631	6,169
Murray	1,027	1,060	1,090	1,114	4,290
Murrumbidgee	2,827	2,994	3,148	3,287	12,256
Lowbidgee	30	61	93	123	307
North Coast	104	111	119	125	459
Hunter	388	427	469	503	1,787
South Coast	52	57	65	70	244
Fish River	1,190	1,272	1,344	1,398	5,204
Total	15,141	16,043	16,826	17,459	65,469

Source: WaterNSW pricing proposal to IPART.

Depreciation method

In previous determinations, we calculated the depreciation allowance based on the total RAB value and using a straight-line approach over the average life of the utility's assets. This means that the total value of an asset is recovered evenly over its assumed life.[66] We consider this method is superior to alternatives in terms of simplicity, consistency and transparency. The ACCC also uses the straight-line depreciation method.

WaterNSW has applied the straight-line depreciation method as the basis for calculating forecast depreciation.

We seek stakeholder's views on whether we should apply a different depreciation method.

[66] Under the straight-line depreciation method, the assets in the RAB are depreciated by an equal value in each year of their economic life, so that their real written down value follows a straight line over time, from the initial value of the asset to zero at the end of the asset's life.

Asset lives

In the 2010 State Water Determination, we used a standard current asset life of 160 years for existing assets and 75 years for new assets in calculating the depreciation allowances. In 2010, Atkins/Cardno reviewed State Water's proposed reduction in asset lives to 83 years, but it recommended maintaining them at current levels of 160 years for existing assets and 75 years for new assets, given uncertainties about the condition-based assessment of assets.[67]

The ACCC's 2014 decision on asset lives

Table 7.5 below lists the ACCC's decisions on WaterNSW's remaining economic asset lives in its 2014 Decision for WaterNSW's MDB prices. For remaining economic lives for assets, its decision ranges from 40.9 years in the Murrumbidgee to 63.6 years in the Peel.

Table 7.5 ACCC's decision on WaterNSW's remaining economic lives by valley as at 1 July 2014 (years)

Valley	Decision
Border	53.9
Fish River	46.6
Gwydir	59.2
Lachlan	45.7
Macquarie	56.0
Murray	46.5
Murrumbidgee	40.9
Namoi	53.9
Peel	63.6

Source: Attachments to ACCC *Draft decision on State Water Pricing Application*, 2014-15 – 2016-17, March 2014, Table 6-5, p 176.

For **existing assets** at 1 July 2014, the ACCC maintained a standard remaining asset life across all classes of asset. However, it determined different remaining asset lives for each valley. For **new assets** from 1 July 2014, the ACCC applied a different approach, setting different asset lives for each valley and class of asset.

In general, the ACCC considered the economic lives of WaterNSW's assets (new and existing) to be shorter than those previously determined by IPART. Its decision on standard economic lives for **new assets** ranges from 5 years for vehicles to 100 years for dams. For remaining economic lives for **existing assets**, its decision ranges from 40.9 years in the Murrumbidgee to 63.6 years in the Peel.

Table 7.6 shows the ACCC's decision on WaterNSW's asset lives for new assets by asset class.

[67] IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 - Final Report*, June 2010, p 101.

Table 7.6 ACCC's decision on WaterNSW's asset lives for new assets by asset class as at 1 July 2014 (years)

Asset class	Decision
Dams	100
Storage reservoirs	80
Revenue meters	15
IT systems	6
Plant & machinery	25
Office equipment	10
Buildings	60
Vehicles	5
Pipelines(a)	80
Land	n/a

Source: Attachments to ACCC *Draft decision on State Water Pricing Application*, 2014-15 – 2016-17, March 2014, Table 6-6, p 178.

WaterNSW's proposed asset lives

For **existing assets** as at 1 July 2017, WaterNSW's has broadly adopted the existing asset lives by valley as decided by ACCC in the ACCC 2014 Decision, and updated the estimates for actual capital expenditure during the 2014-17 period.

For **new assets** from 1 July 2017, WaterNSW has calculated the asset lives for new assets by valley, based on asset lives by activity and the proposed capital expenditure for that valley.

Table 7.7 below sets out WaterNSW's proposed average asset lives by valley, for both remaining and new assets, and for government and user shares.

Table 7.7 WaterNSW's proposed depreciation by valley ($2016-17, $000)

Valley	Remaining assets		New assets	
	User share	Government share	User share	Government share
Border	55	52	50	80
Gwydir	59	56	40	80
Namoi	58	57	31	100
Peel	64	72	41	92
Lachlan	48	55	60	83
Macquarie	55	56	58	80
Murray	44	42	56	80
Murrumbidgee	41	36	67	80
Lowbidgee	75	0	80	0
North Coast	74	77	62	80
Hunter	74	76	58	80
South Coast	74	81	68	80
Fish River	68	0	65	0

Source: WaterNSW pricing proposal to IPART, p 76.

IPART's response

We propose to continue to use the straight-line method to calculate WaterNSW's allowance for regulatory depreciation.

In relation to asset lives, our preference is to adopt the ACCC's approach and disaggregate **new** capital expenditure into asset classes and use different asset lives for each asset class.

As part of our price review our expenditure consultant will examine the appropriateness of the asset lives used to calculate regulatory depreciation.

IPART seeks comments on the following

14 Are there any reasons to depart from a straight-line depreciation method for calculating the allowance for regulatory depreciation?

15 Are WaterNSW's proposed lives for existing and new assets appropriate?

7.4 Allowance for tax

As we use a post-tax WACC to estimate the allowance for a return on assets in the revenue requirement, we also include an explicit allowance for tax, which reflects WaterNSW's forecast tax liabilities.

We calculate the tax allowance for each year by applying a 30% statutory corporate tax rate adjusted for gamma to the (nominal) taxable income.[68] For this purpose, taxable income is the notional revenue requirement (excluding tax allowance) less operating cost allowances, tax depreciation, and interest expenses. As part of calculating the appropriate tax allowance, the business is required to provide forecast tax depreciation for the determination period. Other items such as interest expenses are based on the parameters used for the WACC, and the value of the RAB.[69]

The tax allowance is one of the last building block items we calculate, due to its dependence on other items such as operating cost allowances and WACC parameters.

WaterNSW's proposed tax allowance

WaterNSW has proposed a tax allowance of around $1.4 million per year over the 2017 determination period[70]. Its calculation is consistent with our standard approach.

IPART's response

We will calculate WaterNSW's tax allowance for the 2017 determination period using our standard approach.

7.5 Allowance for working capital

The working capital component of our building block approach represents how much cash-at-bank is necessary for the regulated entity to meet its cash flow obligations. If timing assumptions used in setting the price are inconsistent with the recovery of revenue, an under or over recovery of working capital may occur.

The ACCC pricing principles state that it is appropriate for the regulator to allocate an explicit allowance for working capital to account for potential misalignment in expenditure and revenue.

WaterNSW states that it has adopted our methodology of calculating the working capital allowance based on a:

- 45-day payment term for accounts receivable, and
- 30-day payment term for accounts payable.

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68 Under a post-tax framework, the value of franking credits (gamma) enters the regulatory decision only through the estimate of the tax liability.

69 The nominal cost of debt is the sum of the nominal risk free rate and nominal debt margin.

70 WaterNSW, *Pricing Proposal for Rural Bulk Water Prices*, June 2016, p 107.

WaterNSW comments that these assumptions are consistent with our 2010 State Water Determination. The proposed working capital allowance is $0.22 million per year which is less than 1% of NRR.[71]

IPART's response

We will calculate WaterNSW's allowance for working capital for the 2017 determination period using our standard approach.

7.6 Irrigation Corporation Discounts

The Irrigation Corporations and Districts (ICDs) conduct activities that we have previously determined warrant rebates from charges in recognition of the:

- lower costs in delivering water to the ICDs, which largely relate to cost savings in billing and metering and some river operations activities
- system wide benefits of some of the river operations activities undertaken by the ICDs, which reduce WaterNSW's costs of running the overall system, and
- system wide benefits of some of the environmental and licensing information collected by the ICDs as part of their business operations.

Historically, the rebates have been calculated as the avoided costs of these activities and paid to the ICDs. The value of the rebate is collected from other users and passed through to the ICDs. While the size of the rebate does not affect WaterNSW's total revenue requirement, it affects the value of charges paid by all customers.

In the 2010 IPART Determination and the 2014 ACCC Decision, prices were set to generate enough revenue to recover the notional revenue requirement and the value of ICD rebates. However, in its proposal, WaterNSW has recognised the ICD rebate as a separate component of its notional revenue requirement. This means that the costs that WaterNSW would have incurred had it not been for the activities of the ICDs (or, in other words, the value of the ICD rebate) are counted as part of its total notional revenue requirement. The prices proposed by WaterNSW are set to recover this total amount of revenue (which is inclusive of the ICD rebate) which has the same effect as the approach taken in the 2010 IPART Determination and the 2014 ACCC Decision.

WaterNSW proposes to continue paying this rebate to the ICDs on an annual basis. It has calculated individual rebates based on:

- determining a per ML of entitlement cost for metering and compliance and customer support activities in relevant valleys (this represents the estimated cost savings to WaterNSW arising from the activities of ICDs), and

[71] WaterNSW, *Pricing Proposal for Rural Bulk Water Prices*, June 2016, p 108.

- applying this factor to the number of entitlements held by the irrigation corporation.[72]

Table 7.8 shows WaterNSW's proposed rebates for the upcoming determination period compared to those decided by the ACCC for 2016-17.[73] The rebate is paid directly to each Irrigation Corporation.

Table 7.8 Comparison of WaterNSW's proposed ICD rebates and rebates granted by the ACCC ($2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21
Jemalong	63,032	39,268	37,134	37,101	36,368
Murray Irrigation	926,340	553,805	535,961	535,776	529,003
Western Murray	32,368	17,098	16,547	16,541	16,332
West Corugan	51,408	30,506	29,523	29,512	29,139
Moira	25,687	14,218	13,760	13,756	13,582
Eagle Creek	9,060	23	22	22	22
Murrumbidgee Irrigation	649,655	248,547	238,815	238,713	235,025
Coleambally	285,096	109,864	105,562	105,517	103,887
Total rebates	**2,042,647**	**1,013,328**	**977,323**	**976,938**	**963,358**

Source: ACCC, *Final decision on State Water Pricing Application*, June 2014, p 65 and WaterNSW Pricing Proposal June 2016, p 109.

The rebates proposed by WaterNSW for the upcoming determination are significantly less than the rebates determined by the ACCC for 2016-17. The reduction between 2016-17 and 2017-18 is around 50%.

WaterNSW reports[74] that the reduction in ICD rebates is largely driven by a step change reduction in metering, compliance and customer billing operational expenditure compared to the 2014 ACCC Final Decision. According to WaterNSW, merger efficiencies have been the primary driver of these costs savings, which has led to a significant drop in the average cost per entitlement for these activities.

WaterNSW reports that other contributing factors include:

- a reduction in the number of entitlements held by an IC (eg, Eagle Creek); and
- a reduction in the proposed WACC, which has contributed to an overall reduction in telemetry installation avoided costs.

72 WaterNSW, *Pricing Proposal for Rural Bulk Water Prices*, June 2016, p 109.
73 ACCC, *Final Decision on State Water Pricing Application 2014*, p 65.
74 Personal communication with WaterNSW, 10 August 2016.

IPART's response

Our preliminary view is, in principle, to retain ICD discounts to reflect the costs savings that arise from the aggregation of many customers into a single WaterNSW customer. The IC's undertake activities such as billing, metering and compliance so that WaterNSW avoids these costs. The rebate allows the specification of a common price in each valley rather than a series of prices based on assessment of differential costs for each IC.

We have not formed a preliminary view on the scale of the proposed discounts. We will undertake a review of the calculation of the ICD's including the activity cost assumptions.

IPART seeks comments on the following

16 Should Irrigation Corporations and Districts receive rebates to reflect the avoided costs of the bulk water services they provide to their members?

17 Are the levels of Irrigation Corporation and District rebates proposed by WaterNSW reasonable?

7.7 Addressing the risk associated with revenue volatility

A large portion of WaterNSW's revenue is currently tied to water sales

In most valleys, WaterNSW's prices are currently set to recover 40% of its revenue from its fixed charge ($ per ML of entitlement) and 60% from its usage or variable charges ($ per ML of water taken or 'sold'). Under this structure, if the forecast water sales (take) volumes we use to set prices over the 2017 determination period match actual sales over this period, WaterNSW will receive revenue equal to its notional revenue requirement. However, if actual water sales volumes are less (greater) than forecast, WaterNSW will under-recover (over-recover) relative to its notional revenue requirement.[75]

Forecasting WaterNSW's water sales is difficult

There is a high likelihood of some material difference between forecast water sales at the start of a regulatory period and WaterNSW's actual sales over the period. This is because climatic conditions are difficult to predict, and climate is a key driver of WaterNSW's available supply and the demand of its customers. In total, between July 2010 and June 2014, bulk water sales were 3% below the cumulative forecast of our 2010 Determination.

[75] The same applies for water entitlement volumes. However, entitlement volumes are usually easier to forecast and subject to less volatility than water sales forecasts.

The implications of sales volatility depends on the relationship between price structure and cost structure

The financial consequence of WaterNSW selling less or more water than forecast depends on the relationship between its price structure and its cost structure. If its fixed and usage prices are exactly aligned with its fixed and marginal costs, WaterNSW will be financially indifferent to how much water it sells. This is because for every additional unit of water it sells (or does not sell), it will receive revenue (avoid costs) equal to its marginal cost of supply.

WaterNSW's current price structures combined with the difficulty in forecasting water sales subject it to risk from sales volatility

WaterNSW's price structure is not aligned to its cost structure. Its price structure is currently 40% fixed and 60% variable; whereas it is largely a fixed cost business (WaterNSW argues that its costs are close to 100% fixed[76], and the fixed costs of similar businesses in Australia comprise around 90% to 95% of total costs).[77] This means that while its revenue will vary with water sales, it costs will not – which means there is scope for under and over-recovery of costs.

This, combined with the difficulty in forecasting WaterNSW's water sales, can subject it to some financial risk.

This risk has been previously recognised by IPART and the ACCC

IPART's 2010 Determination

In our 2010 Determination, we acknowledged the 40:60 fixed to variable price structure we set created a risk for WaterNSW (then State Water Corporation). As such, we established a revenue volatility allowance to allow WaterNSW to recover the holding costs for bearing revenue volatility risk on behalf of customers.[78]

We included the revenue volatility allowance as an annual building block cost item in WaterNSW's revenue requirement.[79] The total annual revenue volatility allowance was around $2.6 million per annum (3.7% of the mean annual NRR) in real terms.[80]

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76 WaterNSW pricing proposal to IPART, June 2016, p 35.

77 INDEC, *Qualitative Framework and Assessment of Fixed and Variable Cost Drivers, Draft Final Report*, October 2011, p viii; Goulburn-Murray Rural Water Corporation, *Submission to Price Review 2016*, September 2015, p 68.

78 In a commercial environment, firms may choose to insure against the risk of revenue volatility and incorporate the insurance cost into prices.

79 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 43.

80 See IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 58, for an outline of the approach used to calculate a volatility allowance.

The volatility allowance did not reduce the level of revenue volatility faced by WaterNSW, neither did it compensate it for actual variations in water sales over the determination period. Rather, it provided a premium to prices in the long run, which reflected the long-term expected economic costs of bearing volatility risk.

ACCC's 2014 Decision

In its 2014 decision, the ACCC maintained WaterNSW's price structures at 40:60 fixed to variable.[81] However, rather than including a revenue volatility allowance as a separate building block cost item, it introduced two mechanisms to reduce the revenue risks in MDB valleys:

- an annual adjustment to prices, which is based on updated sales forecasts (annual reviews are discussed in more detail in Chapter 9), and
- an unders and overs mechanism (UOM).

The UOM uses an unders and overs account, which is a running balance of annual differences between actual and target revenues. An allowance is calculated using the overs-and-unders balance multiplied by WaterNSW's WACC. During the determination period, if the balance contains a surplus, charges in the next year will be reduced by the allowance (the surplus multiplied by the WACC). If the UOM balance is a shortfall, charges in the next year will increase. This UOM means prices reflect the holding cost of the account balance.

In its pricing proposal, WaterNSW states that at 1 July 2016, its unders and overs account balance is -$19.5 million. This represents the total revenue shortfall caused by lower than forecast water sales since 1 July 2014. When multiplied by the WACC, the UOM allowance adds $1.1 million to the NRR used to calculate prices across the 8 valleys with a shortfall in the UOM balance.

The UOM impact in 2016-17 is shown in Table 7.9 below.

[81] ACCC, *Draft Decision on State Water Pricing Application: 2014-15 – 2016-17 – attachments*, March 2014, p 214.

Table 7.9 UOM allowance by valley as at 1 July 2016 ($'000)

Valley[a]	Current balance	UOM allowance (balance x WACC)	% impact on 2016-17 prices
Border	-1,033	60	+4%
Gwydir	-2,432	142	+3%
Namoi	-3,039	177	+3%
Lachlan	-1,705	99	+1%
Macquarie	-5,376	313	+4%
Murray	-672	39	+1%
Murrumbidgee	-676	39	0%
Fish River	-4,579	267	+3%
Total	**-19,511**	**1,136**	

a We did not include a UOM in our 2010 price determination. As such, there is no current UOM impact on prices in the three coastal valleys.

Note: The UOM does not operate in the Peel (which was price capped) and Lowbidgee valleys (100% fixed charges).

Source: WaterNSW pricing proposal to IPART, June 2016, p 36.

WaterNSW's proposal

Maintain the UOM

WaterNSW proposes to maintain the UOM. However, it argues that the UOM does not materially reduce revenue volatility and that the WACC is not a fair reflection of the holding cost of a negative UOM balance. It states that it:

> …cannot be expected to raise additional funds cheaply due to the indeterminate period of any source of finance.[82]

Conversely, it also argues that due to the variable balance in the UOM account, the return that it can earn on that balance is *lower* than the WACC.

Due to the indeterminate period, a reasonable expected return on the UOM balance will be at the short-term risk free investment rate.

WaterNSW proposes that from 2017-18, the annual adjustment to the UOM balance should take into account its proposed risk transfer product (see below). In valleys where the UOM would apply, this would mean that only 20% of total revenue is subject to variability.

An risk mitigation allowance

As the UOM does not materially reduce revenue volatility, WaterNSW has proposed to purchase a risk-share product from a third party, which would enable WaterNSW to reduce its revenue volatility exposure. This risk transfer product (RTP) would replicate an 80:20 fixed to variable price structure. This

82 WaterNSW pricing proposal to IPART, June 2016, p 38.

would effectively fix 80% of WaterNSW's revenue, with only 20% of its revenue therefore subject to volatility. However, this RTP would come at a cost.

WaterNSW has proposed to purchase an RTP, as it argues that the UOM does not adequately compensate it for the costs it is exposed to resulting from revenue volatility.[83]

The RTP would work in a similar fashion to an insurance policy. WaterNSW would pay an annual premium to a third party, which would take on the risk of revenue variability of 40% of revenues. WaterNSW would receive a fixed payment in return. The third party would gain or lose depending on actual water sales in any year.

WaterNSW has included an estimate for the premium, which it proposes would be passed through to customers in each valley, based on the revenue volatility of that valley. The revenue volatility for each valley is based on the mean absolute deviation of usage revenue from the prior 20-year period.

The preliminary estimate represents, in total, around an additional 5% per annum[84] on the user share of WaterNSW's notional revenue requirement. The annual cost of the premium in each valley would be entirely borne by general security customers.

WaterNSW also suggests that customers may choose to pay a RTP premium and maintain a 40:60 fixed to variable tariff structure, or choose to move to an 80:20 fixed to variable tariff structure and avoid the additional costs of the RTP premium. This approach would require an agreed methodology for deciding which choice customers have made in each valley.

The relative indicative cost of WaterNSW's proposed RTP over the 2017 Determination is shown by valley in Table 7.10. It shows that there is considerable variability in the volatility cost among valleys, with the cost in the Lachlan and Macquarie valleys accounting for over 10% of each valley's notional revenue requirement due to the high volatility of water sales experienced by these valleys.

83 WaterNSW pricing proposal to IPART, June 2016, pp 37-38.

84 Total across all valleys is 5%. Valley by valley percentages vary in line with each valleys volatility as shown in Table 7.10.

Table 7.10 Proposed volatility cost over 2017 Determination period by valley included in prices (2016-17 $'000)

Valley	% of user share NRR
Border	3.5%
Gwydir	8.9%
Namoi	8.9%
Peel	7.2%
Lachlan	11.6%
Macquarie	10.1%
Murray	2.3%
Murrumbidgee	4.0%
Lowbidgee	0.0%
North Coast	0.0%
Hunter	2.1%
South Coast	0.0%
Fish River	0
Total	5.0%

Note: The volatility cost is not included in the North Coast and South Coast valley (which are price capped) and Lowbidgee valleys (100% fixed charges).

Source: WaterNSW pricing proposal to IPART, June 2016, p 41.

IPART's response

As outlined above, we recognise the risk facing WaterNSW under a 40:60 fixed variable price structure.

We also support, in principle, the concept of trading risk to a third party more willing to take that risk on, at a market tested cost. However, we have not formed a preliminary view on WaterNSW's RTP proposal.

We will consider whether all elements of WaterNSW's proposal to mitigate risk are warranted – ie, annual adjustments to prices based on updated sales forecasts, a UOM, and an allowance in the notional revenue requirement for the RTP.

We will also consider the optimal distribution of risk between WaterNSW and its customers, the most efficient mechanisms for WaterNSW to manage volatility arising from its current price structure, and the pros and cons of alternative price structures (discussed in Chapter 10).

IPART seeks comments on the following

18 Under current price structures, what measures should be used to manage risk (positive and negative) to WaterNSW?

19 What rate should be applied to the Unders and Overs Mechanism (UOM) account?

20 Should an UOM be introduced for users in the Peel Valley?

21 What implications, if any, should WaterNSW's proposed risk transfer product (RTP) have for the Unders and Overs Mechanism and the annual adjustment to prices (and vice-versa)?

22 Should water users pay for WaterNSW's purchase of a risk transfer product?

23 Would water users be willing to move to an 80:20 fixed to variable price structure if they saved on the cost of a risk transfer product (or a similar means of managing risk to WaterNSW of revenue volatility)?

8 Pass through charges: BRC and MDBA charges and Yanco Creek levy

WaterNSW has identified three charges based on costs which from its perspective are 'uncontrollable' costs, which are passed through to relevant customers. These charges are:

- Dumaresq-Barwon Border Rivers Commission **(BRC) charge** in the Border valley between Queensland and NSW.
- Murray-Darling Basin Authority **(MDBA) charge** that is levied on customers in the Murray and Murrumbidgee valleys.
- The **Yanco Creek levy**, which is levied on a sub-set of customers within the Murrumbidgee valley.

The Essential Services Commission (ESC) in its price review of Goulburn-Murray Water in Victoria included an MDBA Contribution, an ESC Licence Fee and an Environmental Contribution as non-controllable operating expenditure items.[85]

The costs associated with each charge can be passed through to customers as a fixed charge ($ per entitlement) or split between fixed and variable charges ($ per ML of usage), eg, aligned with the WaterNSW proposed 40:60 fixed to variable charge ratio. In this chapter, we outline the proposed charges, the cost estimates underlying each and the proposed charging structure.

8.1 BRC and MDBA costs

The MDBA and the BRC are cross-jurisdictional bodies that co-ordinate and manage water resource management and bulk water activities from a 'whole of system' perspective.

The BRC was established by the NSW and Queensland Governments to operate and maintain jointly 'owned' water infrastructure and implement agreed water sharing arrangements in the Queensland-NSW border region.

The MDBA operates the River Murray system in the southern Murray–Darling Basin which includes dams, weirs, locks, environmental works and salt interception schemes.

[85] Essential Services Commission, *Price Review 2016: Goulburn-Murray Water – Final Decision*, p 22.

The costs of construction, operation and maintenance of assets under the MDBA's and BRC's arrangements are jointly paid for by the signatory States. The costs are then allocated to each State in a proportion defined under the terms of the agreement. The NSW Government pays the NSW share of these costs to the MDBA and the BRC.

The BRC's activities, and hence the contributions to them, apply in the Border valley while the MDBA's activities are undertaken in the Murray and Murrumbidgee valleys. WaterNSW's prices are regulated under the WCIR in these three valleys.

During the 2014 ACCC Decision, the NSW Treasurer issued a direction to State Water under section 59B of the *Public Finance and Audit Act 1983* (NSW) (PFA Act) to pay to the Consolidated Fund, by way of dividend, amounts equal to the BRC and MDBA costs.

In its 2014 Decision, the ACCC concluded that the recovery of these costs was a "regulatory obligation" for State Water as a result of a direction from the NSW Treasurer to State Water and allowed these costs to be passed directly through to customers.[86]

In its pricing proposal for rural bulk water charges, WaterNSW has incorporated the BRC and MDBA costs in the information it has submitted based on advice from DPI Water.[87]

At the time of publication, WaterNSW had not yet received a direction from the Treasurer under the PFA Act for the 2017 determination period. However, it does anticipate receiving such a direction.[88]

8.1.1 Forecast BRC and MDBA costs

WaterNSW has included forecast BRC and MDBA costs for users of around $61.65 million over the four years of the 2017 determination period (Figure 8.1 and Table 8.1). This equates to an average annual amount of $15.41 million.

The average annual BRC and MDBA allowed costs under the ACCC Decision was $13.72 million over the three years, 2014-15 to 2016-17 (see Table 8.1).

The annual user share of BRC costs is proposed to decrease by 4.5% compared to that allowed in the 2014 ACCC Decision. The proposed MDBA costs are increasing by 13.3% when compared to the average annual allowed costs in the 2014 ACCC Decision.

86 ACCC, *Final decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014, p 9.
87 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 17.
88 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 17.

Table 8.1 WaterNSW user share of BRC and MDBA costs compared with 2014 ACCC Decision ($ '000, $2016-17)

	2014-15	2015-16	2016-17	Total
Allowed				
BRC	744	744	744	2,233
MDBA Murrumbidgee	2,446	2,446	2,233	7,124
MDBA Murray	10,845	11,058	9,888	31,792
Total	**14,035**	**14,248**	**12,865**	**41,148**
Actual				
BRC	445	796	996	2,237
MDBA Murrumbidgee	2,631	2,074	2,455	7,160
MDBA Murray	12,300	8,452	11,187	31,939
Total	**15,376**	**11,321**	**14,638**	**41,336**
Difference	1,341	-2,926	1,773	188
Difference %	9.6%	-20.5%	13.8%	0.5%

Note: The 'actual' figures for 2016-17 are the projected amounts under the recent ACCC annual price review 2016-17. The amounts contain a 'catch up' component to recover the under-recovery of the previous year.

Source: WaterNSW, Annual Information Return to IPART, June 2016. ACCC, Annual review 2016-17.

WaterNSW has received advice from DPI Water that the maximum amount of these costs will be as shown in Table 8.2.

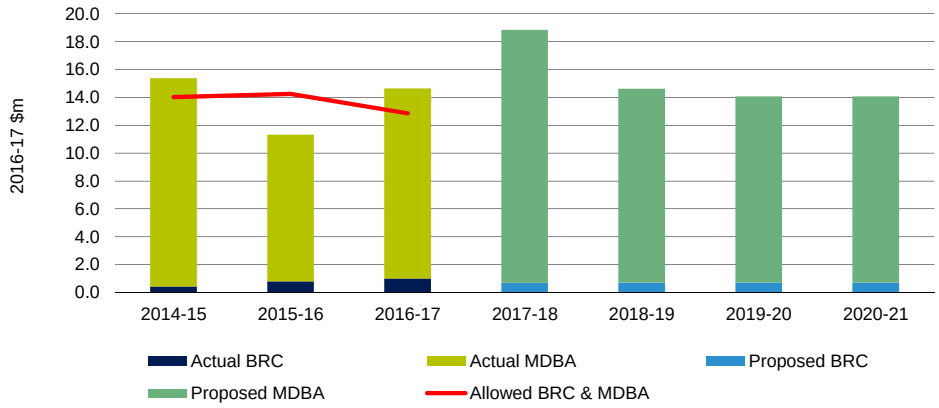
Table 8.2 Estimated BRC and MDBA costs ($ '000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total
BRC					
Government share	406	382	385	385	1,558
Users share	694	718	715	715	2,842
Total	1,100	1,100	1,100	1,100	**4,400**
Users share %	63%	65%	65%	65%	65%
MDBA					
Government share	2,680	4,442	4,476	4,476	16,074
Users share	18,163	13,914	13,366	13,366	58,809
Total	20,843	18,356	17,842	17,842	**74,883**
Users share %	87%	76%	75%	75%	79%

Note: DPI Water has provided estimates for 2016-17 to 2019-20.

Source: DPI Water, *MDBA Joint Venture and DBBRC costs – Letter to WaterNSW*, May 2016. See Appendix D.

Figure 8.1 WaterNSW's past and proposed BRC and MDBA costs ($2016-17)



Data source: WaterNSW pricing proposal and Annual Information Return, 2016; IPART calculations.

For the purposes of comparison, the ESC in Victoria adopted an MDBA contribution of $12 million per year, as opposed to the $14 million per year originally proposed by Goulburn-Murray Water. The adjustment was made to reflect the longer term average MDBA contribution.[89] The ESC also stated it will address any material variation between this amount and the actual MDBA contribution at the time of the annual tariff approval as a forecast adjustment.

WaterNSW has proposed that the BRC and MDBA charges be recouped via an annual fixed charge on a $ per ML of entitlement basis to be collected from water users in the Border, Murrumbidgee and Murray valleys.[90] These proposed fees are listed in Chapter 12.

In the 2014 ACCC Decision, BRC and MDBA charges were calculated in exactly the same manner as the bulk water service charges (ie, recovered 60% through usage charges and 40% through entitlement charges – split between high security and general security charges).[91]

The 2014 ACCC Decision included the establishment of a separate Unders and Overs Mechanism (UOM) for MDBA revenue, which allows WaterNSW to recover any revenue shortfall arising from variation in water usage for each valley. Unlike the UOM applying to prices for bulk water services, the full revenue shortfall is recovered (or paid back) in the subsequent regulatory year.[92]

89 ESC, *Price Review 2016: Goulburn-Murray Water – Final Decision*, p 22.
90 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, pp 145-146.
91 ACCC, *Final decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014, p 75.
92 ACCC, *Final decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014, p 75.

WaterNSW currently faces an under-recovery of approximately $2 million, and it anticipates an under-recovery of $3 million at the end of the current determination period due to lower than forecast usage.[93] To recover the outstanding amount, WaterNSW proposes to add the UOM balance smoothed over each of the four years of the forthcoming determination period.

A change to a fixed charge would mean that the UOM for MDBA costs would not be continued.

To avoid excess bill shocks on high security (HS) customers WaterNSW proposes reducing the HS premium in relevant valleys so that the average bill of a HS customer does not rise substantially as a result of its proposal to recover BRC and MDBA costs via an entitlement charge. The amended HS premiums are shown below.

Table 8.3 WaterNSW proposed BRC and MDBA HS premium

	Standard	Adjusted for BRC/MDBA charges
Border	2.76	1.48
Murrumbidgee	2.55	1.39
Murray	1.95	1.44

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 146, and WaterNSW pricing proposal model.

IPART's response

Our preliminary view is that we will review the efficiency of the MDBA's and BRC's costs. If WaterNSW is directed by the NSW Government to pass through the full costs of the MDBA's activities, we will allow these costs to be passed through to customers.

We will also examine the proposed changes in the structure of these charges from the current 40:60 split of revenue from entitlement and usage charges to a 100% fixed charge per ML of entitlement. This will include consideration of the proposed approach to apportioning the MDBA charges between HS and GS entitlement holders.

IPART seeks comment on the following

24 Are the proposed BRC and MDBA user share of costs efficient?

25 How should BRC and MDBA costs be recovered from water users (ie, how should charges be structured to recover these costs)?

26 Is WaterNSW's proposed adjustment to the high security premium reasonable?

[93] WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 145.

8.2 Yanco Creek levy

The Yanco Creek natural resources management levy (Yanco Creek levy) was first approved by IPART in its 2005 Determination, and continued through its 2006 and 2010 determinations of State Water's prices.[94]

The Yanco Creek levy was also approved as part of the ACCC's 2014 Decision. The ACCC approved the continuation of the Yanco Creek levy at $0.90 per ML of entitlement[95] over the 3-year determination period, on the basis that it was endorsed by Yanco Creek customers and there is no change (in nominal terms) to the level of the charge.

The levy applies to customers in the Yanco Creek system, and was initiated by users in this system. The levy is intended to fund the rehabilitation of the Yanco Columbo system, to improve flows and provide significant water efficiencies for the system and the Murrumbidgee valley. The plan that was proposed and developed by the Yanco Creek and Tributaries Advisory Council (YACTAC) extended over 10 years.[96]

The levy has not been included in the calculation of WaterNSW's notional revenue requirement.

WaterNSW's proposal

For the 2017 determination period, WaterNSW has proposed to continue to apply the Yanco Creek levy to water users in the Yanco Creek system, to fund a program of works initiated by users in that system.

As part of its proposal, WaterNSW wrote to YACTAC to seek its confirmation that it wishes to continue to impose the current Yanco Creek levy of $0.90 per ML of entitlement, ie, be held constant in nominal terms.

WaterNSW received written advice from YACTAC stating that it supports the continuation of the current Yanco Creek natural resources management levy of $0.90 per ML of entitlement as part of this pricing proposal. However, YACTAC noted that it may be more appropriate to collect the levy on water delivered as opposed to the current arrangement, which uses ML of entitlement held.[97]

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94 IPART, *Review of bulk water charges for State Water Corporation*, June 2010, p 158.

95 $0.90 per ML of Yanco System water entitlement, the Yanco System is defined in the *Water Sharing Plan for the Murrumbidgee Regulated River Water Source (2003)*. Source: ACCC, *Final decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014, p 82.

96 IPART, *Review of bulk water charges for State Water Corporation*, June 2010, p 157.

97 WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 147.

IPART's response

Provided there is sufficient evidence of willingness by Yanco Creek customers to continue to pay the levy, our preliminary view is to support WaterNSW's proposal to maintain the levy.

We will consider whether this levy should be charged on a per ML of water entitlement or ML of water usage basis, taking into account the nature of the costs the levy is intended to recover and potential implications for WaterNSW and users in the Yanco Creek system.

IPART seeks comment on the following

27 Do water users in the Yanco Creek system support the continuation of the Yanco Creek levy as proposed by WaterNSW?

28 Should the Yanco Creek levy be charged per ML of water entitlement or per ML of water usage?

9 Form of regulation

Form of regulation refers to the approach to setting prices for monopoly services. This can determine how much discretion the regulated entity has to adjust its prices within a regulatory period, how and how frequently the regulator reviews or adjusts prices, and how risks and rewards are shared between the regulated business and its customers. The form of regulation can affect the incentives faced by the regulated business.

This chapter considers the following elements of regulation:

- **form of price control** – ie, whether to maintain a price cap, but with measures to mitigate the effects of revenue volatility, or move to an alternative form of price control
- **annual reviews of prices** – ie, whether to extend the annual review of prices, which we are required to do for WaterNSW's MDB valleys under the WCIR, to the coastal valleys, and
- **Efficiency Carryover Mechanism (ECM)** – ie, whether to apply this mechanism to WaterNSW Rural, as we have recently decided to do for WaterNSW Greater Sydney.

9.1 Form of price control

These are several different forms of price control. They can provide different incentives to the regulated entity, and different distributions of risk between the regulated entity and its customers.[98] The different forms of price control include the following:

- **Revenue cap**. The goal of a revenue cap is to ensure a regulated entity receives its total revenue allowance for a regulatory period, irrespective of the volume of regulated services provided. Customers bear any volume-related risk through price increases or decreases over the regulatory period.

[98] ACCC, *Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, pp 17-18.

- **Price cap**. Maximum prices are determined at the start of the determination period and adjusted each year for inflation. This approach provides stable prices for customers, but the regulated entity bears volume-related risk to the extent that price structures do not perfectly match the utility's cost structures. (The utility will not face volume-related risk if its fixed price is set to recover its fixed costs, and its usage price is set to recover its variable or marginal costs.)
- **Weighted average price cap.** A maximum average price is set for each group of the utility's prices for the first year of the determination. A formula can also be determined for adjusting this average price in each subsequent year of the regulatory period. The regulator can also set limitations on the amount by which some or all individual prices within the groups can increase during the determination. Utilities then have the freedom to rebalance prices (increase or decrease individual prices), so long as the weighted average of the prices is less than or equal to the maximum average price, and they comply with any limitations imposed. The accuracy of volume forecasts will significantly affect the overall revenue that the utility is able to earn while keeping within the weighted average price cap.[99]
- **Hybrid** of the revenue and price cap controls. A price cap is in place, however additional measures to mitigate the risk of the utility under or over recovering its revenue requirement are also applied.

In the 2010 State Water Determination,[100] we used a price cap (under a 40:60 fixed to variable tariff structure) combined with a revenue volatility allowance to compensate State Water for bearing volume-related risk.[101] This revenue volatility allowance recognised:

- State Water's tariff structure did not match its cost structure – its ratio of fixed to variable costs is higher than the ratio of its ex ante revenue recovered from its fixed to variable charges. For this reason, its revenue will be less than its costs if its actual water sales are lower than forecast. We further discuss tariff structure in Chapter 10.
- Water sales can exhibit significant volatility and be difficult to forecast.

Similarly, the ACCC decided to implement a price cap combined with a rolling unders and overs account mechanism (UOM) (Section 7.7) to address volume-related risk.

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99 IPART, *Form of Economic Regulation for NSW Electricity Network Charges,* Discussion Paper, August 2001, p 5-6.

100 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, pp 43 and 133.

101 This excludes North Coast and Hunter valleys, which have a 60:40 fixed to variable tariff structure.

WaterNSW is proposing the continuation of the hybrid form of price control with the UOM and annual price reviews (for MDB valleys). However, it has also proposed an additional mechanism to address revenue volatility.[102] This is discussed in Chapter 7.

IPART's response

We consider that a price cap with an appropriate regulatory mechanism for addressing volume-related risk is a balanced approach to sharing volume risk between customers and the utility. In Section 7.7 we discuss potential mechanisms for addressing volume-related risk.

IPART seeks comments on the following

29 Are there reasons to depart from a price cap as the form of price control for WaterNSW?

9.2 Annual review of prices

Under the *Water Charge Infrastructure Rules (2010)* (WCIR), we are required to undertake an annual review of prices in MDB valleys. Under this process, we are required to vary regulated charges to the extent that such variation is reasonably necessary having regard to changes in demand or consumption forecasts and price stability. The annual review process under the WCIR is a mandatory process – the infrastructure operator (in this case, WaterNSW) must apply for approval or determination of its prices each year, and the regulator must approve or determine those prices.

As we are regulating prices in WaterNSW's coastal valleys under the IPART Act rather than the WCIR, we are not required to undertake annual reviews of coastal prices.

IPART's response

We will undertake annual reviews of WaterNSW's MDB prices, as per the WCIR.

We do not propose to undertake annual reviews of WaterNSW's prices in the coastal valleys. Unlike the WCIR, the IPART Act does not require annual reviews. Further, we consider that the costs of undertaking annual reviews that would meet the requirements for a pricing review under the IPART Act would likely outweigh the benefits.

[102] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, p 16.

9.3 WaterNSW's proposal for an Efficiency Carryover Mechanism

We set maximum prices that reflect our best estimate of the efficient costs required to deliver regulated services over the determination period. Our current form of regulation allows businesses to keep profits resulting from cost savings made during the regulatory period.

A shortcoming of the current approach is that the financial reward for achieving savings deteriorates over the regulatory period. The consequence is that there is an incentive for the regulated business to delay savings from the latter years of one regulatory period to the beginning of the next regulatory period.

An efficiency carryover mechanism (ECM) can address this issue by allowing gains (or losses) to be held for a specified period of time (eg, four years), regardless of when they are achieved within the regulatory period. This equalises incentives to achieve efficiency gains throughout a regulatory period.

In our 2016 pricing determinations for Sydney Water, Hunter Water and WaterNSW Greater Sydney we decided to establish an ECM to improve efficiency incentives. The ECM we established for these utilities will allow:

- permanent cost increases to be held by the business until the next price review, and if assessed to be efficient, will be reflected in prices going forward
- temporary cost increases to be retained by the business
- temporary reductions in costs to be retained by the business, and
- permanent decreases in costs to be retained by the business for four years, and then passed on to customers through lower prices.[103]

Further information on the ECM we established for these utilities is available in Chapter 3 in the 2016 Final Report of our determination of Sydney Water's prices.[104]

In its proposal for this review of its Rural prices, WaterNSW stated there is scope to improve the strength of the incentives under our recently established ECMs. However, it did not identify specific ways that the ECM could be improved. WaterNSW commented that it will consult with rural customers on the suitability of an ECM for rural bulk water services.[105]

[103] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, p 17.
[104] IPART, *Review of Prices for Sydney Water Corporation,* June 2016, pp 53-60.
[105] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, p 17.

IPART's response

We will consider whether to apply the same ECM to WaterNSW's Rural operations as we recently decided to apply to its Greater Sydney business.

In doing so, we will take into account stakeholder views, incentives for WaterNSW to pursue efficiency gains, and any relevant provisions of the WCIR.

IPART seeks comments on the following

30 What regulatory measures can enhance WaterNSW's incentives to pursue efficiency gains?

31 Should we apply an Efficiency Carryover Mechanism to WaterNSW's Rural operations?

10 Price structures

WaterNSW currently levies a two-part tariff for each valley, comprised of:

- a **Fixed charge** for each valley – an annual fixed charge that applies to the share component specified on each water access licence ($ per ML of General Security and High Security water entitlement or unit share), and
- a **Usage charge** for each valley – that applies to the quantity of water recorded as taken for a water access licence in the billing period ($ per ML of water take or 'usage').

This chapter discusses aspects of WaterNSW's proposed price structures, including the balance between fixed and usage charges, the balance between High Security (HS) and General Security (GS) charges, and charges for the Fish River scheme.

10.1 Price structures

WaterNSW has proposed to broadly maintain the existing price structures from the 2011 and 2014 Determinations, including pricing by valley. Key features of WaterNSW's proposal are that:

- Valley-based pricing is maintained.
- The two-part tariff is maintained (ie, a fixed and usage charge).
- Prices are set to achieve a fixed to variable revenue split of 40:60 for most valleys.
- Revenue is allocated to HS and GS customers using a HS premium. The HS premium is based on the reliability of (and conversion of) a HS entitlement to a GS entitlement.

There are exceptions to the common pricing structure. For example, the Lowbidgee has a 100% fixed charge as users in the Lowbidgee hold supplementary licences.[106] The Fish River Scheme has a distinct pricing structure based on reference to customers' Maximum Annual Quantity (MAQ) and differences between raw and filtered water (see Chapter 12).

[106] Supplementary licenses entitle holders to water use only when there is excess water available. As a result, in the ACCC 2014 Decision, the ACCC levied a 100% fixed charge on customers in the Lowbidgee.

WaterNSW has proposed changes to:

- The structure of the separate MDBA and BRC charges – to be levied as 100% fixed charges, which is a move from the current 40:60 fixed to variable structure.
- The HS premium for the MDBA charges has been reduced to manage bill shocks to HS entitlement holders. The HS premium determines the relativity between HS and GS charges.[107]

WaterNSW proposed to maintain the predominantly 40:60 fixed-to-variable price structure due to strong stakeholder support. However, it notes that its low proportion of fixed charges exposes it to considerable revenue volatility as a result of variability in water sales. This revenue volatility, combined with the difference between WaterNSW's cost structure (which is largely fixed) and its 40:60 fixed to usage price structure, exposes WaterNSW to volume-related risk.[108]

In its 2014 Pricing Decision, the ACCC included an UOM to address this issue. However, WaterNSW has argued that this does not remove its risk associated with revenue volatility. Under the current 40:60 fixed to variable price structure split, it has therefore proposed that customers fund (through prices) a mechanism to manage its risks associated with revenue volatility. Its proposed cost of this mechanism is $3.7 million per year.[109] This is discussed in further detail in Chapter 7.

WaterNSW presented a range of fixed to usage ratio price structures to a group of customers, along with matching costs of revenue volatility for each ratio (the higher the proportion of fixed charges, the lower revenue volatility cost). These customers were therefore faced with a trade-off between a higher proportion of fixed charges and lower building block costs. According to WaterNSW, customers (at a valley level) expressed a preference for their status-quo fixed to usage split – which, for the majority of customers, is 40:60.[110]

IPART's response

We support the retention of valley-based pricing, on the basis this is cost-reflective and sends efficient price signals to water customers.

We will review WaterNSW's proposal to maintain the 40:60 ratio of fixed to usage prices. In doing so, we will consider WaterNSW's cost structure, the distribution of risk between WaterNSW and its customers, and customer views and preferences.

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[107] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, p 146.
[108] WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 25.
[109] WaterNSW, Pricing Proposal Model.
[110] WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 25.

In particular, we are interested in stakeholders' views on the potential trade-off between a higher ratio of fixed to usage prices and lower costs of managing the risk of revenue volatility (and vice-versa). WaterNSW notes that there is currently one valley where customers are considering moving to an 80:20 fixed to usage tariff structure on the basis they would save on revenue volatility costs.[111] WaterNSW has not outlined the specifics of how customers would choose to move.

WaterNSW's proposed volatility costs over the 2017 Determination by valley are outlined in Chapter 7, along with approaches to addressing risks associated with revenue volatility.

IPART seeks comment on the following

32 Is WaterNSW's proposed 40:60 fixed to usage charge split appropriate?

10.2 The balance between high and general security entitlement charges

HS entitlement holders currently face a higher fixed entitlement charge than GS entitlement holders. This reflects the greater security of supply to high security entitlement holders.

The HS premium is used to determine the revenue split between HS and GS fixed entitlement charges and the extent of the premium paid by HS customers. Table 10.1 below shows the inputs used by WaterNSW to determine its proposed HS premium by valley.

[111] WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 41.

Table 10.1 Calculation of the high security premium

Valley	WSP Ratio	Reliability Ratio	HS Premium
Border	1.28	2.32	2.97
Gwydir	1.81	2.25	4.07
Namoi	1.25	1.72	2.15
Peel	6.73	1.47	9.88
Macquarie	1.88	1.96	3.69
Lachlan	2.45	1.65	4.03
Murrumbidgee	1.63	1.41	2.30
Murray	1.25	1.41	1.76
North Coast	1.25	1.15	1.44
Hunter	3.00	1.03	3.09
South Coast	1.70	1.47	2.49

Note: WaterNSW did not determine the HS and GS fixed entitlement charges for the North Coast and South Coast using the HS premium. WaterNSW proposed to increase these charges by 10% per annum from the charges approved in the 2010-14 IPART review of bulk water charges for the State Water Corporation.

Source: WaterNSW Rural submission to IPART, 1 July 2016, p 33.

The price difference between the GS and HS fixed charge is based on the application of the HS premium. In its proposal, WaterNSW has maintained the approach used by the ACCC in its 2014 Determination to set the balance between GS and HS charges. The high security entitlement charge is currently set using the following formula:

(1) High Security Entitlement Charge = General Security Entitlement Charge × High Security Premium

Where:

(2) High Security Premium = Reliability Ratio × Water Sharing Plan (WSP) ratio.

In equation (2):

- **Reliability Ratio**: is calculated by dividing the average of actual allocations to high security licence holders (as a percentage of their entitlement) over the past 20 years (20 years being the period used for forecasting extractions) by the average of actual allocations to general security licence holders over the past 20 years.
- **Water Sharing Plan ratio** (or conversion factor): calculated by DPI Water using 2 variables: the reliability of water and the number of converted licences.

IPART's response

The high security premium ensures high security entitlement holders pay a higher charge to reflect the extra reliability and security these entitlement holders have relative to general security entitlement holders.

We continue to support a high security premium that reflects the greater security of water supply enjoyed by these users. However, we would consider any proposed alternative approaches to the assignment of WaterNSW's costs between high security and general security entitlement holders.

IPART seeks comment on the following

33 Are there reasons to depart from the current approach for setting high security and general security entitlement charges?

10.3 Structure of Fish River charges

In the ACCC's 2014 Decision, it set bulk water service charges for one 'major' user (Energy Australia) and approximately 280 'minor' users.[112]

The Fish River scheme has a distinct pricing structure based on reference to customers' Minimum Annual Quantity (MAQ) and differences between raw and filtered water. Access to water in the Fish River scheme is regulated through a 'minimum annual quantity' (MAQ) for each major customer and (collectively) for minor customers, as users in the scheme do not hold statutory water access entitlements. Access (fixed) charges are set with reference to major customers' actual MAQ and for each minor customer with reference to a deemed MAQ of 200 kL.[113]

Charges under the ACCC's 2014 Determination are differentiated according to whether the water taken is raw or filtered water. The ACCC's 2014 Decision on raw water required that WaterNSW recover 55% of its revenue through fixed charges (access charges) and 45% through variable charges (on the volume delivered). For filtered water, the ACCC required that WaterNSW recover 60% of its revenue through fixed charges (access charges) and 40% through usage charges (on the volume delivered). WaterNSW has proposed to change the fixed to usage charge split for both raw and filtered water to 80% fixed and 20% usage.

IPART seeks comment on the following

34 What is the appropriate structure of WaterNSW's Fish River charges?

35 Is WaterNSW's proposed 80:20 fixed to usage charge split for Fish River charges appropriate?

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112 WaterNSW Rural submission to IPART, 1 July 2016, p 29.

113 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 29.

10.3.1 Reduction in usage forecasts and revenue for the Fish River Scheme

WaterNSW noted in its submission that Wallerawang power station was previously a major customer of the Fish River scheme, however in 2014-15 the Wallerawang power station was closed and decommissioned. According to its analysis, the shutdown of the Wallerawang power station will result in a revenue shortfall to WaterNSW of $1.8 million ($2016-17) per annum in the current determination period for the Fish River scheme.[114] This is driven by a drop in water usage by EnergyAustralia (from 5,000 ML in 2013-14 to 1,200 ML in 2014-15).[115]

WaterNSW states that the current tariff structure and the UOM mechanism for the Fish River scheme is not consistent with the WCIR requirements, since WaterNSW is unlikely to recover prudent and efficient costs for the Fish River scheme. It notes that the Fish River scheme balance is approximately -$4.6 million ($2016-17), mainly due to the closure of Wallerawang power station.

According to WaterNSW, the permanent closure of Wallerawang power station means that the current 20-year moving average of actual water sales does not reflect forecast demand in the Fish River. In order to address this one-off step change, WaterNSW suggested:[116]

- an adjustment to the 20-year moving average of sales in the Fish River scheme, to account for future expected usage from EnergyAustralia. This resulted in an adjustment from 5,636 ML to 1,200 ML, which is the level of expected demand from the remaining Mount Piper power station.
- Increasing the fixed-to-usage charge ratio to 80%.

To avoid customer bill shock, WaterNSW stated that it reduced controllable costs in the Fish River Scheme in order to mitigate the financial risk to customers and itself. According to its analysis, the majority of Fish River Scheme customers will not experience a bill increase by moving to an 80%, 20% usage charge structure.[117]

IPART's response

We will consider whether it is appropriate to adjust the usage forecasts for the Fish River scheme to account for the closure of the Wallerawang power station. We are seeking stakeholder feedback on the best way to derive WaterNSW's forecast water sales in the Fish River scheme.

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114 WaterNSW *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 41.
115 WaterNSW *Pricing Proposal for Rural Bulk Water Services,* June 2016, pp 41-42.
116 WaterNSW *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 42.
117 WaterNSW *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 43.

We seek comment on the following

36 Is WaterNSW's proposed adjustment to sales forecasts in the Fish River Scheme appropriate?

11 Water sales and entitlement forecasts

In Chapter 4, we explained our approach to determining WaterNSW's revenue requirement, including the users' share of this revenue requirement. In this chapter, we explain our approach to determining forecast volumes of water entitlements and water usage, which are used in calculating the water prices needed to recover the users' share of WaterNSW's revenue requirement.

To set charges for bulk water services, we must determine the forecast water sales (or extractions) and licensed water entitlements for the determination period.

Forecast water sales are used to determine the variable charges ($ per ML of water extracted) for each valley. Forecast entitlement volumes are used to set the fixed entitlement charge ($ per ML of water entitlement) for each valley, including the shares between High Security (HS) and General Security (GS) fixed entitlement charges.

It is important that the forecasts are reasonable. If they differ markedly from WaterNSW's actual water sales and entitlement numbers over the determination period, the determined prices will result in the utility over- or under-recovering its required revenue.

The approach used by the ACCC in its 2014 Decision under the WCIR allows a regulator to vary the regulated charges annually, if one or both of the following tests are satisfied:

- it is reasonably necessary to vary the charges, having regard to changes in the demand or consumption forecasts submitted by WaterNSW in its annual application (the 'change in forecasts' variation test)
- it is reasonably necessary to vary the charges, having regard to price stability (the 'price stability' variation test).

This approach, which allows WaterNSW to submit an application for an annual review of its regulatory charges, mitigates to some extent the risk of inaccurate usage forecasts over the four years of the determination period.[118]

[118] See *WCIR,* rule 37(2).

11.1 Forecast water usage

WaterNSW is proposing to retain the current forecasting methodology for water usage by using the 20-year rolling average of actual water sales for the 2017 Determination.[119]

Before the 2010 Determination, we employed a long-run average approach, using over 100 years of historical data, to forecast water extractions over the upcoming determination period. But in the 2010 Determination,[120] we moved to using a 20-year rolling average and actual extractions approach because we found the long-run average approach did not produce accurate forecasts. The 20-year rolling average approach incorporated:

- five years of modelled extractions from the Integrated Quantity and Quality Model (IQQM)[121] (1990-91 to 1994-95) before the availability of reliable actual extractions data
- 14 years of actual extraction data (1995-96 to 2008-09)
- a forecast of extractions for 2009-10 provided by the then State Water.

Table 11.1 sets out the actual usage over the 2010 determination period compared with the forecasts used in the 2010 Determination. Note that, while there are variations on an annual basis over the four years, on average there was only a ten percent variation between our usage forecasts and actual usage.

Table 11.1 Comparison of forecast and actual usage for IPART's 2010 determination period (ML)

	Annual forecast by valley	2010-11 Actual	2011-12 Actual	2012-13 Actual	2013-14 Actual
MDB valleys					
Border	148,535	187,025	160,312	220,696	197,437
Gwydir	247,734	245,148	200,724	428,699	407,295
Namoi	165,558	149,958	128,272	281,247	270,507
Peel	13,052	6,915	4,219	13,317	17,307
Lachlan	258,319	85,699	212,769	394,082	242,067
Macquarie	300,832	203,146	296,618	558,856	268,934
Murray	1,541,376	966,532	1,852,005	2,514,363	2,056,031
Murrumbidgee	1,805,846	1,364,742	1,739,447	2,446,344	1,782,634
Coastal valleys					
North Coast	906	55.3	104	476	953.4

[119] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, p 31.

[120] IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 119.

[121] IQQM uses around 100 years of climate to simulate water availability and extractions based on the current Water Sharing Plan rules and agricultural development.

	Annual forecast by valley	2010-11 Actual	2011-12 Actual	2012-13 Actual	2013-14 Actual
Hunter	139,141	117,117	112,713	124,314	118,474
South Coast	5,804	394	1,547	3,673	3,643
Total	4,627,102	3,326,731	4,708,728	6,986,068	5,365,282
Total forecast		4,627,102	4,627,102	4,627,102	4,627,102
Total actual		3,326,731	4,708,728	6,986,068	5,365,282
Difference		-1,300,371	81,626	2,358,966	738,180
% Difference		-28%	2%	51%	16%
Annual average forecasts	4,627,102				
Annual average actuals	5,096,702				
Difference	469,600				
% Difference	10%				

Note: Volumes include water traded to non-NSW buyers. This volume is an average of around 25GL per year for Border, 275GL per year for Murray, and 65GL per year for Murrumbidgee.

Source: IPART *Review of Bulk Water charges for State Water Corporation*, June 2010, p 119; ACCC annual price control model 2016-17; and WaterNSW Information Request June 2016.

WaterNSW's proposal for the 2017 Determination also uses the 20-year rolling average approach. That is, it uses data from the period 1996-97 to 2015-16[122] to forecast extractions for the first year of the new determination, 2017-18.[123] For subsequent years, WaterNSW has proposed has proposed to update the rolling average with a 2-year lag, ie forecasts for the 2018-19 year would be based on the period 1997-1998 to 2016-17.

The ACCC used a 20-year rolling average for forecasting water sales in its 2014 Decision, similar to our approach for the 2010 Determination. The only difference being the ACCC updated its sales forecasts annually throughout the regulatory period, rather than fixing sales forecasts for each year of the determination period. That is, in each year of the determination period, it amended the dataset used in the 20-year historical rolling average to add the latest available year of actual sales data. The difference between our method in 2010 and the ACCC's approach should generally not result in material differences in forecast extractions during the regulatory period.

Table 11.2 compares forecast and actual usage for MDB valleys for the ACCC's 2014 determination period.

[122] Actual data for 2016-17 will not be available in time for our final decision in June 2017.
[123] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, p 31.

Table 11.2 Comparison of forecast and actual usage for MDB valleys for ACCC's 2014 decision period (ML)

	2014-15 Forecast	2014-15 Actual	2015-16 Forecast	2015-16 Actual	2016-17 Forecast
Border	140,677	44,447	156,230	90,751	150,262
Gwydir	245,877	152,705	261,298	140,000	266,675
Namoi	158,961	67,401	166,374	105,000	167,762
Peel	11,164	6,065	11,530	7,000	11,238
Lachlan	227,697	175,398	225,552	190,000	214,829
Macquarie	279,671	90,815	267,387	100,000	263,576
Murray	1,459,689	1,745,574	1,589,430	970,471	1,611,248
Murrumbidgee	1,759,740	1,934,079	1,779,057	1,402,228	1,788,129
Total	4,283,475	4,216,483	4,456,858	3,005,450	4,473,718
Total forecast		4,283,475		4,456,858	
Total actual		4,216,483		3,005,450	
Difference		-66,993		-1,451,408	
% Difference		-2%		-33%	

Note: Volumes include water traded to non-NSW buyers.

Source: ACCC annual price control model 2016-17; and WaterNSW Information Request June 2016.

Table 11.3 below shows WaterNSW's proposed 20-year rolling average of water usage for the upcoming determination period (WaterNSW has advised that it will update the values with actual data for 2015-16 in time for our final pricing decision in June 2017).[124]

[124] WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, p 32.

Table 11.3 Water NSW's proposed 20-year rolling average of actual water usage from 1996-97 to 2015-16 (ML)

Valley	20 year rolling average of actual water usage
Border	147,829
Gwydir	264,774
Namoi	168,133
Peel	11,291
Lachlan	205,079
Macquarie	258,621
Murray	1,537,145
Murrumbidgee	1,743,637
South Coast	3,781
North Coast	619
Hunter	123,211
Total	**4,464,119**

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, p 32.

Our preliminary response is that we will adopt WaterNSW's forecast water usage for the 2016 determination period across all valleys, unless our review of these forecasts uncovers information to suggest otherwise, and/or we identify a concern with any of its key assumptions.

In the MDB valleys, the WCIR allow WaterNSW to apply annually to IPART to vary its charges. In coastal valleys we will set prices for a fixed 4-year period for the reasons discussed in Section 9.2.

We seek stakeholders' views on whether we should depart from our proposed approach to estimate water usage.

11.2 Licensed water entitlements

Customers across all valleys hold different types of water entitlement (mainly general and high security). These entitlements give customers access to a share of the water resource. The volume of entitlements is influenced by the issuing of access licences, which is governed by the *Water Management Act 2000* (NSW). DPI Water issues these water entitlements on behalf of the Minister for Water. The entitlement volumes have remained relatively stable over time.

WaterNSW has provided forecast entitlement numbers sourced from its Water Accounting System. It proposes to carry forward its estimate of water entitlement numbers as of January 2016 for each year of the upcoming determination period.

Table 11.4 lists the entitlements that we used in setting prices for our 2010 Determination compared to WaterNSW's proposed entitlements for the upcoming determination.[125]

WaterNSW's proposed entitlements for the 2017 Determination are similar to those used in our 2016 determination of prices for WAMC. However, there are some minor differences across valleys.

Table 11.4 Comparison of water entitlement numbers for 2010 IPART Determination and proposed for 2017 determination period (ML)

	2010 determination		Proposed	
	GS	HS	GS	HS
MDB valleys				
Border	263,085	3,125	263,238	3,122
Gwydir	509,665	21,458	511,609	26,840
Namoi	255,780	8,527	256,212	8,874
Peel	30,911	17,381	30,428	17,367
Lachlan	632,946	60,778	633,256	57,514
Macquarie	631,716	42,594	632,466	42,707
Murray	2,076,223	257,438	2,081,716	261,883
Murrumbidgee	2,264,065	436,928	2,267,963	438,331
Lowbidgee	N/A	N/A	747,000[a]	N/A
Coastal valleys				
North Coast	10,193	137	9,681	137
Hunter	147,909	70,738	138,109	70,408
South Coast	14,197	967	13,946	1,175
Total	**6,836,689**	**920,071**	**6,838,624**	**928,358**

[a] Lowbidgee consists of supplementary licences only.

Source: IPART, *Review of Bulk Water charges for State Water Corporation*, June 2010, p 120 and WaterNSW, *Pricing Proposal*, June 2016, p 34.

The ACCC approved WaterNSW's forecast entitlement volumes for the MDB. These entitlement volumes were similar to the determinations in our 2010 Determination. Notably, as with forecast water sales, the ACCC indicated it would adjust prices annually throughout the determination period to account for any changes to entitlement volumes.[126] This approach is different from our standard approach, which is to set maximum annual prices for the determination period, based on best available forecasts at the time of the determination. The entitlement volumes used by the ACCC in its final decision are set out in Table 11.5 below.

[125] DPI Water advises WaterNSW of entitlement information, this data is current as of January 2016.

[126] ACCC, *Draft Decision on State Water Pricing Application: 2014-15 – 2016-17 – attachment*, March 2014, p 189-190.

Table 11.5 Water entitlement volumes – ACCC final decision by valley for 2014-17 (ML)

	GS	HS
MDB valleys		
Border	263,238	3,122
Gwydir	509,665	21,458
Namoi	256,076	8,881
Peel	30,528	17,382
Lachlan	632,837	60,745
Macquarie	631,716	42,606
Murray	2,075,822	261,401
Murrumbidgee	2,260,133	436,928
Lowbidgee[a]	747,000	N/A

[a] Lowbidgee consists of supplementary licences only.

Source: ACCC, *Final Decision on State Water Pricing Application: 2014-15 – 2016-17,* Attachments, June 2014, p 109.

As entitlement numbers have remained steady over time, our preliminary position is to adopt WaterNSW's proposed entitlement numbers for the upcoming determination, as we consider that the forecast entitlement numbers are reasonable. We will retain the approach to adjust entitlement forecasts and hence prices annually for MDB valleys at the request of WaterNSW. Entitlements for coastal valleys will be fixed for the four years of the 2017 Determination.

IPART seeks comments on the following

37 Are WaterNSW's forecast water sales volumes reasonable?

38 Should we maintain the existing approach to forecasting water sales – that is, using a 20-year rolling average based on historical water sales?

39 Are WaterNSW's forecast water entitlement volumes reasonable?

12 Proposed prices

This chapter outlines WaterNSW's proposed price levels for each valley (and the Fish River Water Scheme), which reflect its proposals for revenue requirement, forecast water sales and entitlement numbers, and price structures discussed in the previous chapters. This chapter also outlines our preliminary response to WaterNSW's proposed prices.

In presenting its proposed **bulk water prices**, WaterNSW has excluded MDBA and BRC pass through charges. We have retained this structure and report three prices:

1. bulk water prices for all valleys (based on WaterNSW's revenue requirement)
2. MDBA and BRC pass through charges for three valleys (the Border, Murray and Murrumbidgee valleys), and
3. **final prices** (bulk water prices and pass through costs - ie, 1 and 2 combined).

We consider it is important to present bulk water charges and MDBA/BRC prices transparently. Additionally, it is important that customers can understand the final prices they would face under WaterNSW's proposal, accounting for all bulk water services provided in their valley.

12.1 Prices for bulk water services

The following price tables contain WaterNSW's proposed prices for bulk water services. Each of the tables also includes the current 2016-17 price as a comparator and the percentage change from 2016-17 to the last year of WaterNSW's proposal, 2020-21.

12.1.1 High security entitlement charges

WaterNSW's proposed fixed bulk water charges for high security (HS) entitlements by valley are shown in Table 12.1. The prices exclude MDBA and BRC costs.

Table 12.1 WaterNSW's proposed bulk water HS entitlement charges ($/ML $2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
Border	6.90	5.53	5.53	5.53	5.53	-19.8%
Gwydir	14.13	13.08	13.08	13.08	13.08	-7.4%
Namoi	17.29	16.13	16.13	16.13	16.13	-6.7%
Peel	35.27	21.42	21.42	21.42	21.42	-39.3%
Lachlan	16.48	14.80	14.80	14.80	14.80	-10.1%
Macquarie	16.17	12.50	12.50	12.50	12.50	-22.7%
Murray	1.79	1.52	1.52	1.52	1.52	-15.1%
Murrumbidgee	3.08	2.90	2.90	2.90	2.90	-5.6%
North Coast	9.54	10.24	10.99	11.79	12.65	32.6%
Hunter	26.03	20.76	20.76	20.76	20.76	-20.2%
South Coast	21.12	22.67	24.32	26.10	28.01	32.6%

Note: Prices exclude BRC and MDBA costs for the Border, Murray and Murrumbidgee valleys.

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, pp 44-46 and IPART calculations.

Under WaterNSW's proposal, HS entitlement bulk water charges would decrease for all valleys with the exception of the North Coast and South Coast. The prices for the North Coast and South Coast valleys increase because these valleys are currently below full cost recovery and WaterNSW has proposed to transition towards full cost recovery in these valleys by increasing prices by 10% per year in nominal terms.

The proposed price reduction in other valleys reflects a reduction in proposed operating expenses and a lower return on capital since the 2014 ACCC Decision.

12.1.2 General security entitlement charges

WaterNSW's proposed general security (GS) entitlement charges by valley are shown in Table 12.2. The prices exclude MDBA and BRC costs.

Table 12.2 WaterNSW's proposed GS entitlement charges ($/ML $2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
Border	2.43	2.30	2.30	2.30	2.30	-5.3%
Gwydir	3.47	4.11	4.11	4.11	4.11	18.2%
Namoi	8.25	9.48	9.48	9.48	9.48	14.9%
Peel	3.88	4.78	4.78	4.78	4.78	23.2%
Lachlan	3.28	3.99	3.99	3.99	3.99	21.7%
Macquarie	3.62	3.62	3.62	3.62	3.62	-0.2%
Murray	0.97	0.98	0.98	0.98	0.98	0.7%
Murrumbidgee	1.26	1.37	1.37	1.37	1.37	8.4%
Lowbidgee [a]	0.84	0.84	0.84	0.84	0.84	0.6%
North Coast	7.25	7.78	8.35	8.96	9.62	32.6%
Hunter	8.86	7.33	7.33	7.33	7.33	-17.2%
South Coast	10.09	10.83	11.62	12.47	13.38	32.6%

[a] Lowbidgee licences are supplementary licences.

Note: Prices exclude BRC and MDBA costs for the Border, Murray and Murrumbidgee valleys.

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, pp 44-46 and IPART calculations.

Under WaterNSW's proposal, the GS entitlement charges would increase for most valleys. Some valleys such as the Peel and Lachlan would experience price increases above 20% over the 2017 determination period. The driver of the proposed price increases for general security entitlements for most valleys is the cost of managing revenue volatility (discussed in Chapter 7), which WaterNSW has assigned to general security entitlements.

The prices for the North Coast and South Coast valleys would increase because these valleys are currently below full cost recovery and WaterNSW has proposed to transition towards full cost recovery in these valleys by increasing prices by 10% per year in nominal terms.

12.1.3 Usage charges

WaterNSW's proposed usage charges by valley are shown in Table 12.3. Under WaterNSW's proposal, usage charges decrease for all valleys with the exception of the North Coast and South Coast. Prices for the North Coast and South Coast valleys increase because these valleys are currently below full cost recovery and WaterNSW has proposed to transition towards full cost recovery in these valleys by increasing prices by 10% per year in nominal terms.

The proposed price reduction in other valleys reflects lower operating expenditure and lower return on capital since the 2014 ACCC Decision.

Table 12.3 WaterNSW's proposed usage charges ($/ML $2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
Border	6.60	5.53	5.53	5.53	5.53	-16.1%
Gwydir	12.13	11.17	11.17	11.17	11.17	-7.9%
Namoi	20.26	18.45	18.45	18.45	18.45	-9.0%
Peel	58.26	57.57	57.57	57.57	57.57	-1.2%
Lachlan	21.12	18.63	18.63	18.63	18.63	-11.8%
Macquarie	16.97	12.78	12.78	12.78	12.78	-24.7%
Murray	2.31	1.97	1.97	1.97	1.97	-14.9%
Murrumbidgee	3.53	3.32	3.32	3.32	3.32	-6.1%
Lowbidgee	-	-	-	-	-	-
North Coast	45.04	48.34	51.87	55.67	59.74	32.6%
Hunter	14.77	12.93	12.93	12.93	12.93	-12.5%
South Coast	40.38	43.33	46.51	49.91	53.56	32.6%

Note: Prices exclude BRC and MDBA costs for the Border, Murray and Murrumbidgee valleys.

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, pp 44-46 and IPART calculations.

IPART's response on proposed bulk water charges

We will consider the views of our consultants and stakeholders in making our decisions on WaterNSW's prices. This will include consideration of whether to maintain the current 40:60 fixed to variable price structure given WaterNSW's cost structure, and the distribution of costs between high and general security users.

We will also examine the proposed prices in the North Coast and South Coast valleys, which have been capped at a 10% per annum increase in nominal terms by WaterNSW. Under WaterNSW's proposal, prices in the North Coast and South Coast valleys would recover 12% and 44% of costs, respectively, by 2021.

IPART seeks comments on the following

40 Are WaterNSW's proposed bulk water prices reasonable?

41 Is WaterNSW's proposed approach to increasing prices in the North Coast and South Coast valleys so they transition towards full cost recovery reasonable?

12.2 MDBA and BRC pass through charges

In presenting its proposed prices for all valleys, WaterNSW excluded MDBA and BRC pass through charges. These charges, which would apply to the Border, Murrumbidgee and Murray valleys, were presented separately by WaterNSW in order to clearly identify them.

In deriving these proposed charges, WaterNSW received advice from DPI Water on projected MDBA and BRC costs.[127] These charges are to be added to the relevant bulk water charge for the appropriate valley (outlined above) to derive WaterNSW's final proposed charges for these valleys (Table 12.4).

Table 12.4 WaterNSW's proposed MDBA and BRC charges ($/ML $2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
High Security Entitlement Charge						
Border	4.22	4.19	4.33	4.31	4.31	2.1%
Murray	3.22	8.91	6.87	6.61	6.61	105.4%
Murrumbidgee	0.72	1.62	1.25	1.20	1.20	67.1%
General Security Entitlement Charge						
Border	1.49	2.83	2.92	2.91	2.91	95.8%
Murray	1.74	6.17	4.76	4.58	4.58	162.4%
Murrumbidgee	0.29	1.17	0.90	0.86	0.86	193.3%
Usage Charges						
Border	4.03	0.00	0.00	0.00	0.00	-100.0%
Murray	4.17	0.00	0.00	0.00	0.00	-100.0%
Murrumbidgee	0.82	0.00	0.00	0.00	0.00	-100.0%

Source: WaterNSW Rural submission to IPART, 1 July 2016, p 146 and IPART calculations.

In its 2014 Decision, the ACCC set MDBA and BRC charges with a fixed and a variable component and established an overs and unders account for MDBA and BRC costs. For the 2017 determination period, WaterNSW has proposed to recover the MDBA and BRC pass through charges through a 100% fixed charge, rather than the current 40:60 fixed to variable split. Due to this proposed change in structure, usage charges in Table 12.4 fall by 100% in 2017-18 when compared to 2016-17. In order to offset this fall, fixed entitlement charges increase substantially over the same period.[128]

BRC and MDBA costs are discussed in Chapter 8.

IPART seeks comments on the following

42 Are WaterNSW's proposed MDBA and BRC pass through charges reasonable?

12.3 Final prices

Table 12.5 shows the combined final prices for all valleys (bulk water prices plus MDBA and BRC pass through prices, which apply to the Border, Murrumbidgee and Murray valleys).

[127] WaterNSW, *Pricing Proposal for Rural water Bulk Water Services,* June 2016, pp 145-6
[128] WaterNSW, *Pricing Proposal for Rural water Bulk Water Services,* June 2016, pp 145-6

Table 12.5 WaterNSW's proposed combined final prices ($ML $2016-17)

Valley	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
High Security Entitlement Charge						
Border	11.12	9.73	9.86	9.84	9.84	-11.5%
Gwydir	14.13	13.08	13.08	13.08	13.08	-7.4%
Namoi	17.29	16.13	16.13	16.13	16.13	-6.7%
Peel	35.27	21.42	21.42	21.42	21.42	-39.3%
Lachlan	16.48	14.80	14.80	14.80	14.80	-10.1%
Macquarie	16.17	12.50	12.50	12.50	12.50	-22.7%
Murray	5.00	10.43	8.39	8.13	8.13	62.4%
Murrumbidgee	3.79	4.52	4.15	4.10	4.10	8.1%
North Coast	9.54	10.24	10.99	11.79	12.65	32.6%
Hunter	26.03	20.76	20.76	20.76	20.76	-20.2%
South Coast	21.12	22.67	24.32	26.10	28.01	32.6%
General Security Entitlement Charge						
Border	3.91	5.13	5.22	5.21	5.21	33.1%
Gwydir	3.47	4.11	4.11	4.11	4.11	18.2%
Namoi	8.25	9.48	9.48	9.48	9.48	14.9%
Peel	3.88	4.78	4.78	4.78	4.78	23.2%
Lachlan	3.28	3.99	3.99	3.99	3.99	21.7%
Macquarie	3.62	3.62	3.62	3.62	3.62	-0.2%
Murray	2.71	7.15	5.74	5.55	5.55	104.7%
Murrumbidgee	1.56	2.53	2.27	2.23	2.23	43.4%
Lowbidgee	0.84	0.84	0.84	0.84	0.84	0.6%
North Coast	7.25	7.78	8.35	8.96	9.62	32.6%
Hunter	8.86	7.33	7.33	7.33	7.33	-17.2%
South Coast	10.09	10.83	11.62	12.47	13.38	32.6%
Usage Charge						
Border	10.63	5.53	5.53	5.53	5.53	-48.0%
Gwydir	12.13	11.17	11.17	11.17	11.17	-7.9%
Namoi	20.26	18.45	18.45	18.45	18.45	-9.0%
Peel	58.26	57.57	57.57	57.57	57.57	-1.2%
Lachlan	21.12	18.63	18.63	18.63	18.63	-11.8%
Macquarie	16.97	12.78	12.78	12.78	12.78	-24.7%
Murray	6.48	1.97	1.97	1.97	1.97	-69.6%
Murrumbidgee	4.36	3.32	3.32	3.32	3.32	-23.9%
North Coast	45.04	48.34	51.87	55.67	59.74	32.6%
Hunter	14.77	12.93	12.93	12.93	12.93	-12.5%
South Coast	40.38	43.33	46.51	49.91	53.56	32.6%

Note: Prices include BRC and MDBA costs for the Border, Murray and Murrumbidgee valleys. Lowbidgee does not have a usage charge as prices are 100% fixed.

Source: WaterNSW, *Pricing Proposal for Rural Water Bulk Water Services,* June 2016, pp 44-46, 146 and IPART calculations.

Table 12.5 shows that, under WaterNSW's proposal:

- High security entitlement charges would decrease in 7 out of 11 valleys, however the Murray, North Coast and South Coast valleys would experience considerable increases.
- General security entitlement charges would increase in 10 out of 12 valleys, with substantial increases in the Border, Murray and Murrumbidgee valleys. The large increases in these valleys would result from WaterNSW's proposal to recover MDBA and BRC costs through entitlement charges rather than a 40:60 fixed to usage split.
- Usage prices would generally decrease, with prices declining in 9 out of 11 valleys. Usage prices would increase in the North Coast and South Coast valleys, where WaterNSW is proposing to transition prices towards full cost recovery (subject to a 10% per annum increase in nominal prices).

IPART's response on final prices

As outlined above, we will review the key drivers and elements of WaterNSW's proposed prices.

We note that WaterNSW's proposed total annual average revenue requirement is lower for the 2017 determination period compared to 2016-17 ($101 million in 2016-17 compared to an average of $87.6 million per annum over 2017-18 to 2020-21, excluding MDBA and BRC costs).

However, WaterNSW's proposed cost allowance for managing the risks associated with revenue volatility (discussed in Chapter 7) and the proposed increases in MDBA charges would mean that some WaterNSW customers would pay more in the 2017 determination period than currently. Chapter 14 outlines WaterNSW's analysis on customer bills of the proposed changes in charges.

IPART seeks comments on the following

43 Are WaterNSW's proposed final prices reasonable?

12.4 Fish River charges

WaterNSW's proposed charges for the Fish River scheme are outlined in Table 12.6. The approach to setting charges for the Fish River Scheme is discussed in chapter 10.

Table 12.6 WaterNSW's proposed Fish River Scheme charges for large users of bulk raw water ($2016-17, $/kL)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
Minimum Annual Quantity (MAQ)[a]						
EnergyAustralia	0.36	0.38	0.38	0.38	0.38	5.6%
WaterNSW (Urban)	0.38	0.38	0.38	0.38	0.38	0.0%
Oberon Council	0.38	0.38	0.38	0.38	0.38	0.0%
Usage up to MAQ						
EnergyAustralia	0.42	0.28	0.28	0.28	0.28	-33.3%
WaterNSW (Urban)	0.43	0.28	0.28	0.28	0.28	-34.9%
Oberon Council	0.43	0.28	0.28	0.28	0.28	-34.9%
Usage in excess of MAQ						
EnergyAustralia	0.78	0.66	0.66	0.66	0.66	-15.4%
WaterNSW (Urban)	0.81	0.66	0.66	0.66	0.66	-18.5%
Oberon Council	0.81	0.66	0.66	0.66	0.66	-18.5%

a Each customer in the Fish River is assigned a share (similar to an entitlement amount) specified in the Department of Primary Industries, Office of Water, *State Water Corporation Water management Licence Fish River Scheme*, May 2012. This share is the Minimum Annual Quantity (MAQ). The customer pays a fixed charge for the MAQ and a usage amount depending on the amount of water allocated to it and the relativity of the allocated water amount to the MAQ.

Source: WaterNSW, *Pricing Proposal to IPART for Rural Bulk Water Services,* and IPART calculations.

Table 12.7 WaterNSW's proposed Fish River Scheme charges for large users of bulk filtered water ($2016-17, $/kL)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
Minimum Annual Quantity (MAQ)	0.57	0.67	0.67	0.67	0.67	17.5%
Usage up to MAQ	0.61	0.26	0.26	0.26	0.26	-57.4%
Usage in excess of MAQ	1.18	0.93	0.93	0.93	0.93	-21.2%

Note: WaterNSW currently has one large bulk water filtered water customer, which is Lithgow Council.

Source: WaterNSW, *Pricing Proposal to IPART for Rural Bulk Water Services,* and IPART calculations.

Table 12.8 WaterNSW's proposed Fish River Scheme charges for individual minor customers ($2016-17)

	2016-17	2017-18	2018-19	2019-20	2020-21	% Change
BULK RAW WATER						
Minimum Annual Quantity (MAQ) ($/year)	71.27	75.93	75.93	75.93	75.93	6.5%
Usage up to MAQ ($/kL)	0.42	0.28	0.28	0.28	0.28	-33.3%
Usage in excess of MAQ ($/kL)	0.78	0.66	0.66	0.66	0.66	-15.4%
BULK FILTERED WATER						
Minimum Annual Quantity (MAQ) ($/year)	137.95	134.61	134.61	134.61	134.61	-2.4%
Usage up to MAQ ($/kL)	0.78	0.26	0.26	0.26	0.26	-66.7%
Usage in excess of MAQ ($/kL)	1.47	0.93	0.93	0.93	0.93	-36.7%

Source: WaterNSW, *Pricing Proposal to IPART for Rural Bulk Water Services*, and IPART calculations.

IPART's response on Fish River charges

Table 12.6 shows that under WaterNSW's proposal, charges for the Fish River Scheme would generally decrease. However, we will examine WaterNSW's proposed changes in prices for Fish River customers, in particular, the rationale behind prices increasing for some customers while decreasing for others.

We will review WaterNSW's proposed charges and take into account stakeholder feedback in setting charges in our draft and final reports.

IPART seeks comments on the following

44 Are WaterNSW's proposed Fish River Scheme charges reasonable?

12.5 Yanco Creek Levy

WaterNSW, on advice from the Yanco Creek and Tributaries Advisory Council Inc (YACTAC), has proposed to maintain the current Yanco Creek natural resources management levy of $0.90 per ML of entitlement. This levy applies to a sub-set of customers within the Murrumbidgee valley.[129]

WaterNSW has proposed to continue to treat the levy as a cost pass-through. The Yanco Creek Levy is discussed in greater detail in Chapter 8.

[129] WaterNSW, *Pricing Proposal for Rural Bulk Water Charges*, June 2016, p 147.

IPART's response on Yanco Creek Levy

We will take feedback from Yanco Creek levy payers into account when reviewing the continuation and magnitude of the levy (see Chapter 8).

12.5.1 WaterNSW's proposal to introduce credit card payment fee

WaterNSW has proposed to introduce credit cards as a payment option. However, by offering this payment channel to customers, WaterNSW states that it will incur credit card payment fees. WaterNSW has proposed to pass on to customers an amount in respect of these fees which is set by NSW Treasury based on the normal cost of merchant interchange fees. This is currently 0.44% for Visa/Mastercard and 1.54% for American Express cards. WaterNSW has proposed to vary the charges as NSW Treasury varies the charges (see Appendix E).

According to WaterNSW, its proposal is in response to a direction from NSW Treasury (in May 2012) to NSW Government agencies and State Owned Corporations (SOCs) to recoup their merchant interchange fees. Merchant interchange fees are incurred by SOCs and government agencies when they accept credit card payments from the public or customers.

The NSW Government requires recoupment of these fees through surcharging for payments accepted using debit or credit cards issued by card schemes such as Visa, MasterCard, American Express and Diners. This does not include payments accepted using ATM cards issued by banks and other deposit taking institutions.[130]

IPART's response on credit card payment fee

Our view is to not regulate the maximum amount of a credit card payment fee levied by WaterNSW. We note that customers can avoid the credit card fee as they have a choice of payment methods.

IPART seeks comments on the following

45 Do customers support the introduction of credit card payment options?

46 Is there any reason for IPART to regulate these fees?

[130] NSW Treasury, *Treasury Circular*, 24 May 2012.

13 Metering service and miscellaneous charges

WaterNSW owns and operates around 2,000 meters (telemetered and non-telemetered), which were funded by the Commonwealth Government under the NSW Metering Project. These meters were installed in the Murray and Murrumbidgee valleys.[131]

In the 2010 Determination, we decided to introduce a metering service charge, which applied to new meters installed under the NSW metering scheme. Metering service charges are levied for users of WaterNSW owned meters on regulated rivers. The current metering service charges cover the cost of operating, maintaining and reading the WaterNSW owned meters as well as the provision, maintenance and operation of information systems to process water meter data.[132]

These charges are separate to the meter service charges that we set in our recent review of prices for the Water Administration Ministerial Corporation (WAMC).[133] In this case, DPI Water provides metering services to licence holders in unregulated rivers and groundwater sources for WAMC.

WaterNSW proposes to continue levying a meter service charge on customers who extract water through a WaterNSW-owned meter. The charge will recover the costs associated with its maintenance and administration (including overheads).[134]

WaterNSW has also stated that it intends to restructure its approach to meter reading over the determination period.[135] This is discussed further below.

In addition, WaterNSW has proposed a number of miscellaneous charges. These miscellaneous charges include water trading charges, an environmental gauging station charge, a refundable meter accuracy deposit, and Fish River connection/disconnection fees. The environmental gauging station charge is an annual charge, whereas the other charges are fee for service.

131 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 110.
132 ACCC, *Final Decision on State Water Pricing Application: 2014-15 – 2016-17,* June 2014, p 24.
133 IPART, *Review of prices for the Water Administration Ministerial Corporation,* June 2016, Chapter 11.
134 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 110.
135 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 112.

The proposed meter service charge and other miscellaneous charges are discussed in the sections below.

13.1 Meter service charges (MSC)

WaterNSW has proposed to continue levying a metering service charge to cover maintenance and administration costs related to WaterNSW owned meters. The proposal features the same level of charging for both telemetered and non-telemetered meters, with differential pricing by meter size only. In its 2014 Decision, the ACCC determined separate maintenance charges for telemetered and non-telemetered meters, with differential pricing by meter size within those categories.

Table 13.1 shows WaterNSW's proposed annual charges over the 4-year determination period. The charges are based on a service contract with a third party, which was selected from a competitive tender evaluation process in 2015.

Under WaterNSW's proposal, meter service charges will increase over the 4-year determination period for all meter sizes, except channel meters. Additionally, for meter sizes 200mm and above, charges decrease in the first year before increasing over the remaining years.

Table 13.1 WaterNSW's proposed annual meter service charges (telemetry and non-telemetry) ($2016-17)

Meter size (mm) and channel	2016-17	2017-18	2018-19	2019-20	2020-21	% change (2016-17 to 2020-21)
50	$398.65	$429.29	$449.19	$469.09	$528.71	32.6%
80	$398.79	$431.14	$451.12	$471.09	$530.31	33.0%
100	$399.55	$429.98	$450.38	$470.77	$534.06	33.7%
150	$420.27	$433.12	$454.28	$475.45	$548.65	30.5%
200	$442.79	$434.73	$456.25	$477.76	$560.12	26.5%
250	$448.46	$435.23	$457.44	$479.65	$565.11	26.0%
300	$450.46	$438.37	$461.70	$485.02	$574.97	27.6%
350	$463.04	$454.82	$482.29	$509.76	$625.98	35.2%
400	$515.41	$462.70	$493.34	$523.97	$657.98	27.7%
450	$623.99	$463.52	$495.02	$526.52	$661.43	6.0%
500	$633.40	$472.19	$505.48	$538.76	$668.58	5.6%
600	$667.59	$480.30	$516.97	$553.64	$682.10	2.2%
700	$681.27	$491.69	$531.74	$571.78	$695.63	2.1%
750	$682.95	$518.05	$559.03	$600.01	$760.64	11.4%
800	$720.82	$523.27	$569.48	$615.69	$781.54	8.4%
900	$775.11	$524.93	$572.79	$620.65	$788.16	1.7%
1,000	$780.59	$527.99	$578.91	$629.83	$800.39	2.5%
Channel	$7,637.95	$5,674.46	$5,737.92	$5,801.39	$6,051.33	-20.8%

Source: WaterNSW Pricing Proposal, p 111.

Note: In the 2014 Decision, the ACCC determined separate maintenance charges for telemetered and non-telemetered meters, with differential pricing by meter size within those categories. The 2016-17 figures are based on the MSC for telemetered meters.

13.1.1 The ACCC's assessment of meter service charges

In its 2014 Final Decision, the ACCC did not fully approve WaterNSW's (then State Water) proposed meter operating and maintenance costs. It found that the costs did not reflect the prudent and efficient cost of providing the service for newly installed meters (less than two years old). However, for meters installed more than two years ago, it found that the costs were reasonable except for:

- the corporate overheads allocated to the charges, which were reduced to a level reflecting historical experience
- the cost of telemetry and information systems, which were adjusted to align with historic costs for reading and processing meter data.

In its proposal, Water NSW commented that its proposed MSC will allow it to recover the costs associated with asset maintenance in relation to telemetry assets and administration costs incurred by Water NSW, including associated overheads.[136]

13.1.2 IPART's response to meter service charges

For this review, we will request our expenditure review consultant to assess and market-test the meter service charges proposed by WaterNSW. In particular, we will examine the meter service charge model provided by WaterNSW, including how the costs were incorporated from the market tested contract and how any shared/overhead costs were allocated.

We are seeking stakeholder views on WaterNSW's proposed changes to its meter service charges for this review, including the change to the structure of charges (removing the difference between telemetered and non-telemetered meters) as well as the level of charges.

IPART seeks comments on the following

47 Are WaterNSW's proposed meter service charges reasonable?

13.1.3 Water reading and assessment charge

WaterNSW does not levy a separate charge for meter reading and water use assessment costs. These charges are recovered through bulk water charges. Currently, WaterNSW requires:

- a minimum of four customer reads per annum, and one annual compliance check for customers using less than 100 ML
- a minimum of two meter reads performed by WaterNSW per annum, for customers using between 101 ML and 500 ML, and
- a minimum of four meter reads performed by WaterNSW per annum, for customers using 501 ML or greater.[137]

WaterNSW stated that it intends to restructure its approach to meter reading over the determination period. It will investigate different options for recovering meter reading and water use assessment costs. It stated a fixed minimum charge for small customers and a separate meter reading charge for larger customers may be appropriate. WaterNSW also commented that it will analyse different options for different customer segments and will continue to consult with customers on these options.[138]

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136 WaterNSW, *Pricing Proposal for Bulk Water Services,* 1 June 2016, p 110.
137 WaterNSW, *Pricing Proposal for Bulk Water Services,* 1 June 2016, pp 111-112.
138 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, p 112.

IPART's response

We will consider the appropriate approach to recovering the costs of meter reading and water use assessment over the course of this review.

IPART seeks comments on the following

48 Should WaterNSW recover meter reading costs through a separate charge rather than including them in standard bulk water charges?

13.2 Miscellaneous charges

WaterNSW proposed to levy six miscellaneous charges to recover the cost of non-routine services. Table 13.2 summarises the charges and how they are levied. WaterNSW stated that it proposes to index the 2017-18 charges by CPI over the determination period.

Table 13.2 Summary of WaterNSW's proposed miscellaneous charges ($2016-17)

Charge	2016-17 (current)	2017-18 and onwards	How the charge is levied
Trade processing charge	$39.01 per application $0.51 per ML of allocation traded	$39.01 per application $0.51 per ML of allocation traded	On receipt of a trade application
Environmental gauging station charge	$8,789.45 per year	$18,658 per year	Before the works are carried out as requested by the customer
Refundable meter accuracy deposit for verification and testing in situ	$1,710.26 per request	$3,000 per request	Before the works are carried out as requested by the customer
Refundable meter accuracy deposit for laboratory verification and testing	NA	$1,795.19 per request	Before the works are carried out as requested by the customer
Fish River connection charge	$473.51 per request	Fee for service	As agreed between the customer and WaterNSW
Fish River disconnection charge	$263.06 per request	$263.03 per request	Before the works are carried out as requested by the customer

Source: WaterNSW, *Pricing Proposal to IPART,* June 2016, p 113.

13.2.1 Trade processing charge

These charges cover the administrative costs of processing trade applications. This includes trading assignments between licenses (general and high security) within a water source, between water sources and between states (subject to the Minister's consent).

WaterNSW intends to continue levying this charge at the same level (in real terms, excluding the effects of inflation) over the determination period.[139] We will consider whether this charge is cost reflective in setting it for the 2017 Determination. In general, charges should be set to reflect the efficient costs of providing the relevant services, in order to send appropriate price signals.

IPART seeks comments on the following

49 Is WaterNSW's proposed trade processing charge reasonable?

13.2.2 Environmental gauging station charge

The environmental gauging station charge recovers the incremental costs of operating the 21 environmental gauging stations that are operated under a service agreement with DPI Water.

WaterNSW proposed to increase this charge significantly for 2017-18 because it argues the current ACCC determined charge is insufficient to recover the incremental costs of upgrading the stations to achieve the level of accuracy required under the Commonwealth National Measurement Standards. The proposed charge includes additional operational costs to maintain the gauging station at the required level of accuracy.[140]

For the 2017 Determination, we will consider WaterNSW's proposed environmental gauging station charge and examine whether the charge reflects efficient costs.

IPART seeks comments on the following

50 Is WaterNSW's proposed environmental gauging station charge reasonable?

13.2.3 Refundable meter accuracy deposit

Meter accuracy deposits are for resolving customer disputes about the accuracy of WaterNSW-owned meters, and are forfeited by the customer if the meter is found to be operating within accuracy standards. Where the meter is operating outside of accuracy standards, the deposit is refunded.

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139 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, p 113.
140 WaterNSW, *Pricing Proposal for Bulk Water Services,* June 2016, p 117-118.

For in-situ testing, WaterNSW proposed to increase the deposit from $1,710 to $3,000 to provide the right incentives for customers to question the accuracy of the meter. WaterNSW stated that the $3,000 rate is approximately half of the costs associated with the works.[141]

WaterNSW proposed to introduce a new meter accuracy refundable deposit for meter laboratory verification and testing of $1,795.19. WaterNSW commented that this is consistent with the equivalent charge under IPART's recent determination of the Water Administration Ministerial Corporation's (WAMC) water management charges, which took effect from 1 July 2016.[142]

We will review WaterNSW's proposal to increase the charge for in-situ testing to a more cost-reflective level, as well as the introduction of the new meter accuracy refundable deposit for meter laboratory verification and testing.

IPART seeks comments on the following

51 Are WaterNSW's proposed refundable meter accuracy deposits appropriate?

13.2.4 Fish River Connection/Disconnection Fee

WaterNSW stated that each new connection in the Fish River entails different requirements (location of tapping point and time taken to travel to location), which results in a variable cost of connection. WaterNSW also stated that the current charge does not cover the full cost of the connection services. As such, it proposes to provide individual quotes for each connection, using a bottom-up build-up of costs based on labour, material, equipment hire and travel time required.[143]

When considering our determination, IPART is required to either set prices or a methodology to determine prices. We will need to consider whether it is possible for WaterNSW to set prices based on a cost build-up, or whether we need to set prices for individual components of a service. We could also consider setting a methodology for determining this charge.

We will consider whether to accept WaterNSW's proposal, specify a maximum charge, or set a methodology for calculating a charge for this service. In doing so, we will balance the benefits of cost-reflective pricing against the administration costs and practicality of different pricing options. We will also consider the requirements of the IPART Act and stakeholder views. Setting a price that recovers the average costs of providing this service may be the most practical approach to recovering WaterNSW's costs under the circumstances.

141 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* 1 June 2016, pp 113, 118.
142 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 118.
143 WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 118-119.

For disconnections, WaterNSW proposes to continue to maintain the existing charges in real terms. It stated that the disconnection service is less complex than connection and involves removing the meter and turning the tap off.[144]

IPART seeks comments on the following

52 Is WaterNSW's proposed 'fee for service' approach to determining Fish River connection fees reasonable?

53 Is WaterNSW's proposed Fish River disconnection fee reasonable?

[144] WaterNSW, *Pricing Proposal for Rural Bulk Water Services,* June 2016, p 119.

14 Impacts of prices

As part of our review, we will consider the potential implications of our pricing decisions on WaterNSW, water entitlement holders and the wider community. In setting prices for the Coastal valleys we will consider each of the matters listed in Section 15 of the IPART Act (see Appendix A).

In setting prices for MDB valleys in its 2014 Decision, the ACCC was required to have regard to whether the charges would contribute to the Basin Water Charging Objectives and Principles (BWCOP) set out in Schedule 2 of the *Water Act 2007*, and also listed in Appendix A.

One of the Basin water charging objectives is to avoid perverse or unintended pricing outcomes. In deciding to cap price increases for the Peel Valley, the ACCC considered that continuing a cap on annual price increases, and a NSW Government subsidy to support this, would best meet the BWCOP.[145] In setting prices for the MDB valleys, we will also be required to take into account the BWCOP.

In assessing impacts on customers for the draft and final reports, we will model the impact of our prices on customer bills, and estimate water bills as a proportion of farm costs. We may also consider the ability of water users to mitigate the impact of charges through trading water entitlements/allocation.

WaterNSW has provided an assessment of the impact of its proposed prices on users, using hypothetical customer bills.

The sections below outline WaterNSW's assessment of the impacts on bills of proposed prices. In developing prices for our draft report, we will take stakeholder feedback into account when examining the impacts on WaterNSW and its customers.

14.1 Impact of WaterNSW's proposed prices on customers

The practical impact of WaterNSW's proposed charges can be shown by the changes that would occur in customer bills compared to bills under current prices.

[145] ACCC, *Final Decision on State Water Pricing Application: 2014-15 – 2016-17*, pp 11-12, 19-20.

Table 1.1 shows the impact on customer bills of WaterNSW's proposed fixed and usage charges. General security (GS) bills are calculated based on a customer holding a 1,000 ML entitlement and using 60% of the entitlement. High security (HS) bills are based on a customer holding a 500 ML entitlement and using 100% of entitlement held in a year. The bills in Table 14.1 do not include MDBA and BRC charges. The bills are in nominal dollars, and therefore include the impact of forecast inflation (forecast to be 2.5% per annum for the 2017 Determination).

Table 14.1 Customer bill impacts of proposed charges[a] ($nominal)

Valley	2016-17	2017-18	2020-21	2016-17 to 2020-21 %
1. Border				
General Security	$6,385	$5,757	$6,200	-2.9%
High Security	$6,748	$5,669	$6,105	-9.5%
2. Gwydir				
General Security	$10,753	$11,082	$11,934	11.0%
High Security	$13,130	$12,429	$13,384	1.9%
3. Namoi				
General Security	$20,405	$21,063	$22,682	11.2%
High Security	$18,776	$17,721	$19,083	1.6%
4. Peel				
General Security	$38,832	$40,302	$43,400	11.8%
High Security	$46,761	$40,484	$43,597	-6.8%
5. Macquarie				
General Security	$13,804	$11,566	$12,456	-9.8%
High Security	$16,572	$12,955	$13,951	-15.8%
6. Lachlan				
General Security	$15,955	$15,550	$16,746	5.0%
High Security	$18,799	$17,134	$18,452	-1.8%
7. Murrumbidgee				
General Security	$3,381	$3,441	$3,706	9.6%
High Security	$3,304	$3,187	$3,432	3.9%
8. Lowbidgee				
Supplementary	$625,574	$644,957	$694,548	11.0%
9. Murray				
General Security	$2,982	$2,687	$3,112	4.4%
High Security	$2,499	$2,233	$2,548	2.0%
10. North Coast				
General Security	$34,274	$37,701	$50,181	46.4%
High Security	$27,290	$30,019	$39,955	46.4%
11. Hunter				
General Security	$17,722	$15,466	$16,655	-6.0%
High Security	$20,400	$17,267	$18,595	-8.8%

Valley	2016-17	2017-18	2020-21	2016-17 to 2020-21 %
12. South Coast				
General Security	$34,318	$37,750	$50,245	46.4%
High Security	$30,750	$33,825	$45,021	46.4%
13. Fish River Valley (filtered water)				
Lithgow Council	$1,542,666	$1,458,911	$1,571,087	1.8%
Minor customers	$794	$517	$557	-29.8%
13a. Fish River Valley (raw water)				
EnergyAustralia	$3,418,816	$3,535,216	$3,807,041	11.4%
Minor customers	$476	$418	$450	-5.5%

a Bill calculations do not include the pass-through of MDBA and BRC charges.

Source: WaterNSW Pricing Proposal, June 2016, pp 49-58.

North Coast and South Coast customers would experience the highest percentage bill increases under WaterNSW's proposal. The typical bill would increase by 46.4% in each valley due to the proposal to transition prices towards full cost recovery, subject to a 10% cap on annual price increases. Both valleys are currently below full cost recovery.

Bill increases would also occur for the Gwydir, Namoi and Peel GS customers. These increases would be driven in part by WaterNSW's proposal to recover its costs of managing the risk of revenue volatility (as discussed in Chapter 7).

Valleys where both the HS and GS customers would experience bill reductions include Border, Macquarie and Hunter valleys.

In general prices are decreasing in valleys as WaterNSW's revenue requirement is decreasing. The largest percentage decreases in revenue requirement are experienced in the Fish River, Hunter, Peel and Macquarie valleys. The valleys with the largest percentage increases are the Lowbidgee, Murray and Murrumbidgee valleys.

Lowbidgee bills for supplementary entitlement holders would increase by 11.0% over the determination period, which is a result of a proposed capital program.

Across all valleys (other than the North and South Coast) GS bills increase by more than bills for HS entitlement holders. In valleys where there are price decreases (eg, Border and Hunter the decrease for GS is less than for HS bills). This is driven by assignment of volatility costs as a fixed charge to GS entitlements and in the Border, Murrumbidgee and Murray valleys proportionally greater allocation of MDBA costs to GS entitlements holders.

14.2 Proposed MDBA and BRC pass-through costs

As outlined in Chapter 8, WaterNSW is proposing to significantly increase the cost pass-through for the MDBA and BRC contributions. This would have a significant impact on customer bills in the Murray and Murrumbidgee valleys.

As Chapter 12 explained, WaterNSW proposes to recover the BRC/MDBA costs through a fixed charge (per entitlement), instead of the previous 40:60 fixed to usage charge split. For example, for the Murray valley, WaterNSW proposes that the MDBA HS fixed charge would increase by 105.4%, the MDBA GS fixed charge by 162.4%, and the MDBA usage charge would decrease by 100%. Table 14.2 shows the bills for those affected valleys when the BRC and MDBA pass through costs are added to their fixed charges.

Table 14.2 Customer bills including BRC/MDBA pass-through costs ($nominal)

	2016-17	2017-18	2020-21	2016-17 to 2020-21
1. Border				
General Security	$10,298	$8,662	$9,410	-8.6%
High Security	$10,875	$7,820	$8,485	-22.0%
7. Murrumbidgee				
General Security	$4,160	$4,630	$4,656	11.9%
High Security	$4,075	$4,020	$4,090	0.4%
9. Murray				
General Security	$6,598	$8,542	$7,432	12.6%
High Security	$5,745	$6,360	$5,565	-3.1%

Source: WaterNSW, *Pricing Proposal for Rural Bulk Water Services*, June 2016, pp 49-58, and IPART calculations.

Table 14.2 shows that, for the valleys affected by BRC and MDBA pass through costs, there are mixed impacts on bills under WaterNSW's proposed prices. Bills for both GS and HS customers in the Border valley would decrease over the 2016-17 to 2020-21 period; whereas bills for GS customers in the Murrumbidgee would increase, with bills for HS customers in this valley remaining flat.

The Murray valley would experience mixed effects, with GS customer bills increasing while HS customer bills would decrease slightly.

14.3 Financeability

We are required under section 15 of the IPART Act to consider the impact on customers as well as the business' financial viability when setting the level of charges for WaterNSW's coastal valleys.

An objective under the BWCOP (Appendix A) is to promote 'economically efficient and sustainable use of government resources devoted to the management of water resources'.

In making price determinations, IPART generally applies a financeability test to assess how pricing decisions are likely to affect a utility's short term financial viability. The financeability test is based on a utility's actual gearing ratio and a forecast of the actual interest expense. We assess whether our pricing decisions would enable the utility to raise finance consistent with an investment grade rated (Baa2) firm, over the regulatory period. We take this into account in setting prices for WaterNSW for the 2017 Determination.

14.3.1 IPART's response on price impacts

In determining WaterNSW's charges, we will take into account the impact these charges will have on customers' bills.

In our 2010 Determination, we used a range of measures to assess the impacts of our pricing decisions on customers.[146] As part of our customer impact assessment, we calculated the impacts on bills for small, medium and large general security and high security users, where general security users were assumed to receive 60% of their allocation and high security users were assumed to receive 100% of their allocation.

We also considered customer bills as a proportion of total farm cash costs, to assess how significant water bills were in relation to farm costs. In addition, we considered the impact of Fish River Scheme charges on large customers.

We propose to use a similar approach for the 2017 Determination to assess customer impacts of proposed prices on customers to meet our IPART Act requirements and to also consider the prices against the BWCOP.

We will also assess the impact on WaterNSW to ensure that it is able to efficiently operate, maintain, renew and augment the assets it requires to deliver its regulated rural bulk water services. We propose to assess WaterNSW's financeability at the corporate level (ie, combined WaterNSW Greater Sydney and WaterNSW Rural regulated businesses). To do this, we will analyse the results of our determined prices on the financial results of the business while keeping the results of the Greater Sydney constant.

IPART seeks comments on the following

54 Is WaterNSW's analysis of the impacts of its proposed prices on customer bills reasonable?

55 Can we improve our proposed approach to assessing customer impacts?

[146] IPART, *Review of Bulk Water Charges for State Water Corporation,* June 2010, Chapter 12.

15 Other issues

This chapter considers the issue of pricing in valleys that are currently well below full cost recovery – ie, the South Coast and North Coast valleys.

In our 2010 Determination and the ACCC's 2014 Decision, measures such as a cap on price increases for valleys considerably below full cost recovery have been used to mitigate customer impacts. This means the Government has had to bear the shortfall as a community service obligation (CSO).

WaterNSW proposes to cap price increases in the two valleys below full cost recovery, the South Coast and North Coast. We are developing our approach to address the situation where there is little or no likelihood of achieving full cost recovery for the 2017 determination period.

15.1 Setting prices in valleys with high prices and low recovery of costs

When possible, we aim to set prices that fully recover the users' share of WaterNSW's efficient costs. This approach ensures customers receive efficient price signals, which means that resources are used and allocated efficiently, and users and taxpayers fairly share the costs of services.

We have capped price increases in past determinations

In our 2010 Determination for the then State Water, we set prices to recover the full cost of services in 8 of the 11 valleys across NSW, as well as the Fish River Scheme. However, to reduce adverse customer impacts, we decided to cap real annual average bill increases at 10% per year in the North Coast, South Coast and Peel valleys, given the low levels of cost recovery.[147]

In its 2014 Decision, the ACCC maintained a similar approach in capping price increases in the Peel valley at 10% per year.[148] After the 2015 Annual Review the Peel valley is now at full cost-recovery.

[147] IPART, *Review of Bulk Water Charges for State Water Corporation,* June 2010, p 149.
[148] ACCC, *Final Decision on State Water Pricing Application: 2014-15 – 2016-17,* June 2014, p 23.

WaterNSW proposes to continue with 10% price caps

In its pricing proposal to IPART for this review, WaterNSW proposes to continue to cap annual price increases at 10% per year for the North Coast and South Coast valleys.[149] Under its proposed prices, both these valleys would continue to be well below full cost-recovery, recovering about 12% and 44% respectively of their user share of costs by 2021.[150]

Table 15.1 shows WaterNSW's proposed user share of the notional revenue requirement (or user share of total costs) and target revenue (revenue raised from customer charges) for the North Coast and South Coast valleys. This demonstrates the significant gap between the user share of the notional revenue requirement and the forecast revenue raised from prices in these valleys. To recover the proposed user share of costs in these valleys, the NSW Government would need to contribute around $1.24 million each year, on average.

Table 15.1 WaterNSW proposed user share of notional revenue requirement and target revenue for 2017 determination period ($'000/year, $2016-17)

	North Coast	South Coast
Notional revenue requirement	3,636	3,098
Target revenue	423	1,355
Government subsidy	3,213	1,743
Cost recovery %	12%	44%

Note: Figures are net present value over the 4-year determination period.

Source: WaterNSW pricing proposal to IPART, June 2016, p 30; WaterNSW Information Return, June 2016; IPART analysis.

The North Coast and South Coast valleys have the fewest customers of all of WaterNSW's valleys. They also have the lowest volume of entitlements and average annual water usage. The low level of extractions relative to the volume of entitlements suggests there is a significant under-utilisation of entitlements by licence holders in the North Coast valley in particular. The North Coast and South Coast valleys also have relatively small dams, with a higher cost per unit of storage capacity.

[149] WaterNSW, *Pricing Proposal to IPART for Rural Bulk Water Services*, June 2016, p 30.
[150] WaterNSW Information Return, June 2016, and IPART analysis.

In both our 2006 and 2010 determinations we stated that State Water should consult with the NSW Government to assess the long-term viability of valleys that are below full cost recovery, and to consider how to fund services in those valleys. Our 2010 Determination stated:

> … State Water and the Government should assess the long-term viability of these valleys that are below full cost recovery. In the interim, the NSW Government will need to fund the revenue shortfall as it has done for the 2006 Determination.[151]

WaterNSW states that its proposed prices will require:

> …an additional $0.4 million per annum in [community service obligation] subsidy payments from current levels ($1.1 million per annum) to recover its forecast user share of costs. This is despite the 10 per cent per annum glide path increase in recovered costs, due to declining customer numbers and average water sales in these valleys.[152]

IPART's response

Bulk Water Prices are highest in North Coast, South Coast and Peel

We have set valley based prices since 1994-95 in line with national reforms such as intergovernmental competition agreements and the National Water Initiative (NWI), which encouraged cost-reflective pricing and the removal of cross-subsidies. In 2012, our review of rural water charging systems examined the under-recovery of the user share of costs. For the Peel Valley, our view in 2012 was to continue to transition to full cost recovery, but cap annual real price increases at 5%.

Despite the low level of cost-recovery, users in the North Coast and South Coast valleys pay the highest bulk water charges in NSW (see Table 14.1).

While the Peel valley is now at full cost-recovery, customers in that valley also pay relatively high prices. WaterNSW states:

> Peel valley customers face similar pricing pressures. For instance, charges in Peel valley for HS entitlements and usage are much higher than in other NSW valleys due to recovery of costs from relatively low volumes of entitlement and usage.[153]

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151 IPART, *Review of bulk water charges for State Water Corporation, From 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 150.

152 WaterNSW, *Pricing Proposal to IPART for Rural Bulk Water Services*, June 2016, p 30.

153 WaterNSW pricing proposal to IPART, June 2016, p 30.

Setting prices in valleys where prices are not fully cost reflective

In setting prices in the North Coast and South Coast valleys, we will consider a number of broad approaches to the issue. For example, approaches could include:

- continue the transition to full cost recovery, but cap annual real price increases (at 10%, for example)
- freeze prices at a point in time
- reassess the efficient or optimal cost base in these valleys given prevailing market conditions (including entitlement volumes and customer numbers)
- introduce consideration of capacity to pay
- set prices that only recover operating costs
- set lower-bound prices (ie, that exclude a return on assets)

We will also consider other options identified throughout the review, including those put forward by stakeholder submissions.

For the 2017 Determination, we will consider the appropriate approach to pricing for customers in valleys that are significantly below full cost recovery, or where prices are high compared to other valleys.

We intend to consider the level of bulk water service that customers require in each of the valleys with low levels of cost-recovery and/or the level of prices. This may involve reassessing the assets, infrastructure and operating costs that would be required to deliver services, given both supply and demand factors.

To do so, we may investigate how each of these assets (dams) would be designed and constructed now, given what we know now about the customer base and demand for bulk water services. Under this type of approach, we would consider setting the user share of capital costs based on the depreciated optimised replacement cost (DORC)[154] of assets.

To ensure that the principles upon which we set prices are consistent and objective, we have engaged consultants to develop a preliminary set of principles and guidelines we have reference to when making pricing decisions in this context, while maintaining the integrity of our regulatory approach.

We will aim to set prices that will provide incentives to manage assets efficiently over the long term.

[154] The DORC method values the asset base based on buying a modern equivalent asset needed to deliver the required services and depreciated to reflect the remaining life of the existing assets.

IPART seeks comments on the following

56 How should the cost of providing bulk water services be recovered in valleys in which full cost recovery has not been achieved?

57 What principles or approaches should we use to assess the efficient costs of services in valleys that are well below full cost recovery?

58 What principles should we use to determine prices in valleys that are well below full cost recovery?

59 Given the low level of cost-recovery, are there any assets that should be excluded from the asset base and hence from prices? If so, what are the ongoing costs of these assets and who should bear them?

16 Output measures

As part of our determination process, we usually specify outputs against which to measure the delivery of the proposed expenditure program.[155] For this review, we will consider if there is benefit in setting output measures that can be used by stakeholders to assess WaterNSW's progress against the determination.

If prices are set to allow WaterNSW to recover the efficient costs of undertaking a certain level of activity, it is important that these activities occur or that the outcomes are achieved.

16.1 WaterNSW's Performance

At our 2010 Determination, we specified a set of output measures grouped into seven categories for WaterNSW for the 2010-11 to 2013-14 period.[156]

In its 2014 Decision, the ACCC did not set output measures for WaterNSW for the MDB valleys.

In its Proposal, WaterNSW has provided an end-of-determination report, which summarises its past performance.[157] It provides information for the comparison of financial results (revenue, operating and capital expenditure) for the MDB valleys and performance against service obligations.

High level achievements include:

- implementation of a new integrated organisational structure
- development of a new Strategic Action Plan
- achieved water delivery requirements 100% of the time
- met environmental flows requirements 100% of the time
- achieved 100% compliance with water quality guidelines

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[155] Output measures are a guide for our analysis, however, if an agency has justifiable reasons for diverging from a particular output measure then we will take that into account when determining prices.

[156] IPART, *Review of bulk water charges for State Water Corporation, From 1 July 2010 to 30 June 2014 – Final Report*, June 2010, pp 210-213.

[157] WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, Chapter 18.

- completed various significant capital works:
  - Burrendong Dam safety upgrade
  - Keepit Dam safety upgrade, and
  - telemetered metering Phase 1A.

Under its Operating Licence, which is currently subject to a separate review by IPART, WaterNSW is obliged to:

- take all reasonable steps to process all Water Orders promptly and efficiently
- take all reasonable steps to manage Water Orders so as to ensure the timely Delivery of water to its Customers
- maintain a Water Allocation Account for each access licence issued under the *Water Management Act 2000* (NSW) and each licence issued under the *Water Act 1912* (NSW) held by a Customer, and
- take all reasonable steps to conserve water and minimise water losses that result from undertaking its operations under the Operating Licence.

WaterNSW reports that results show general improvements in performance in delivering services to customers - eg, the number of non-complying orders contacted within one day has reached 100% to date for this year.

16.2 Performance against 2010 Determination measures

16.2.1 IPART's 2010 determination period

The output measures that we set for the 2010 Determination were:

- reporting the percentage of maintenance jobs on the Facilities Maintenance and Management System (FMMS) to measure the effectiveness of corrective and routine maintenance
- assessing the existing asset condition profile to see that there has been no deterioration of State Water's asset base
- assessing the completion of key dam safety schemes
- reporting on the number and percentage of key telemetry sites with remote monitoring for observation and control of assets
- monitoring of the performance of infrastructure related to fish passes
- reporting on completion of Cold Water Pollution works in relevant valleys
- developing performance indicators for water delivery for each valley.

In its proposal, WaterNSW stated:

> We have not presented a comparison for coastal valleys against the 2010 IPART determination in this pricing proposal. This information has been provided previously to IPART in Annual Information Accounts.[158]

Our 2010 Determination also requested that WaterNSW (then State Water) continue to meet its valley based reporting requirements by providing:

- annual reports to IPART and Customer Service Committee's (CSC's) on matters including costing data, water share plan compliance and any water use penalties enforcement action undertaken (subject to confidentiality)
- bi-annual valley based reports detailing revenue collected, operating and capital expenditure, and current year budget details.

The information we have received from WaterNSW over the 2010 determination period indicates that it performed relatively well against the determined output measures in some areas such as undertaking maintenance jobs on FMMS, but not well in other areas such as telemetry (eg, it had not installed automation upgrades and dam surveillance instrumentation on some sites projected for 2010-11).[159]

16.2.2 IPART's response

We will review WaterNSW's performance against the stipulated performance measures as part of our expenditure review for the relevant years and comment on outcomes in our Draft Report.

We will consider the implications of WaterNSW's performance levels for the upcoming determination and consider devising relevant performance and output measures for the 2017 determination period.

Our preliminary position is that setting targeted output measures for WaterNSW will be useful to judge its performance against the revenue we determine it needs to fulfil its functions.

IPART seeks comments on the following

60 Is there a need for output or other reporting measures for WaterNSW over the upcoming determination period? If so, what are appropriate measures?

[158] WaterNSW, *Pricing Proposal for Bulk Water Services*, June 2016, p 120.

[159] State Water, *Activity against output measures 2010/11 – Water Pricing*, p 3. We will seek further information from WaterNSW regarding its performance against its output measures for 2011-12 to 2013-14.

Appendices

A Legislative considerations

A.1 Matters to be considered by IPART under section 15 of the IPART Act

Section 15(1) of the IPART Act requires IPART, in making determinations, to have regard to the following matters (in addition to any other matters that 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).

A.2 Matters to be considered by IPART under the Water Act (2007)

Rule 29 of the WCIR sets out the matters that we are required to consider in determining charges for MDB valleys. Rule 29(2) and (3) specify the matters that IPART must be satisfied of when approving or determining regulated charges. Rule 29(4) explains the relevance of the Basin water charging objectives and principles that are set out below.

Schedule 2—Basin water charging objectives and principles

Part 2— Water charging objectives

The water charging objectives are:

(a) to promote the economically efficient and sustainable use of:

  (i) water resources; and

  (ii) water infrastructure assets; and

  (iii) government resources devoted to the management of water resources; and

(b) to ensure sufficient revenue streams to allow efficient delivery of the required services; and

(c) to facilitate the efficient functioning of water markets (including inter-jurisdictional water markets, and in both rural and urban settings); and

(d) to give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management; and

(e) to avoid perverse or unintended pricing outcomes.

Part 3— Water charging principles

Water storage and delivery

(1) Pricing policies for water storage and delivery in rural systems are to be developed to facilitate efficient water use and trade in water entitlements.

(2) Water charges are to include a consumption-based component.

(3) Water charges are to be based on full cost recovery for water services to ensure business viability and avoid monopoly rents, including recovery of environmental externalities where feasible and practical.

(4) Water charges in the rural water sector are to continue to move towards upper bound pricing where practicable.

(5) In subclause (4): upper bound pricing means the level at which, to avoid monopoly rents, a water business should not recover more than:

(a) the operational, maintenance and administrative costs, externalities, taxes or tax equivalent regimes; and

(b) provision for the cost of asset consumption; and

(c) provision for the cost of capital (calculated using a weighted average cost of capital).

(6) If full cost recovery is unlikely to be achieved and a Community Service Obligation is deemed necessary:

(a) the size of the subsidy is to be reported publicly; and

(b) where practicable, subsidies or Community Service Obligations are to be reduced or eliminated.

(7) Pricing policies should ensure consistency across sectors and jurisdictions where entitlements are able to be traded.

Cost recovery for planning and management

(1) All costs associated with water planning and management must be identified, including the costs of underpinning water markets (such as the provision of registers, accounting and measurement frameworks and performance monitoring and benchmarking).

(2) The proportion of costs that can be attributed to water access entitlement holders is to be identified consistently with the principles set out in subclauses (3) and (4).

(3) Water planning and management charges are to be linked as closely as possible to the costs of activities or products.

(4) Water planning and management charges are to exclude activities undertaken for the Government (such as policy development and Ministerial or Parliamentary services).

(5) States and Territories are to report publicly on cost recovery for water planning and management annually. The reports are to include:

(a) the total cost of water planning and management; and

(b) the proportion of the total cost of water planning and management attributed to water access entitlement holders, and the basis upon which this proportion is determined.

Environmental externalities

(1) Market-based mechanisms (such as pricing to account for positive and negative environmental externalities associated with water use) are to be pursued where feasible.

(2) The cost of environmental externalities is to be included in water charges where found to be feasible.

Benchmarking and efficiency reviews

(1) Independent and public benchmarking or efficiency reviews of pricing and service quality relevant to regulated water charges is or are to be undertaken based on a nationally consistent framework.

(2) The costs of operating these benchmarking and efficiency review systems are to be met through recovery of regulated water charges.

B Building blocks by valley

Table B.1 User share building blocks for average annual revenue requirement by valley 2017-18 to 2020-21 ($'000, $2016-17)

	Operating expenditure	Return on assets & working capital	Depreciation	Tax allowance	MDBA & BRC contributions	UOM allowance	ICD rebates	Total	Percentage
Border	1,177	129	73	0	775	61	0	2,214	3.0%
Gwydir	3,834	897	537	0	0	143	0	5,411	7.4%
Namoi	3,861	982	652	0	0	179	0	5,674	7.8%
Peel	841	188	108	31	0	0	0	1,167	1.6%
Lachlan	4,739	1,426	899	0	0	100	37	7,201	9.9%
Macquarie	4,026	1,136	649	0	0	316	0	6,126	8.4%
Murray	2,980	1,092	746	0	12,355	39	599	17,811	24.4%
Murrumbidgee	6,411	1,806	1,208	344	2,891	40	346	13,047	17.9%
Lowbidgee	365	188	77	0	0	0	0	629	0.9%
North Coast	635	295	87	0	0	0	0	1,017	1.4%
Hunter	2,720	1,040	308	0	0	0	0	4,067	5.6%
South Coast	646	170	50	0	0	0	0	867	1.2%
Fish River	2,956	2,770	1,301	365	0	269	0	7,661	10.5%
Total	**35,193**	**12,118**	**6,694**	**739**	**16,020**	**1,147**	**983**	**72,894**	
Percentage	**48.3%**	**16.6%**	**9.2%**	**1.0%**	**22.0%**	**1.6%**	**1.3%**		

Source: WaterNSW pricing proposal and AIR, IPART calculations.

Table B.2 WaterNSW's proposed user share of NRR - Border Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	1,340	1,381	1,401	1,395	5,517	1,379	1,595	-13.6%
UOM[c] allowance	61	61	61	61	243	61	32	90.4%
BRC costs[c]	758	782	779	779	3,098	775	746	3.9%
Total user share	*2,159*	*2,224*	*2,240*	*2,235*	*8,858*	*2,214*	*2,373*	-6.7%
Total NRR – Border	2,366	2,432	2,447	2,437	9,682	2,421	2,561	-5.5%
Total user share (%)	*91%*	*91%*	*92%*	*92%*	*91%*	*91%*	*93%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c BRC costs include a smoothed recovery of costs not recovered in the ACCC's 2014 Decision.

Table B.3 WaterNSW's proposed user share of NRR - Gwydir Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	5,180	5,199	5,336	5,356	21,071	5,268	5,215	1.0%
UOM[c] allowance	143	143	143	143	572	143	68	110.6%
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*5,323*	*5,342*	*5,479*	*5,499*	*21,643*	*5,411*	*5,283*	2.4%
Total NRR – Gwydir	10,449	10,419	10,505	10,461	41,835	10,459	11,924	-12.3%
Total user share (%)	*51%*	*51%*	*52%*	*53%*	*52%*	*52%*	*44%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.4 WaterNSW's proposed user share of NRR - Namoi Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	5,297	5,395	5,603	5,686	21,981	5,495	5,492	0.0%
UOM[c] allowance	179	179	179	179	715	179	92	93.2%
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*5,476*	*5,574*	*5,782*	*5,864*	*22,695*	*5,674*	*5,585*	1.6%
Total NRR – Namoi	13,855	14,399	14,811	15,098	58,162	14,541	14,538	0.0%
Total user share (%)	*40%*	*39%*	*39%*	*39%*	*39%*	*39%*	*38%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.5 WaterNSW's proposed user share of NRR - Peel Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	1,135	1,147	1,186	1,201	4,670	1,167	1,392	-16.1%
UOM[c] allowance	-	-	-	-	-	-	-	-
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*1,135*	*1,147*	*1,186*	*1,201*	*4,670*	*1,167*	*1,392*	-16.1%
Total NRR – Peel	3,392	3,392	3,414	3,407	13,605	3,401	4,315	-21.2%
Total user share (%)	*33%*	*34%*	*35%*	*35%*	*34%*	*34%*	*32%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.6 WaterNSW's proposed user share of NRR - Macquarie Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	5,728	5,736	5,867	5,910	23,241	5,810	7,065	-17.8%
UOM[c] allowance	316	316	316	316	1264	316	154	105.6%
BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*6,044*	*6,052*	*6,183*	*6,226*	*24,505*	*6,126*	*7,219*	-15.1%
Total NRR – Macquarie	9,011	9,004	9,118	9,133	36,265	9,066	10,359	-12.5%
Total user share (%)	*67%*	*67%*	*68%*	*68%*	*68%*	*68%*	*70%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.7 WaterNSW's proposed user share of NRR - Lachlan Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	7,113	6,953	7,136	7,201	28,404	7,101	7,568	-6.2%
UOM[c] allowance	100	100	100	100	401	100	47	115.0%
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*7,213*	*7,053*	*7,236*	*7,301*	*28,804*	*7,201*	*7,614*	-5.4%
Total NRR – Lachlan	11,104	10,926	11,083	11,110	44,223	11,056	11,815	-6.4%
Total user share (%)	*65%*	*65%*	*65%*	*66%*	*65%*	*65%*	*64%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.8 WaterNSW's proposed user share of NRR - Murrumbidgee Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	9,895	9,998	10,144	10,430	40,466	10,116	13,481	-25.0%
UOM[c] allowance	40	40	40	40	159	40	6	521.1%
MDBA costs[d]	3,438	2,712	2,674	2,740	11,564	2,891	2,387	21.1%
Total user share	*13,372*	*12,750*	*12,857*	*13,210*	*52,189*	*13,047*	*15,874*	-17.8%
Total NRR – Murrumbidgee	18,456	17,841	17,927	18,249	72,473	18,118	20,942	-13.5%
Total user share (%)	*72%*	*71%*	*72%*	*72%*	*72%*	*72%*	*76%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

d MDBA costs include a smoothed recovery of costs not recovered in the ACCC's 2014 Decision.

Table B.9 WaterNSW's proposed user share of NRR - Lowbidgee Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	480	571	684	782	2,517	629	597	5.5%
UOM[c] allowance	-	-	-	-	-	-	-	N/A
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*480*	*571*	*684*	*782*	*2,517*	*629*	*597*	5.5%
Total NRR – Lowbidgee	480	571	684	782	2,517	629	597	5.5%
Total user share (%)	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

Table B.10 WaterNSW's proposed user share of NRR - Murray Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	5,395	5,428	5,442	5,403	21,668	5,417	9,613	-43.6%
UOM[c] allowance	39	39	39	39	158	39	12	237.1%
MDBA costs[d]	15,187	11,710	11,261	11,261	49,419	12,355	10,646	16.0%
Total user share	*20,622*	*17,177*	*16,743*	*16,703*	*71,245*	*17,811*	*20,271*	-12.1%
Total NRR – Murray	21,519	18,072	17,631	17,582	74,805	18,701	20,207	-7.5%
Total user share (%)	*96%*	*95%*	*95%*	*95%*	*95%*	*95%*	*100%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

d MDBA costs include a smoothed recovery of costs not recovered in the ACCC's 2014 Decision.

Table B.11 WaterNSW's proposed user share of NRR - North Coast Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average IPART	Change[b]
Base building block	1,014	1,003	1,026	1,025	4,068	1,017	934	8.9%
UOM[c] allowance	-	-	-	-	-	-	-	N/A
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*1,014*	*1,003*	*1,026*	*1,025*	*4,068*	*1,017*	*934*	8.9%
Total NRR – North Coast	1,289	1,277	1,299	1,292	5,158	1,289	1,198	7.7%
Total user share (%)	*79%*	*79%*	*79%*	*79%*	*79%*	*79%*	*78%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2010-11 to 2013-14).

c Unders and Overs Mechanism (UOM).

Table B.12 WaterNSW's proposed user share of NRR – Hunter Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average IPART	Change[b]
Base building block	4,073	3,960	4,098	4,138	16,269	4,067	5,581	-27.1%
UOM[c] allowance	-	-	-	-	-	-	-	N/A
BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*4,073*	*3,960*	*4,098*	*4,138*	*16,269*	*4,067*	*5,581*	-27.1%
Total NRR – Hunter	5,236	5,099	5,256	5,284	20,874	5,219	6,884	-24.2%
Total user share (%)	*78%*	*78%*	*78%*	*78%*	*78%*	*78%*	*81%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2010-11 to 2013-14).

c Unders and Overs Mechanism (UOM).

Table B.13 WaterNSW's proposed user share of NRR - South Coast Valley ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	869	850	869	879	3,466	867	822	5.4%
UOM[c] allowance	-	-	-	-	-	-	-	N/A
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*869*	*850*	*869*	*879*	*3,466*	*867*	*822*	5.4%
Total NRR – South Coast	1,067	1,048	1,063	1,077	4,255	1,064	1,009	5.4%
Total user share (%)	*81%*	*81%*	*82%*	*82%*	*81%*	*81%*	*81%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (over 2017-18 to 2020-21) compared with 2016-17.

c Unders and Overs Mechanism (UOM).

Table B.14 WaterNSW's proposed user share of NRR - Fish River Scheme ($'000, $2016-17)

	2017-18	2018-19	2019-20	2020-21	Total[a]	Average Proposed[a]	Average ACCC	Change[b]
Base building block	7,123	7,336	7,521	7,588	29,568	7,392	10,153	-27.2%
UOM[c] allowance	269	269	269	269	1077	269	108	148.4%
MDBA and BRC costs	-	-	-	-	-	-	-	N/A
Total user share	*7,393*	*7,605*	*7,790*	*7,857*	*30,645*	*7,661*	*10,261*	-25.3%
Total NRR – Fish River	7,393	7,605	7,790	7,857	30,645	7,661	10,261	-25.3%
Total user share (%)	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	

a Total and annual average over 2017-18 to 2020-21.

b Annual average (2017-18 to 2020-21) compared with average annual (2014-15 to 2016-17).

c Unders and Overs Mechanism (UOM).

C Cost shares

This appendix provides a brief history of our development of the cost sharing ratios, and the key concepts used in our approach.

C.1 Cost shares – the economic argument for a government contribution

There is consensus that the charges for monopoly services should generally cover the full costs of providing those services. However, in the case of public goods or legacy issues, we took the view in past reviews that there is an economic argument for a government contribution to WaterNSW's efficient costs.[160]

C.1.1 Public good considerations and government contribution

There is an economic argument for long-term under-recovery of costs (that is, a government contribution) when the services provided by monopolies have public good aspects.

In the case of WaterNSW's bulk water services, a public good element exists because the costs incurred in managing dams, weirs, canals, monitoring and flow control assets, and other parts of the bulk water system do not exclusively relate to bulk water delivery. These infrastructure assets provide broader community services such as flood mitigation and environmental monitoring benefits. We developed a cost sharing method to allocate costs between extractive users and the government that recognises the public good aspects of water services. Our allocation objective is to ensure, as far as possible, extractive users and the community (through the government cost share) both pay their fair share of the efficient costs of managing the bulk water system.

[160] This view also applies to our approach for pricing bulk water services provided by DPI Water.

C.1.2 Legacy costs and the government contribution

Another aspect of the government contribution relates to legacy costs, which are current and future costs that relate to past practices and activities. There is an economic argument for government contributions during the phase-in of new regulatory requirements for assets that were created under a previous regulatory framework and that have not come to the end of their useful life.

Governments routinely seek to minimise the impact of new regulatory requirements on past investments made in good faith under a previous regulatory regime. This approach is particularly relevant when the new regulatory obligation imposes substantial costs or reduces the benefit of that investment. In these circumstances, the costs of the new regulatory obligations should not necessarily be passed onto users. It is thus appropriate for the government to contribute to those costs during the remaining life of existing infrastructure.

This issue applies to WaterNSW's infrastructure assets – for example, the cost recovery expectations for bulk water assets and regulatory obligations on dams have increased over time. Dam safety standards are significantly higher than in the mid-20th century when the dams were constructed, and environmental standards and obligations have also increased. The costs associated with these new regulatory obligations should not necessarily be passed onto users. If prices jump significantly as a result of a new regulatory obligation, this may threaten future investment by customers. The inclusion of these legacy costs in today's prices may distort the signal to users of the current and future cost of providing bulk water services. Therefore, there is an economic argument for a government contribution related to legacy assets.

C.2 Our development of cost shares for activities

Given that we consider there is an economic case for the government to contribute to WaterNSW's efficient costs, over a number of determination periods we have developed an approach for determining the cost shares of activities:

- We decide the full, efficient costs of providing the regulated bulk water services over the determination period, based on a detailed analysis of WaterNSW's forecast operating and capital costs and scope for efficiency gains – that is, the notional revenue requirement.
- We review the allocation of costs across activities.
- We decide the proportion of this efficient cost that WaterNSW should recover from the NSW Government, and the proportion that it should recover from users through bulk water prices – that is, the cost shares.

We developed our cost share ratios at an activity level, assigning a code to each activity. WaterNSW records and presents its costs by these activity codes. Once the ratios are decided, we apply them to the efficient costs for those activity codes to determine the user and government contributions. If, for example, an activity code has a 50% user share and the efficient costs are $1,000, then the user and government shares of cost would be $500 each.

We developed and refined our approach with the assistance of users, WaterNSW and DPI Water, resulting in a well-established and accepted method for determining cost shares. Below is the history of our development of the cost sharing ratios, and the key concepts used in our approach.

C.2.1 2001 bulk water price determination

In our 2001 bulk water price review, we engaged ACIL Consulting[161] to review (then named) State Water's water management costs and to provide a framework for allocating these costs between users and the NSW Government. ACIL developed a conceptual framework for allocating costs that was based on the 'impactor pays' principle, and that excluded legacy costs. In general, we adopted the principles that underpinned this approach.

Specifically, in our 2001 bulk water price determination, we moved from a 'beneficiary pays' approach to an 'impactor pays' approach. (Box C.1 describes the differences between these approaches.) Our earlier cost share ratios reflected a mixture of the two approaches.[162]

Box C.1 Beneficiary pays versus impactor pays

- 'Beneficiary pays' – users pay charges on the basis of benefiting from the service.
- 'Impactor pays' – those ultimately responsible for creating the costs, or the need to incur the costs, pay the costs.

[161] ACIL Consulting, *Review of water resource management expenditure in the NSW Department of Land and Water Conservation and State Water business*, Report to Independent Pricing and Regulatory Tribunal, July 2001.

[162] IPART, *Bulk water prices for 1998/99 and 99/00 – Final Report,* July 1998.

ACIL Consulting

In recommending the application of the 'impactor pays' principle, ACIL defined 2 key concepts:[163]

- **Legacy costs**. These principally current and future costs are attributable to past activities. Current and future water users should not have to meet the expenditure caused by past users.
- **Impactor pays.** Non-legacy costs should be allocated to current stakeholders in proportion to the contribution of their current and future actions to the need for these expenditures.

ACIL's approach would fully allocate all legacy costs to the NSW Government, and would allocate all forward looking costs according to the 'impactor pays' principle. For some costs, the 'impactor' would be both the NSW Government and extractive users. Under this framework, WaterNSW's total costs were broken down according to their associated key 'products' or activities (for example, dam safety compliance and water quality monitoring). Within each of these activities, costs that related to past users were regarded as legacy costs and fully allocated to the NSW Government. Future expenditure that related to current or future users was allocated according to whichever party (users or the community) created the costs or the need to incur the costs (the 'impactor pays' principle). Table C.1 shows ACIL's recommended cost shares.

[163] ACIL Consulting, *Review of water resource management expenditure in the NSW Department of Land and Water Conservation and State Water business*, Report to Independent Pricing and Regulatory Tribunal, July 2001, p xiii.

Table C.1 Implied user share and ACIL's recommended cost shares (%)

				ACIL's recommended cost shares for 2001/02 to 2003/04				
Code	**Product name**	**IPART 1998/99**	**Proposed DLWC[a]**	**Legacy share**	**Impacter 0% legacy**	**Impacter 25% legacy**	**Beneficiary 0% legacy**	**Beneficiary 50% legacy**
PA1	Surface Water Database	50%	50%	7%	65%	67%	37%	41%
PA2	Groundwater Database	70%	70%	0%	100%	100%	100%	100%
PA3	Other Water Databases	0%	0%	0%	0%	0%	0%	0%
PA4	Water Information Product	0%	0%	25%	50%	56%	19%	31%
PB1	Surface Water Allocation Strategies	50%	50%	0%	100%	100%	0%	0%
PB2	Rural Water Licences	100%	100%	0%	100%	100%	90%	90%
PB3	Groundwater Allocation Strategies	70%	70%	0%	100%	100%	70%	70%
PB4	Groundwater Licences	100%	100%	0%	100%	100%	90%	90%
PC1	Rural Water Supply Strategies	90%	90%	0%	100%	100%	80%	80%
PC2	Rural Water Operations	90%	90%	0%	100%	100%	90%	90%
PC3	Flood Operations	50%	50%	91%	6%	29%	0%	46%
PC4	Rural Water Infrastructure	90%	90%	16%	80%	84%	76%	84%
PD1	River Quality / Flow Reforms	0%	50%	18%	39%	43%	0%	9%
PD2	Blue Green Algae Strategies	50%	50%	1%	89%	89%	0%	1%
PD3	River Salinity Strategies	50%	50%	50%	10%	22%	0%	25%
PD4	Bacterial, Chemical and Other Strategies	0%	0%	0%	100%	100%	0%	0%
PD5	Groundwater Strategies	70%	70%	0%	100%	100%	100%	100%
PD6	Wetland Strategies	0%	0%	50%	50%	62%	0%	25%
PD7	Water Industry Strategies	0%	0%	0%	0%	0%	50%	50%
PE1	Rivers and Groundwater Income	0%	100%	0%	100%	100%	100%	100%
Total		**n.a.**	**68%**	**22%**	**64%**	**70%**	**49%**	**60%**

[a] Department of Land and Water Conservation (DLWC), predecessor of State Water Corporation. The total in this column is an amount calculated by allocating DLWC proposed shares to the revised costs; it is not a DLWC proposed share. **n.a.** Not applicable.

Source: IPART, *Department of Land and Water Conservation bulk water prices from 1 October 2001 – Final Report*, October 2001, p 89.

Our decision

After considering ACIL's recommendations and stakeholder submissions made in response to our draft report, we came to the following decisions:[164]

- To determine legacy costs, it is more appropriate to draw a line in the sand at a particular date and to consider only expenditure required to meet standards established at or before that date. We drew a line in the sand at July 1997, so the NSW Government bore all legacy costs incurred before that date.
- The 'impactor pays' principle should be applied to allocate bulk water costs, but this process requires a significant level of judgement.

Stakeholders exhibited a high level of concern about the treatment of compliance capital costs. These costs included the capital costs of complying with dam safety standards, relevant public safety and occupational health and safety standards, and contemporary standards aiming to mitigate the environmental impacts of stream interruption (for example, fish ladders to enable native fish passage, multi-level water off-takes to reduce cold water pollution, and dam release valves to enable high volume environmental flows). For each of these activities, we considered the expenditure arises because the community expects the needs of the environment will be met at the same time as the needs of extractive users. Further, these activities have a significant legacy component, and we considered a 50% cost share was an appropriate balance for the different stakeholders. Table C.2 shows our 2001 decisions on cost shares.

[164] IPART, *Department of Land and Water Conservation bulk water prices from 1 October 2001 – Final Report*, October 2001, pp 31–32.

Table C.2 Changes to sub-product allocations

Sub-product code	Sub-product name	ACIL proposed allocation between user and government		Revised allocation between user and government		Comment
PC330	Dam Compliance Environment	33%	67%	50%	50%	Has a significant legacy component, but need for expenditure arises from continuing presence of structures. Removal would be an option in some cases but for ongoing extraction requirement. IPART thus considered equal share appropriate and consistent with the impactor pays principle.
PC331	Dam Compliance, OHS and Public Safety	0%	100%	50%	50%	OHS costs are borne by businesses generally rather than government. Includes some public safety costs not necessarily attributable to extractive users, and some legacy component. IPART considered it appropriate to pass through a significant share to users.
PC332	Regulated River Compliance, Environment	33%	67%	50%	50%	As with other environmental compliance sub-products, IPART considered an equal sharing appropriate.
PC333	Regulated River Compliance, OHS and Public Safety	0%	100%	50%	50%	As with other OHS and public safety costs, IPART considered an equal sharing appropriate.
PC334	Unregulated River Compliance, OHS and Public Safety	0%	100%	50%	50%	As with other OHS and public safety costs, IPART considered an equal sharing appropriate.
PC335	Unregulated River Compliance, Environment	33%	67%	50%	50%	As with other environmental compliance sub-products, IPART considered an equal sharing appropriate.

C.2.2 2006 bulk water price determination

In our 2006 Determination for (then named) State Water, we used the principles for allocating costs between users and the NSW Government that we established in the 2001 Determination. We engaged the Centre for International Economics (CIE)[165] to review the agencies' proposals and to advise appropriate ratios for cost allocation. In deciding on the cost sharing ratios, we also considered stakeholders' views in response to our draft report. While we maintained our general approach to cost shares, we reviewed and changed specific allocations:[166]

- We reduced the user share for capital projects related to flood mitigation from 100% to 90%, recognising the expenditure is primarily to maintain flood mitigation assets, but users also derive some benefit from the flood mitigation works.
- We increased the user share of costs for hydrometric monitoring from 70% to 90%, because these activities play some role in flood mitigation, rather than the 100% user share that we adopted in our draft determination.

Table C.3 shows IPART's decision on the cost sharing ratios.

Table C.3 IPART's 2006 findings and decisions on cost shares (%)

Product	2001 IPART determination	State Water submission	CIE recommendation	IPART's draft finding	IPART's decision
Capital expenditure					
Asset management planning (3110)	100	100	70–100	100	100
Plant and equipment (3160)	100	100	70–100	100	100
Dam safety compliance capital projects – pre-1997 (3520)	0	0	0	0	0
Dam safety compliance capital projects – post-1997 (3525)	50	50	0–50[a]	50	50
MPM capital projects (3530)	100	100	70–100	100	90
Structure enhancement capital projects (3540)	100	100	100[a]	100	100
OH&S compliance system (4210)	50	100	50	50	50

[165] CIE, *Review of cost sharing ratios – Analysis in support of 2006 bulk water price review*, March 2006.

[166] IPART, *Bulk water prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June* 2010 - *Final Report*, September 2006, pp 39–40.

Product	2001 IPART determination	State Water submission	CIE recommendation	IPART's draft finding	IPART's decision
Fish passage works (6310)	50	50	0	50	50
Cold water impacts mitigation works (6320)	50	50	50	50	50
Salt interception schemes (6340)	10	10	10[b]	10	10
Fish River Supply Scheme	n.a.	100	100	100	100
Operating expenditure					
Customer support (1120)	100	100	100	100	100
Hydrometric monitoring (2120)	70	100	70–100	100	90
Water quality monitoring (2130)	50	100	50	50	50
River operations (2150)	100	100	70–100	100	100
Dam safety compliance O&M (3130)	50	100	50	50	50
Preventative maintenance (3140)	100	100	70–100	100	100
Billing and receipts (5220)	100	100	100	100	100
Insurance (5250)	100	100	50	100	100
Metering (2180)	100	100	100	100	100
Salt interception schemes (6140)	10	10	10[b]	10	10
Fish River Supply Scheme	n.a.	100	100	100	100

a Depends on whether users or the community demand the upgrade. Government (on behalf of the community) would pay the additional incremental costs associated with metering community demands.

b CIE retains the recommended 10% allocation, assuming it reflects legacy costs.

n.a. Not applicable.

Source: IPART, *Bulk water prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June 2010 - Final Report*, September 2006, p 41.

C.2.3 2014 ACCC Decision

In the 2014 ACCC price review, State Water did not proposed any changes to the cost sharing ratios between users and the NSW Government, as approved by IPART in previous determinations. The ACCC used the cost sharing ratios as set by IPART in the 2010 determination. The NSW Government, in agreement with State Water, maintained the existing cost sharing arrangement. The NSW Government paid its share of the revenue requirement, consistent with the 2010 IPART determination. The cost sharing ratios used to determine the user and government cost shares applied to activities attracting capital and operating expenditures.

C.3 Trends in the government cost share over time

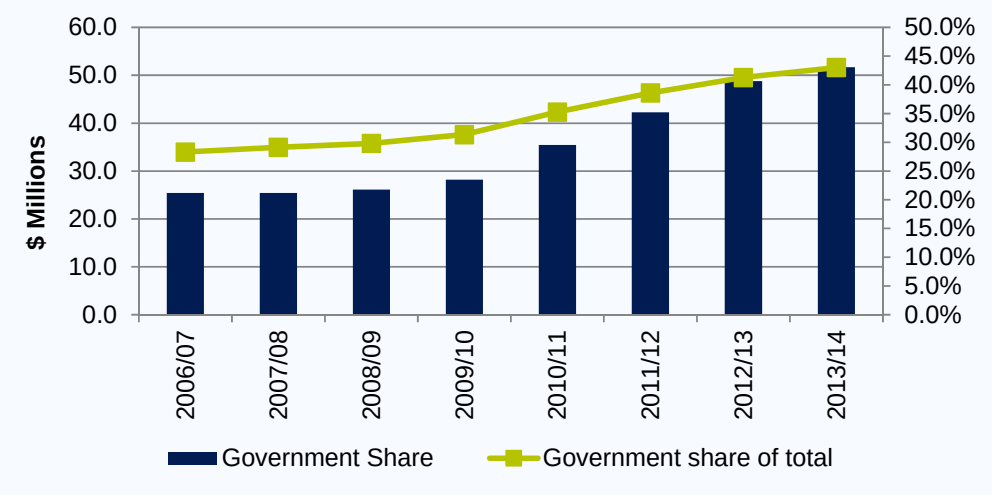
There are 2 factors that have affected the ratio of government and user cost shares over time:

- changes we have made to the cost shares
- changes to WaterNSW's activities – if, for example, WaterNSW's expenditure moves toward activity cost codes with a higher government share, then the government's contribution will increase, because the cost share ratio is multiplied by the dollar amount of costs allocated to that activity code.

Figure C.1 shows the NSW Government's cost share and that share as a total of WaterNSW's efficient costs since 2006-07. It shows the NSW Government's contribution increased from around 30% of WaterNSW's efficient costs in 2006-07 to around 45% in 2013-14. This increase in government contribution primarily relates to WaterNSW's increased capital expenditure to undertake dam safety upgrades and related environmental measures (such as fish passage and cold water pollution mitigation works). These activities have a higher government cost share (50%).[167]

[167] IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 37.

Figure C.1 Trend in NSW Government's cost shares ($2010-11)



Data source: IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 48; IPART, *Bulk water prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June 2010 – Final Report*, September 2006, p 15. The figures have been adjusted to $2011-12.

D DPI Water advice to WaterNSW on MDBA Joint Venture and BRC

Department of Primary Industries
Water

OUT16/17793

Mr David Harris
Chief Executive Officer
WaterNSW
PO Box 1018
Dubbo NSW 2830

Dear Mr Harris

MDBA Joint Venture and DBBRC costs – IPART Submission

I am writing to advise of the costs arising from the forward program of the Murray-Darling Basin Joint Venture and the Dumaresq-Barwon Border Rivers Commission (DBBRC) that should be included by WaterNSW in your submission on regulated charges for water infrastructure services in the Murray-Darling Basin commencing 1 July 2017.

Attached are two tables that have been derived primarily from a detailed assessment of the individual projects in the 19 April 2016 version of the draft MDBA Corporate Plan 2016/17 to 2019/20. Table 1 provides the WaterNSW share of funded activities and uses Independent Pricing & Regulatory Tribunal (IPART) cost sharing criteria to determine the costs that are attributable to water users. Over the current planning horizon, the Joint Venture costs all fall within the Murray and Murrumbidgee Valleys. Table 2 assigns the total contribution by NSW to the Joint Venture and the DBBRC between DPI Water and WaterNSW.

These costs have been slightly revised compared to those advised to WaterNSW at an officer level on 26 April 2016.

You will note that the data provided extend only to the 2019/20 financial year, which is the limit of Joint Venture forward planning at this point in time. In the absence of MDBA Corporate Plan data for 2020/21, past practice has been to repeat the previous year, i.e., 2019/20 figures. It is recommended, however, that you seek advice from NSW Treasury on how best to include 2020/21 in your submission.

In relation to these costs, I would observe that while final approval of the MDBA budget is the responsibility of the Murray-Darling Basin Ministerial Council, the river management works component is negotiated through the River Murray Operations Committee, which includes WaterNSW representation. Also, project recommendations and data on costs to support NSW's participation in Committee deliberations are primarily sourced from the constructing authority, i.e., WaterNSW.

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The spreadsheet that underpins the data in the tables will be provided to WaterNSW separately. You may also find it useful for the purposes of your submission to refer to the discussion in the DPI Water 2015 Price Submission to IPART of the measures taken in recent years to ensure the efficiency of the Joint Venture. This submission is available on the IPART website.

I have arranged for Mr Nick Milham to be available to speak with you should you have any questions on this advice. Mr Milham can be contacted on (02) 6391 3613 or by email at nick.milham@dpi.nsw.gov.au.

Yours sincerely

Gavin Hanlon
Deputy Director General, DPI Water
17 May 2016

Encl.

Table 1: WaterNSW cost recovery from users for MDBA and DBBRC ($16/17)

		2016/17	2017/18	2018/19	2019/20
Total NSW Government contribution to MDBA costs		28,413	30,880	29,727	29,659
WaterNSW share of MDBA costs ($000)		18,917	20,843	18,357	17,842
User Share Allocation of WNSW MDBA Costs:					
	Border Rivers	-	-	-	-
	Gwydir	-	-	-	-
	Namoi	-	-	-	-
	Peel	-	-	-	-
	Lachlan	-	-	-	-
	Macquarie	-	-	-	-
	Murray	13,655	14,865	11,388	10,939
	Murrumbidgee	3,029	3,298	2,526	2,427
	North Coast	n/a	n/a	n/a	n/a
	Hunter	n/a	n/a	n/a	n/a
	South Coast	n/a	n/a	n/a	n/a
	Fish River	n/a	n/a	n/a	n/a
User share of WaterNSW MDBA costs		**16,685**	**18,163**	**13,915**	**13,366**
Government share of WaterNSW MDBA costs		2,232	2,680	4,442	4,476
Users share %		88.2%	87.1%	75.8%	74.9%
Total NSW Government contribution to BRC costs		1,100	1,100	1,100	1,100
User share of WaterNSW BRC costs:		**693**	**694**	**718**	**715**
Government share of WaterNSW BRC costs		407	406	382	385
TOTAL WaterNSW MDBA and BRC User Charges ($000)		17,378	18,857	14,633	14,081

Table 2: MDBA Joint Program and DBBRC costs and DPIW / WNSW split ($2016/17)

	MDBA Corporate Plan				Notes/Assumptions
NSW contribution to MDBA and BRC	**2016/17**	**2017/18**	**2018/19**	**2019/20**	
NSW Contribution to MDBA ($'000)	$28,413	$30,880	$29,727	$29,659	
NSW Contribution to BRC ($'000)	$1,100	$1,100	$1,100	$1,100	
Total NSW Contribution ($'000)	$29,513	$31,980	$30,827	$30,759	Water NSW MDBA asset base - Non-current Property, Plant and Equipment as at 30 June 2015 as reported in NSW Trade & Investment Annual Report 2014-15: $683.432 million
MDBA Contribution based on total cost					ACCC determined Water NSW opening RAB as at 1 July 2014 is $657.3 million (nominal). The user share of the opening RAB at 1 July 2014 is $219.3 million (nominal)
WNSW	18,917	20,843	18,357	17,842	
DPIW	9,496	10,037	11,370	11,817	MDBA opening Regulated Asset Base (RAB) at 1 July 2015 (excluding land & intangibles) = $3,130,239,000
BRC Contributions based on average of 2010-11 to 2013-14 shares					MDBA RAB at 1 July 2015 assumption 2.3% CPI
WNSW	705	705	705	705	
DPIW	395	395	395	395	NSW share of MDBA asset base is 26.67%
Total MDBA and BRC contribution					
WNSW	19,622	21,548	19,062	18,547	
DPIW	9,891	10,432	11,765	12,212	

E Letter from WaterNSW re Credit Card Payment Fees

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ABN 21 147 934 787

Mr Hugo Harmstorf
Chief Executive Officer
Independent Pricing and Regulatory Tribunal
PO Box K35, Haymarket Post Shop
Sydney NSW 1240

Dear Mr Harmstorf,

Proposal to expand payment methods for customers

We refer to the WaterNSW Pricing Proposal to the Independent Pricing and Regulatory Tribunal (IPART) for regulated prices for NSW Rural Bulk Water Services from 1 July 2017 to 30 June 2021 (Proposal).

We would like to offer our customers increased convenience and choice, during the 2017-2021 determination period, through the introduction of an additional payment method for their water bills. Currently, WaterNSW only offers customers the choice to pay by credit card in respect of fees for trading water allocations. We propose to extend the choice to pay by credit card to all bills issued by us.

By opening up this payment channel to customers, we will incur credit card payment fees. We propose to pass on to customers an amount in respect of these fees which is set by NSW Treasury based on the normal cost of merchant interchange fees. This is currently 0.44% for Visa/Mastercard and 1.54% for American Express cards. We propose to vary the charges as NSW Treasury varies the charges.

We note that IPART, in its Final Report on its Review of prices for Sydney Water Corporation, decided not to regulate the credit card payment fee as it is not charged for the provision of a monopoly service and did not seek a section 12A referral (under the IPART Act) to regulate the credit card payment fee, because customers have a choice of payment methods (see page 211).

Therefore, amounts raised by the fees should be excluded from our forecast of regulatory operating expenditure. In our Proposal, our forecast regulatory operating expenditure does include the amount we are already charged by credit card providers (in respect of trading water allocations) which is small relative to the overall forecast operating expenditure, in the order of $9,000 per annum.

Yours sincerely,

David Harris
Chief Executive Officer
WaterNSW

Glossary

2006 Determination	*Bulk Water Prices for State Water Corporation and Water Administration Ministerial Corporation*, September 2006 (Determination Nos 4 and 5, 2006)
2006 determination period	The period from 1 October 2006 to 30 June 2010, as set in the 2006 Determination
2010 Determination	*Review of bulk water charges for state water corporation*, June 2010 (Determination No 2, 2010)
2010 determination period	The period from 1 July 2010 to 30 June 2014, as set in the 2010 Determination
2014 ACCC Decision	*ACCC Final Decision on State Water Pricing Application: 2014-15 – 2016-17*, June 2014
2017 determination period	The period commencing 1 July 2017
ACCC	Australian Consumer and Competition Commission
ACCC's Pricing Principles	*Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011.
Annual revenue requirement	The notional revenue requirement in each year of the determination period
BRC	Border Rivers Commission
BWCOP	Basin Water Charging Objectives and Principles
Current determination period	The period from 1 July 2012 to 30 June 2016, as set in the 2012 Determination
CPI	Consumer Price Index

CSO	Community service obligation
CSC	Customer Service Committee
DPI Water	Department of Primary Industries (formerly the NSW Office of Water)
DORC	Depreciated optimised replacement cost
ECM	Efficiency Carryover mechanism
EPA	Environment Protection Authority
ESC	Essential Services Commission
FMMS	Facilities maintenance and management system
GS	General security
GL	Gigalitre
Greater Sydney area	Water catchments that service WaterNSW storages including the Blue Mountains, Shoalhaven, Warragamba, Upper Nepean and Woronora catchments.
HS	High security
ICDs	Irrigation corporations and districts
IPART	Independent Pricing and Regulatory Tribunal of NSW
IPART Act	*Independent Pricing and Regulatory Tribunal Act 1992* (NSW)
MDB	Murray Darling Basin
MDBA	Murray Darling Basin Authority
MAQ	Maximum Annual Quantity
ML	Megalitre
MSC	Meter service charges

Notional revenue requirement (NRR)	Revenue requirement set by IPART that represents the efficient costs of providing WaterNSW's monopoly services
NOW	NSW Office of Water
NPV	Net Present Value
PFA Act	*Public Finance and Audit Act 1983* (NSW)
RAB	Regulatory asset base
RTP	Risk transfer product
SCA	Sydney Catchment Authority (now part of WaterNSW)
Section 16A directions	Ministerial directions pursuant to section 16A of the IPART Act
SOC	State-owned corporation
SOC Act	*State Owned Corporations Act 1989* (NSW)
Target revenue	The revenue Sydney Water generates from maximum prices set by IPART for that year
UOM	Unders and overs mechanism
Upcoming determination period	the period commencing 1 July 2017
WACC	Weighted Average Cost of Capital
WAMC	Water Administration Ministerial Corporation
Water Act	*Water Act 2007* (Cth)
WCIR	*Water Charge (Infrastructure) Rules 2010* made under s 92 of the *Water Act 2007*
YACTAC	Yanco Creek and Tributaries Advisory Council