



Australian  
Competition &  
Consumer  
Commission

**ACCC Final Decision on  
State Water Pricing Application:  
2014-15 — 2016-17**

June 2014

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**Addendum:** Appendix C includes insertion of 2 July 2014 for avoidance of doubt on capped charges for allocation trade processing.

# 1 State Water 2014-17 pricing application

On 30 July 2013 State Water submitted a bulk water pricing application to the ACCC covering the regulatory period from 1 July 2014 to 30 June 2017. The ACCC is responsible under the Water Act 2007 (Cwlth) and the Water Charge (Infrastructure) Rules 2010 (WCIR) for approving or determining State Water's charges over the regulatory period.

This document is the ACCC's final decision on State Water's application.

## 1.1 The Australian Competition and Consumer Commission

The ACCC is an independent Commonwealth statutory authority whose role is to enforce the Competition and Consumer Act 2010 and a range of additional legislation, promoting competition, fair trading and regulating national infrastructure. Further details about the ACCC are available at [www.accc.gov.au](http://www.accc.gov.au).

The ACCC is the body responsible for assessing State Water's pricing applications for regulated charges in the MDB, in accordance with the WCIR. This function had previously been carried out by the NSW Independent Pricing and Regulatory Tribunal (IPART). IPART has responsibility for State Water's pricing reviews outside of the MDB.

## 1.2 State Water

State Water is the rural bulk water infrastructure operator in New South Wales. State Water owns, maintains, manages and operates major infrastructure to store and deliver bulk water to approximately 6300 licensed water users. Historically, this has involved the delivery of an average 5500 GL of water annually. Water users range from individual irrigators to large irrigation infrastructure operators, council town water suppliers, electricity generators and environmental water holders.

State Water's bulk water delivery services in the NSW MDB are provided in the Fish River water supply area, the Lowbidgee Flood Control and Irrigation District and in the following eight valleys: Border, Gwydir, Namoi, Peel, Lachlan, Macquarie, Murrumbidgee and Murray.

State Water was corporatised in 2004 by the State Water Corporation Act 2004 (NSW) and is owned by the NSW Government. In accordance with the State Water Corporation Act 2004, the principal objectives of State Water are to capture, store and release water in an efficient, effective, safe and financially responsible manner. Further details about State Water are available on its website at [www.statewater.com.au](http://www.statewater.com.au).



implemented a 10 per cent cap on annual increases in charges in the Peel valley. This is discussed further below.

The key differences between this final decision and the ACCC's draft decision are:

- bulk water charges in this final decision are generally lower than in the draft decision except in the Murray, Murrumbidgee and Border valleys.
- the higher bulk water charges for the Murray, Murrumbidgee and Border valleys in this final decision reflect the inclusion of the recovery of MDBA and BRC costs as determined by the NSW government. These costs were not available to the ACCC for its draft decision.
- the rate of return in this final decision is 6.92 per cent. The indicative rate of return in the ACCC's draft decision was 7.44 per cent
- the estimate of net capex in 2013-14 in this final decision is \$38.6 million, compared to \$83.2 million in the draft decision
- the net capex forecast in this final decision is 22 per cent lower than in the draft decision
- metering charges in this final decision are higher than in the draft decision
- rebates to most Irrigation Corporations and Districts (ICDs) are higher in this final decision than in the draft decision.

### 1.3.1 Structure of the final decision

The final decision is set out as follows:

- Part 1:
  - ACCC final decision – the final decision on State Water's 2014-17 pricing application and a summary of reasons
  - Appendices – Appendix A: Summary of charges and revenue requirement in each MDB valley serviced by State Water. Appendix B: Regulated charges determined by the ACCC's final decision, ICD rebates and the form of control for annual price variations. Appendix C: Regulated metering and miscellaneous charges determined by the ACCC's final decision.
- Part 2: Attachments – Analysis of the issues raised in response to the ACCC's draft decision.

The ACCC's draft decision also contains information and analysis supporting this final decision.

### 1.3.2 Key issues

#### **State Water's proposed expenditure and total revenue**

The ACCC's final decision is that State Water's total revenue forecast for the 2014-17 regulatory period is higher than required to meet the efficient cost of providing bulk water infrastructure services. The ACCC formed this view after carrying out a comprehensive assessment of State Water's costs in the regulatory period and giving consideration to information provided by State Water in response to the ACCC's draft decision.

The ACCC considers that State Water's operating and capital expenditure forecasts are too high, as is its estimation of the required rate of return on capital. Reductions made by the ACCC are offset to

some extent by the rate of depreciation of assets, which the ACCC revised up compared to State Water's forecast. Overall the ACCC's final decision results in lower revenues than those proposed by State Water.

The ACCC's final decision on State Water's average annual revenue for 2014–17 regulatory period is 23.9 per cent lower in real terms (\$2013–14) than State Water's proposal, and 9.1 per cent lower in real terms (\$2013–14) than the average revenue approved by IPART for the 2009–14 regulatory period.

### **Impact on customers in each regulated valley**

While the average annual revenue requirement is less than the last decision made by IPART, other factors such as the rate of asset depreciation, the forecast of water extracted and changes in opex and capex will cause the charges in each valley to vary somewhat from their current level. As discussed below, bills will fall for the majority of customers in all valleys except the Murray and Murrumbidgee valleys and the Peel Valley.

Appendix A provides a summary of how this decision affects charges in each MDB valley regulated by the ACCC. The table below shows the change in bills payable under the ACCC's final decision compared to current bills.

In the Murray and Murrumbidgee valleys the NSW government levies MDBA costs through a dividend recovered from State Water. In turn State Water recovers these costs from irrigators through regulated charges. As shown in the table below, when the MDBA costs are maintained at the current level the ACCC's decision reduces charges to the majority of Murray and Murrumbidgee customers. As discussed further below, the NSW government recently increased the MDBA costs recovered from users. The substantial increases offset the reductions resulting from the ACCC's decision on State Water's direct charges and result in net increases in water bills for irrigators in the Murray and Murrumbidgee valleys.

## Change in State Water bills

Percentage change in bills from current charges (2014-15 over 2013-14, in real \$2013-14)		
	With MDBA costs constant (at 2013-14 levels)	With new MDBA costs for 2014-15
<b>General security users</b>		
Border	5%	0%
Gwydir	-13%	-14%
Namoi	-8%	-10%
Peel	10%	10%
Lachlan	-10%	-10%
Macquarie	-8%	-8%
Murray	-7%	24%
Murrumbidgee	-3%	5%
<b>High security users</b>		
Border	-5%	-9%
Gwydir	-8%	-9%
Namoi	-1%	-2%
Peel	10%	10%
Lachlan	0%	0%
Macquarie	4%	3%
Murray	3%	38%
Murrumbidgee	5%	13%

Notes: Assumes 500ML of HS and GS entitlement, with usage based on historical average allocations. Some MDBA costs were allocated to Border, Gwydir, Namoi, Peel and Macquarie valleys up to 2013-14 but are to be removed from 2014-15.

### Murray Darling Basin Authority and Border Rivers Commission costs

State Water's proposed charges in its July 2013 pricing application did not include the pass-through of costs associated with the MDBA and BRC. Currently the NSW Government pays its share of these costs to the MDBA and the BRC, and the portion attributed to regulated river operations and maintenance in NSW is recovered through State Water charges. State Water's pricing application stated that the pass through of the NSW Government's contribution to MDBA and BRC costs was not considered to be a bulk water charge under the Water Act 2007. Consequently, State Water excluded these contributions from its proposed revenue requirements for 2014-17, which reduced revenue requirements for a number of valleys, in particular the Murray, Murrumbidgee and Border valleys.



The NSW Government informed the ACCC in February 2014 that its contribution to MDBA and BRC costs would be recovered from users through State Water charges in the 2014-17 regulatory period and that State Water would be required by the NSW Government to recover these costs.

At the time of its draft decision the ACCC had not been advised of the amount of MDBA and BRC costs to be recovered from users through State Water charges in the 2014-17 period. To enable recovery of these costs, the ACCC included a pass-through mechanism in the form of control for State Water's charges. This mechanism was set out in the draft decision.

The ACCC was not advised of the amount of MDBA and BRC costs to be recovered from users through State Water charges in the 2014-17 period until 30 May 2014, just prior to its final decision on State Water's 2014-17 charges. Consequently, the ACCC was not in a position to consult with affected customers on this matter.

State Water advised the ACCC that the NSW Treasurer had directed it under the *Public Finance and Audit Act 1983* (NSW) to recover specified costs each year in the Murray, Murrumbidgee and Border valleys in the 2014-17 regulatory period. As a result, recovering these costs is a regulatory obligation for State Water. The NSW's Treasurer's direction dated 28 May 2014 determined the amounts to be recovered based on the NSW Office of Water's (NOW) advice. The direction states that NOW had consulted with bulk water users' key representatives and State Water about the increase in NSW's contribution to the MDBA and associated impacts on users. The ACCC was not asked to participate in NOW's consultations with representatives of bulk water users.

The resulting increase in MDBA costs for Murray and Murrumbidgee valley customers in 2014-17 is around 72% annually on average compared to the 2010-14 regulatory period. Customer contributions in the Border valley for the BRC in 2014-17 are similar to the 2010-14 regulatory period.

The following tables show current (2013-14) State Water charges in the Murray and Murrumbidgee valleys and the charges to apply in the 2014-17 period including the MDBA costs. High security entitlement charges increase by up to 45 per cent and 16 per cent, and usage charges increase by up to 35 per cent and 11 per cent, compared to current charges in the Murray and Murrumbidgee valleys respectively.

**Table 1-1 Bulk water charges Murray and Murrumbidgee valleys - comparison of ACCC Final Decision Tariffs (2014-17) and IPART approved 2013-14 charges – (real \$2013-14)**

Valley	2013-14 \$/ML (IPART Approved)	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
High security charges				
Murray	\$3.14	\$4.52	\$4.55	\$4.21
Murrumbidgee	\$2.98	\$3.46	\$3.46	\$3.39
General security charges				
Murray	\$2.33	\$2.56	\$2.58	\$2.39
Murrumbidgee	\$1.59	\$1.50	\$1.50	\$1.47
Usage charges				
Murray	\$4.97	\$6.68	\$6.72	\$6.23
Murrumbidgee	\$3.78	\$4.19	\$4.18	\$4.10

Note: MDBA costs for Murray and Murrumbidgee are included.

Appendix B of this final decision sets out State Water's charges incorporating the MDBA and BRC costs to be recovered from users in the 2014-17 period in the Murray, Murrumbidgee and Border valleys. The charges include the costs specified in the NSW Treasurer's direction to State Water dated 28 May 2014.

The control mechanism for State Water refers to the costs in the NSW Treasurer's direction and will vary charges in line with that direction. Therefore if the NSW Government were to review the amount of MDBA and BRC costs to be recovered from State Water's customers in the 2014-17 regulatory period, the ACCC could vary State Water's charges in the event that the costs to be recovered changed.

### Revenue and price volatility

At the moment State Water recovers 40% of its revenues through fixed charges and 60% through usage based charges. State Water proposed changing this to an 80:20 split between fixed and variable charges. State water argued that the increase in fixed charges is necessary to provide greater revenue stability. It also proposed lowering the cost of high security entitlements.

All submissions in response to the ACCC's draft decision except State Water's supported the ACCC's proposal to maintain the current 40:60 split between fixed and variable charges.

The ACCC considers that the 80:20 split proposed by State Water does not promote the Basin water charging objectives and principles (BWCOP).<sup>3</sup> Among other things, State Water's proposal transfers volume related risk onto its customers. The ACCC's final decision is to maintain the 40:60 ratio currently used by State Water. The ACCC recognises that State Water faces revenue volatility given changes in rainfall and water usage from year to year. For example, if water usage falls by 20%, State

<sup>3</sup> The Basin water charging objectives and principles (BWCOP) are set out in Schedule 2 of the Water Act.

Water's revenue can fall by 12%. Such volatility makes revenue recovery uncertain and investment planning more difficult.

The ACCC's decision addresses revenue volatility by establishing an 'unders' and 'overs' account. An unders and overs account allows State Water to adjust its charges annually to recover a portion of the revenue not recovered because water usage is lower than forecast, or to return a portion of revenue to customers if water usage is higher than forecast.

The approach reduces price volatility for customers while allowing State Water to recover all of its costs over time.

As discussed in attachment 9, the ACCC engaged Deloitte Access Economics (Deloitte) to consider State Water's submission that during periods of less than average water extractions, the ACCC's proposed tariff design and unders and overs mechanism would place undue financial risk on State Water. Deloitte concluded that it is unlikely that State Water's financial viability over the 2014-17 regulatory period would be placed at risk by the ACCC's tariff design and unders and overs mechanism.

### **Charges for Peel valley**

The ACCC received 36 submissions on its draft decision on charges for the Peel valley, which incorporated a 10% cap on annual price increases over the 2014-17 regulatory period. The cap was proposed to mitigate a price shock that would occur if charges moved to full cost recovery as proposed by State Water over the 2014-17 regulatory period.

State Water's proposal would have resulted in high and general security entitlement charges in the Peel valley increasing by up to 169 per cent and 264 per cent respectively, and usage charges increasing by up to 79 per cent, in 2014-17 compared to current charges. The ACCC considered that State Water's proposal would result in a perverse pricing outcome and would not meet the Basin water charging objectives and principles (BWCOPs).

Currently, charges in the Peel valley recover around 88 per cent of State Water's cost of providing services in that valley. The costs to service the Peel valley are spread over a relatively small number of water entitlements for irrigators and other users compared to other NSW MDB valleys. This results in a higher cost per megalitre of entitlement to service the Peel valley compared to other NSW MDB valleys.<sup>4</sup>

As discussed in the draft decision, the ACCC considered whether it would be possible to reduce charges in the Peel Valley. It considered applying an alternative methodology for forecasting water extractions based on the potential for the Chaffey Dam extension to increase water extractions in the 2014-17 regulatory period. However, further analysis showed that this is unlikely to have a material impact in this period. Notwithstanding this, the ACCC's assessment of State Water's cost forecast for the Peel valley is that the efficient level of costs to service the valley is around 21 per cent lower than the costs proposed by State Water over the 2014-17 period.

IPART has applied valley specific charges to MDB valleys since its first determination of bulk water prices in 1996, with charges reflecting valley specific costs of providing services in all MDB valleys except the Peel. The ACCC's draft decision was to continue the 10% cap on annual price increases

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<sup>4</sup> The number of water entitlements available in the Peel valley is not set by the ACCC. Water entitlements in the Peel valley are determined by the *Water Sharing Plan for the Peel Valley Regulated, Unregulated, Alluvium and Fractured Rock Water Sources 2010*, which is approved by the Minister responsible for water in NSW.

currently applied by IPART to the Peel valley and recommend that the NSW Government give consideration to continuing its subsidy for the Peel valley in the 2014-17 regulatory period.

Submissions on the ACCC's draft decision on charges in the Peel valley generally referred to equity issues, comparing the price of water in the Peel valley with other MDB valleys serviced by State Water. The alternatives to the ACCC's draft decision raised by stakeholders in submissions included postage stamp pricing across all MDB valleys and the merger of the Namoi and Peel and potentially other valleys for pricing purposes. These alternatives and variations thereof were raised with the ACCC in submissions and in discussions with ACCC staff prior to the ACCC's draft decision. A range of regulatory and policy options to implement these alternatives were canvassed in submissions, including cross subsidies between NSW MDB valleys, direct government subsidies and legislation to determine postage stamp pricing across all MDB valleys.

State Water's submission noted that the ACCC should explain how its approach to charges in the Peel valley is more consistent with the Basin water charging objectives and principles compared to alternative approaches.

The ACCC has considered the submissions it received in response to its draft decision. As noted in the ACCC's draft decision, options involving cross-subsidies between valleys, such as combining valleys for pricing purposes, would result in price increases in other valleys and charges being less cost reflective and transparent at the valley level. Having considered submissions the ACCC maintains its support for valley based cost reflective pricing in this final decision. The ACCC considers that continuing a cap on annual price increases in the Peel valley, and a NSW Government subsidy to support this, would best meet the Basin water charging objectives and principles. This approach averts a price shock and the perverse pricing outcome that would occur if prices moved immediately to full cost recovery over the 2014-17 period, and recognises the need for community service obligations (subsidies) where full cost recovery is unlikely to be achieved, as set out in the BWCOPs.

The ACCC's final decision is to implement a 10% cap on annual price increases in the Peel valley over the 2014-17 regulatory period consistent with its draft decision.

State Water's charges in the Peel valley did not fully recover its costs of providing services in that valley in the 2006-10 or the 2010-14 regulatory periods and IPART capped annual price increases in the Peel valley at 15 per cent and 10 per cent in these periods, respectively. Consistent with IPART's 2010-14 determination, the NSW Government provided an operating subsidy to State Water for the Peel valley over the 2010-14 regulatory period.

State Water advised the ACCC on 30 May 2014 that it understood the NSW Government would not be providing an operating subsidy in the Peel valley over the 2014-17 period to cover the shortfall in revenue caused by the ACCC's 10 per cent cap on prices, and that the NSW Minister for Water would be writing separately to the ACCC on this matter.

At the time of this final decision the NSW Minister for Water had not confirmed with the ACCC whether the NSW Government would be providing a subsidy for the Peel Valley over the 2014-17 regulatory period. The ACCC maintains that the NSW Government should give consideration to the continuation of a subsidy for the Peel Valley in the 2014-17 regulatory period. Such a subsidy would be consistent with the BWCOP's recognition of the need for community service obligations (subsidies) where full cost recovery is unlikely to be achieved.<sup>5</sup>

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<sup>5</sup> The subsidy to State Water's operating costs would be around \$350,000 (\$2013-14) over 2014-17.

As discussed above, the ACCC engaged Deloitte to consider State Water's submission that the ACCC's tariff design and unders and overs mechanism would place undue financial risk on State Water. Deloitte's analysis assumed that real price increases in the Peel valley would be capped at 10 per cent annually consistent with the ACCC's draft decision. Deloitte concluded that it is unlikely that State Water's financial viability over the 2014-17 regulatory period would be placed at risk by the ACCC's tariff design, unders and overs mechanism or its 10% cap on annual price increases in the Peel valley.

## 1.4 The ACCC's consultation process

The ACCC carried out a comprehensive process of consultation with a variety of interested parties including State Water, customers of State Water's regulated services, various government bodies and other stakeholders. The ACCC has also considered the advice of its expert consultant Deloitte. In undertaking the review Deloitte sub-contracted some aspects of the review to specialist engineers Aurecon and Bird Consulting Group.

Following State Water's July 2013 pricing application the ACCC received 29 public submissions and met with around 50 stakeholders, including representatives of State Water's MDB Customer Service Committees and the NSW Irrigators' Council, before issuing its draft decision in March 2014.

In response to its draft decision the ACCC received 42 public submissions. Copies of submissions are available at [www.accc.gov.au](http://www.accc.gov.au). After the ACCC's draft decision was released ACCC staff met with State Water, its MDB Customer Service Committees, the NSW Irrigators Council and a number of other stakeholders.

The following timeline shows the ACCC's review process. Further details about consultation are available in appendix C of the ACCC's draft decision.<sup>6</sup>

The ACCC thanks all stakeholders who provided submissions and met with ACCC staff during the ACCC's review process.

**Table 1-2 Pricing review – timeline and milestones**

30 July 2013	Receive State Water's application and call for submissions
13 September 2013	Closing date to receive submissions on State Water's application
5 March 2014	ACCC Draft decision and call for submissions
17 April 2014	Closing date to receive submissions on ACCC Draft decision
26 June 2014	ACCC Final Decision

## 1.5 The ACCC's assessment approach

Charges for the use of State Water's regulated services must be set at a level that allows it the opportunity to earn sufficient revenue to cover the efficient cost of providing these services. The ACCC's assessment process can be broadly split into two categories:

<sup>6</sup> Appendix C is available in *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 201.

- how much revenue State Water requires to meet the efficient cost of providing its regulated services
- how much State Water needs to charge customers of its regulated services to collect the user share of this revenue.

The ACCC assessed State Water's proposed charges by reference to its total revenue requirement and the likely usage of its regulated services over the regulatory period. The ACCC can accept State Water's proposed charges if they meet the requirements set out in the WCIR. If the ACCC does not consider State Water's proposal meets the requirements of the rules, the ACCC determines charges for the regulatory period. The ACCC used the building block approach to determine the efficient level of costs to provide State Water's regulated services and therefore the amount of revenue required by State Water. The building block approach includes the following capital and operating costs of providing regulated services:

- operating expenditure (see chapter 6 of this final decision)
- a return on the projected regulatory asset base incorporating:
  - the regulatory asset base (RAB) at the start of the regulatory period (see chapter 8 of this final decision)
  - capital expenditure to be added to the RAB during the regulatory period (see chapter 7 of this final decision)
  - a rate of return on the projected RAB (see chapter 9 of this final decision)
  - an allowance for depreciation of the projected RAB (see chapter 10 of this final decision).

These building block costs were used to establish State Water's efficient costs for the three year regulatory period, and consequently, the total amount of revenue it requires. They formed the basis for the ACCC either accepting State Water's revenue proposal or determining the efficient total revenue requirement. The process was used to establish the total revenue requirement for each individual valley that is covered by the ACCC's decision.

The ACCC also considered the likely usage of State Water's regulated services to determine the appropriate charge (or suite of charges). To do this, the ACCC forecast the demand for regulated services over the regulatory period. Charges were then set at a level that will allow State Water the opportunity to collect its total revenue requirement. The ACCC also considered how these charges can be varied during the regulatory period as part of an annual price review, as required by the WCIR.

The attachments to this final decision and to the ACCC's draft decision explain the assessment process in further detail and how charges have been set for the 2014-17 period.

Appendix B to this final decision sets out the regulated charges determined by the ACCC, ICD rebates and the form of control for annual price variations. Appendix C sets out metering and miscellaneous charges determined by the ACCC.

## **1.6 Government and user allocations**

The cost of State Water's infrastructure services is shared between the users of the service and a government share. The ACCC's decision relates to the total revenue requirement and the charges that will apply to users. The NSW Government informed the ACCC in November 2012 that it will pay

the Government's share of the efficient costs using the same cost sharing ratios as determined by IPART in 2010.<sup>7</sup> These ratios vary between capital and operating expenditure activity categories<sup>8</sup> and are set out in IPART's *Review of bulk water charge for State Water Corporation 1 July 2010 to 30 June 2014*.

The ACCC adopted these ratios in its draft and final decisions. The user and government shares of total revenue are detailed throughout this document. The ACCC's draft decision also contains information on user and government cost shares.

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<sup>7</sup> Hon Katrina Hodgkinson, MP, NSW Minister for Primary Industries, letter to Rod Sims, Chairman ACCC, 21 November 2012.

<sup>8</sup> The ratios apply to all valleys, except Fish River and the Lowbidgee Flood Control and Irrigation District, which are 100 per cent user share for all activities.

## 2 Total revenue requirement

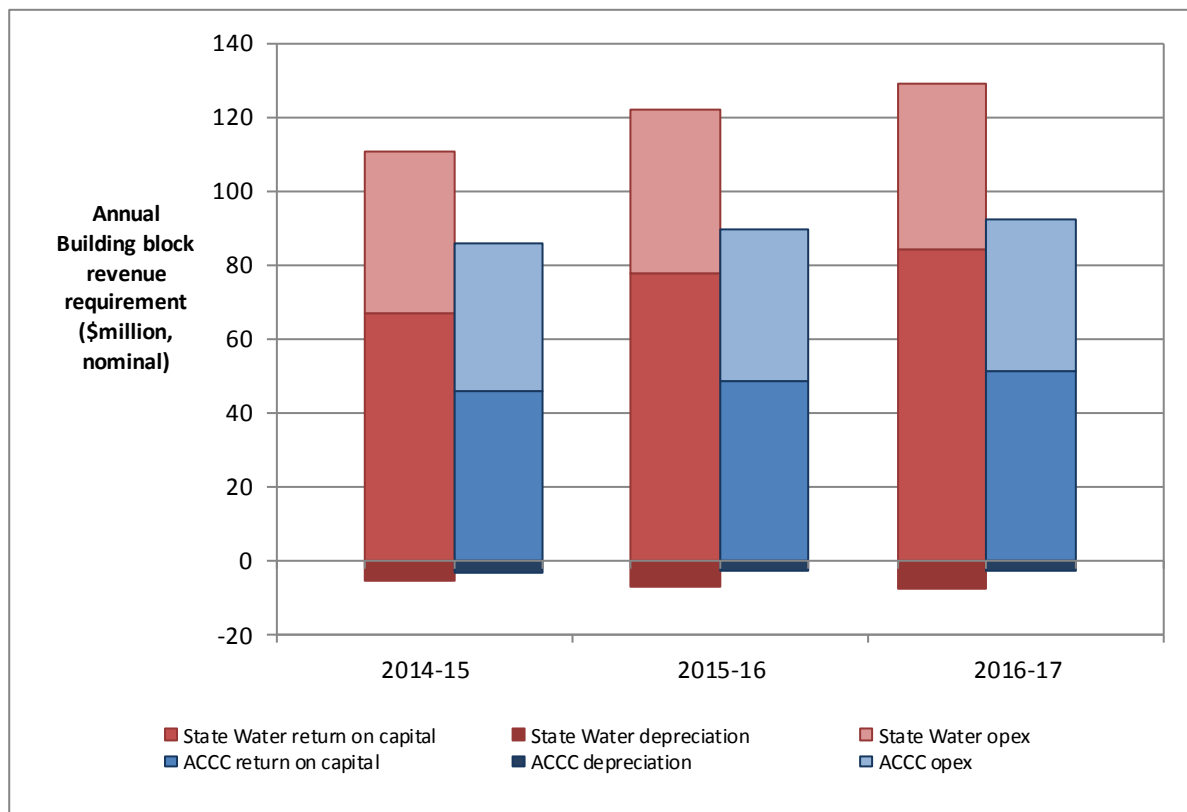
The total revenue requirement is a forecast of State Water’s cost of providing water infrastructure services to users. The ACCC must not approve the charges set out in State Water’s pricing application unless it is satisfied that the total revenue is likely to meet the prudent and efficient costs of providing infrastructure services.<sup>9</sup> As noted in the previous chapter, the ACCC uses the building block model to determine the total revenue requirement.

### 2.1 Final decision

The ACCC does not accept State Water’s proposed total forecast revenue requirement, as it does not consider it reflects the prudent and efficient costs of providing infrastructure services. The ACCC has calculated a total revenue requirement of \$257.8 million (\$, nominal) over the 2014–17 regulatory period for all of State Water’s regulated valleys. This includes a user share of \$159.3 million and a government share of \$98.5 million.

This revenue requirement is 24.2 per cent lower than State Water’s proposed revenue over the 2014–17 regulatory period. Figure 2-1 compares the ACCC’s final decision to State Water’s proposal in the 2014–17 regulatory period. Figure 2-2 compares the ACCC’s final decision on total revenue with the decision made by IPART for 2010–14, State Water’s actual revenue over the 2010–14 regulatory period and State Water’s forecast revenue requirement for 2014–17.

**Figure 2-1 Comparison of the ACCC’s final decision and State Water’s proposal**

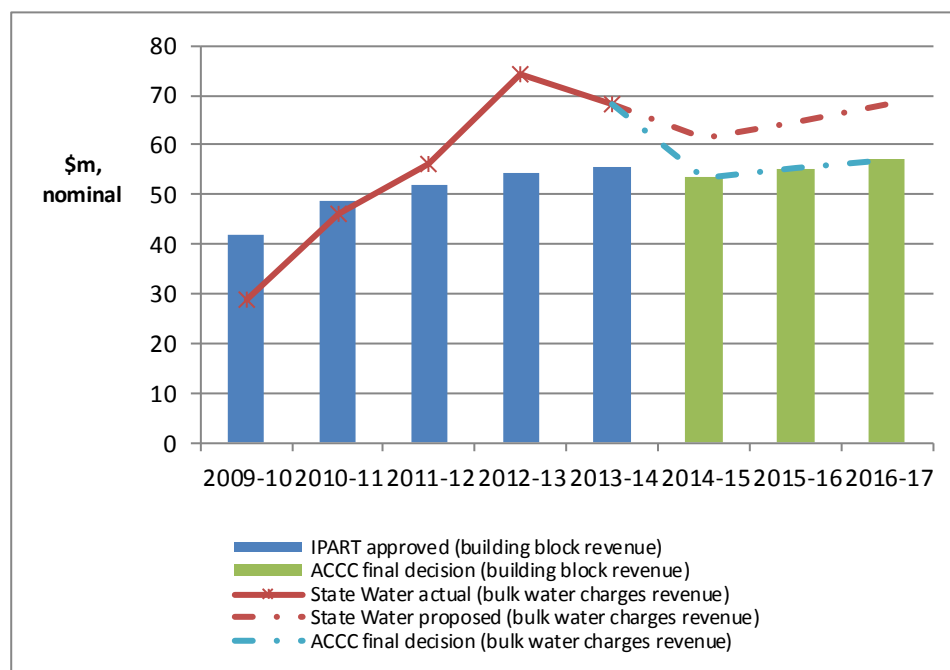


Source: ACCC analysis

<sup>9</sup> WCIR, rule 29(3).



**Figure 2-2 ACCC’s final decision compared to State Water’s proposal revenue requirement (user share) and IPART approved revenue for 2009–10 to 2013–14 (\$m, nominal)<sup>10</sup>**



Source: ACCC analysis.

IPART, *Review of bulk Water charges for State Water*, June 2010, p. 46.

Notes: IPART approved revenues from 2009–2014 are calculated net of MDBA and BRC costs and excludes revenue from the North Coast, Hunter and South Coast valleys not regulated by the ACCC  
 State Water’s 2013–14 revenue is a forecast based on estimated building blocks.  
 The bulk water charges revenue refers to the summation of revenue recovered from regulated user charges for each of State Water’s valleys regulated by the ACCC.

The ACCC’s final decision on State Water’s total revenue is arrived at by summing the building block costs.

The main elements of the ACCC’s final decision that reduce State Water’s total revenue relative to the proposal are:

- A cost of capital of 6.92 per cent, compared with State Water’s proposed 8.96 per cent.
- Forecast capital expenditure of \$132.0 million (real 2013–14), compared with State Water’s proposed \$204.1 million (\$2013–14), a reduction of 35.3 per cent.
- Forecast operating expenditure of \$116.5 million (\$2013–14), compared with State Water’s proposed \$127.5 million (\$2013–14), a reduction of 8.7 per cent.

Table 2-1 shows the ACCC’s final decision total revenue by building block for each year of the regulatory period. The costs are discussed in greater detail in this final decision and its attachments. The ACCC’s draft decision<sup>11</sup> also contains information and analysis supporting this final decision.

<sup>10</sup> For comparative purposes Figure 2 2 shows the IPART approved revenue requirement less MDBA & BRC costs. These costs did not form part of State Water’s 2014-17 pricing application.

<sup>11</sup> See attachment 1 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

**Table 2-1 ACCE final decision – State Water’s total building block revenue requirement for 2014–17 (\$m, nominal)**

	2014-15	2015-16	2016-17	Total
<b>Return on capital</b>	<b>45.5</b>	<b>48.5</b>	<b>50.9</b>	<b>144.9</b>
<b>Regulatory depreciation</b>	<b>-3.4</b>	<b>-3.2</b>	<b>-3.0</b>	<b>-9.6</b>
<b>Operating expenditure</b>	<b>40.1</b>	<b>40.9</b>	<b>41.4</b>	<b>122.5</b>
<b>Annual building block revenue requirement (unsmoothed)</b>	<b>82.2</b>	<b>86.2</b>	<b>89.4</b>	<b>257.8</b>
<b>Plus: Large irrigator rebates</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>6.3</b>
Total revenue requirement	84.3	88.3	91.5	264.1

Source: ACCE analysis.

Note: Numbers may not sum due to rounding.

A further breakdown of the total revenue requirement is provided in attachment 1. This includes detailed information on the government and user shares of total revenue and separate revenue requirements for each valley.

## 3 Charges for regulated infrastructure (excluding metering)

State Water collects revenue by charging users to access its regulated infrastructure and through contributions from the NSW government. The ACCC assessed State Water's proposed charges to determine whether they would provide it the opportunity to recover its efficient costs (represented by the user component of total revenue) and whether the charges contribute to the Basin water charging objectives and principles (BWCOP) set out in Schedule 2 of the Water Act.<sup>12</sup> This chapter covers:

- bulk water entitlement and usage charges
- the method for changing prices for bulk water (form of price control)
- other charging issues.

### 3.1 Bulk water charges

Bulk water charges are made up of two components: an entitlement charge to allow access to an allocation of water (fixed charge); and a usage charge based on the amount of water actually supplied (variable charge). The entitlement charge itself is split into two categories, high security entitlements (entitlements that gives a customer preferential access to their water allocation) and general security entitlements that do not receive special preference.

State Water proposed setting charges so that it collects 80 per cent of its revenue from entitlement charges and 20 per cent from usage charges. State Water also proposed changes to the calculation of the charge for high security entitlements from their current form. These changes would result in a reduction in high security entitlement charges and relative increases in general security entitlement charges compared to current charges.

#### 3.1.1 Final decision

The ACCC's final decision is to maintain State Water's current tariff structure so that 40 per cent of its revenue is recovered through entitlement charges (fixed charges) and 60 per cent is recovered through usage charges (variable charges) over the 2014-17 regulatory period.

The ACCC's final decision is to maintain the calculation of high security entitlement charges that applies in the current regulatory period.

Regulated charges from this final decision and the methodology for annual variations to bulk water charges are set out in appendix B.

#### 3.1.2 Summary of reasons

In approving or determining State Water's regulated charges, the ACCC must have regard to whether the proposed charges would contribute to the BWCOP set out in Schedule 2 of the Water Act.<sup>13</sup> The ACCC considers that State Water's proposed 80:20 fixed to variable tariff structure would not contribute to the BWCOP. In having regard to the BWCOP, the ACCC considered the following aspects of the BWCOP to be particularly significant:

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<sup>12</sup> WCIR, rule 29.

<sup>13</sup> WCIR, rule.29.

- to avoid perverse or unintended pricing outcomes
- to ensure sufficient revenue streams to allow efficient delivery of the required services
- to promote the economically efficient and sustainable use of water resources.

The ACCC placed more weight on these aspects of the BWCOP as it considered them to be the most relevant to determining water charges for MDB valleys.

Attachment 8 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to State Water's proposed tariff structure and the ACCC's draft decision.

### **Avoid perverse or unintended pricing outcomes**

The ACCC considers State Water's proposed 80:20 fixed to variable tariff structure may lead to perverse or unintended pricing outcomes. The ACCC considers the 80:20 tariff structure would increase the financial risk to State Water's customers. During dry periods, customers, particularly those holding general security entitlements, are less likely to receive their full allocation of water. A high entitlement cost means that these users would pay relatively more for their water during dry periods when they are also likely to have less ability (due to reduced crop yields) to pay for the water.

The ACCC is concerned that State Water's proposal would reduce the cash-flow of water users in dry periods, which may limit their ability to finance their activities, with potentially detrimental economic impacts. This could give rise to perverse or unintended pricing outcomes. The ACCC does not consider that this transfer of risk to customers through an 80:20 tariff structure would contribute to the BWCOP.

### **Ensure sufficient revenue streams to allow efficient delivery of the required services**

The 80:20 tariff structure proposed by State Water weights charges in favour of a fixed cost component. Under this structure, State Water's revenue is less sensitive to the volume of water extracted than it is under the current 40:60 tariff structure. However, the ACCC considers that a 40:60 tariff structure with an appropriate form of price control will also allow State Water the opportunity to recover its efficient costs. An appropriate form of price control will allow State Water to adjust its prices to account for a proportion of the difference between its actual and target revenue.<sup>14</sup> This structure avoids the detriments associated with transferring volume related risk to customers, while allowing State Water to earn sufficient revenue to efficiently deliver its services.

### **Promote the economically efficient and sustainable use of water resources**

The ACCC has considered whether State Water's proposal would have a significant impact on the sustainable and efficient use of water resources. The ACCC considers that in comparing the current 40:60 tariff structure with State Water's proposal, neither are likely to have a significant impact on the efficiency of water use.

The ACCC also considers that the 40:60 tariff structure contributes to the objective of the BWCOP to include a consumption based component and is transparent in that customers understand this tariff structure and can relate their volume of water use to the level of charges they pay.

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<sup>14</sup> The ACCC's consideration of the form of price control is at section 3.2 of this document and attachment 9.

## High security entitlements

State Water's proposal would bring the cost of high security entitlements down relative to the cost of general entitlements. The ACCC does not consider State Water's proposed charges adequately reflect the additional value high security entitlements represent compared to general security entitlements.

The ACCC considers that the current method of determining the value of high security entitlements provides a better estimate of the value to customers. This contributes to the objective of the BWCOP to reflect user pays in respect of water storage and delivery in irrigation systems.

## 3.2 Form of price control for bulk water

The form of price control sets out how State Water's charges can be varied over time. Price controls can take the form of a revenue cap, a price cap or a hybrid of the two. Each of these present a different risk to the customer and the regulated entity.

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

**Price cap** – under a price cap, prices are determined at the commencement of the regulatory period, and adjusted each year for inflation. This results in stable pricing for customers, but does not allow them to be reimbursed for over collection of revenue, nor does it allow the regulated entity to be compensated for the under collection of revenue. Under a price cap, the regulated entity bears any volume related risk.

State Water proposed a revenue cap for the 2014-17 regulatory period.

The ACCC may choose any form of price control subject to meeting the requirements of the WCIR. Rule 37 of the WCIR requires the ACCC to consider an annual revision<sup>15</sup> of State Water's maximum charges in the second and third years of the regulatory period, in light of any updated information on demand or consumption forecasts, considering also price stability for each year of the regulatory period.

### 3.2.1 Final decision

The ACCC does not approve the revenue cap proposed by State Water. The ACCC is not satisfied that the revenue cap best achieves both revenue stability for State Water and price stability for customers.<sup>16</sup> Further, the ACCC considers State Water's proposed revenue cap effectively transfers volume related risk to customers. It would result in increases in prices during dry times, which could have detrimental economic implications for customers. The ACCC does not consider that this would contribute to the BWCOP.

Attachment 9 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to State Water's proposed form of control and the ACCC's draft decision.

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<sup>15</sup> In carrying out the annual revision of prices, the ACCC uses the form of price control equation that is set out in appendix B. The price may vary due to updated entitlement and extraction volume forecasts and State Water's 'unders' and 'overs' account. The ACCC does not reopen its price determination in the annual revision.

<sup>16</sup> ACCC, *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011 (ACCC Pricing Principles), p.51.

The ACCC has determined that a hybrid form of control will apply to State Water's bulk water charges for the 2014-17 regulatory period. Specifically, the hybrid form of price control adopted is a price cap that can be adjusted for under or over collection of revenue.

The hybrid form of control will allow for a partial rather than full adjustment to prices each year to account for the difference between actual and target revenue. Under this form of control, any under or over collection of revenue will be added into a rolling 'unders' and 'overs' account. The value of this account will be multiplied by the weighted average cost of capital (WACC) to determine the amount by which charges can be adjusted in the next year.

The unders and overs account is a running balance of annual differences between actual and target revenues. As the adjustment to total revenue is equivalent to the WACC multiplied by the balance in the unders and overs account, and not the full difference between actual and forecast revenues, annual price changes will not be as significant compared to State Water's proposed revenue cap.

This form of control is symmetrical, as it will reduce charges if State Water has over collected revenue, and increase them if it has under collected.

The ACCC considers the hybrid form of control will address price stability for customers while also providing State Water with greater revenue certainty. If there are dry periods, State Water will receive a return on the balance in the unders and overs account, thereby recognising any additional borrowing costs needed to help manage its cash flows.

## 3.3 Other charging issues

### 3.3.1 Fish River charges

In the Fish River water supply area, which is part of the MDB, the ACCC has responsibility for regulating water charges for electricity generators and approximately 278 smaller customers that use water for domestic purposes.

The ACCC notes that charges levied for Lithgow and Oberon councils and the former Sydney Catchment Authority<sup>17</sup> in the Fish River water supply area are not regulated charges under Section 91(3) of the Water Act 2007. Accordingly the ACCC cannot determine charges for these customers, which will be regulated by IPART. The ACCC has agreed with IPART to include all Fish River charges in the ACCC's review. The ACCC's view on charges not covered by the Water Act 2007 is set out in the ACCC's decision on Fish River charges in appendix B.<sup>18</sup>

IPART will review the charges levied for Lithgow and Oberon councils and the former Sydney Catchment Authority in 2014-15 and intends to use information from the ACCC's review in its review process.<sup>19</sup>

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<sup>17</sup> Sydney Catchment Authority is to become part of Bulk Water NSW.

<sup>18</sup> Further background on Fish River is set out in attachment 10 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>19</sup> IPART's website contains further information on its price review for certain Fish River customers. See [http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural\\_Water/IPARTs\\_2015\\_review\\_of\\_State\\_Waters\\_price\\_s\\_for\\_the\\_coastal\\_valleys\\_and\\_some\\_Fish\\_River\\_customers](http://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural_Water/IPARTs_2015_review_of_State_Waters_price_s_for_the_coastal_valleys_and_some_Fish_River_customers).

### 3.3.2 Peel valley

The ACCC's consideration of Peel valley specific issues raised is discussed in chapter 1 of this final decision. The ACCC's draft decision<sup>20</sup> also contains information and analysis supporting this final decision.

Price increases in the Peel Valley in this final decision are capped at 10 per cent for each year of the 2014-17 regulatory period.

Peel valley would face a price shock if the ACCC moved to full cost recovery immediately, with an increase in usage charges of around 82 per cent over the 2014-17 regulatory period.

### 3.3.3 Rebates to Irrigation Corporations and Districts

Irrigation Corporations and Districts (ICDs) provide services to a large group of customers in the MDB. ICDs aggregate water orders (i.e. extraction of water from water courses) on behalf of their customers and undertake real-time monitoring of extractions along with billing, metering and compliance functions. This reduces the need for State Water to perform these functions. ICDs receive a rebate from State Water for providing these services.

The ACCC's final decision is to continue rebates to ICDs in the 2014-17 regulatory period. The ACCC does not approve the amount of rebates to ICDs proposed by State Water and has maintained the approach to calculating rebates adopted by IPART with updated cost and other inputs to reflect current circumstances. The rebates calculated for this final decision and the methodology are set out in appendix B. Attachment 8 provides further information.

### 3.3.4 Charges for ancillary infrastructure services

The ACCC approves State Water's proposed charges for connecting and disconnecting customers in the Fish River water supply scheme. The ACCC considers these charges are prudent and efficient as they are based on realistic labour volumes for relevant tasks and on current labour rates.

The ACCC approves State Water's proposal to continue the Yanco creek levy on the basis that it is endorsed by Yanco Creek customers and there is no change (in nominal terms) to the level of the charge.

The ACCC approves State Water continuing to charge for services to process trades of water allocations, but considers that the proposed level of the charge is not prudent and efficient. This is because State Water expects the number of trades processed to decline, but did not account for the costs avoided by processing less trades. The ACCC has determined a lower amount for this charge.

Details on these charges are set out in appendix C.<sup>21</sup>

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<sup>20</sup> See attachment 8 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>21</sup> In response to the Draft decision the Gwydir Valley Irrigators' Association submitted that it supported the ACCC's decision on State Water's allocation trade processing charge. There were no other submissions on these charges. Note that Table 9.8 in attachment 9 of the ACCC's Draft decision contains a typographical error. The charge per ML of allocation traded in 2014–15 should read '\$0.50' rather than '\$0.55', with the charges for 2015–16 and 2016–17 also amended accordingly.

## 4 Metering charges

The ACCC is responsible for regulating certain water metering charges levied by State Water for the MDB. These are in addition to the bulk water charges and other charges discussed in chapter 3 of this final decision. The ACCC approves or determines State Water's metering charges for:

- extractive customers using a State Water owned meter in the Murray-Darling Basin (meter service charge)
- non-extractive customers' gauging stations (environmental gauging station charge).

The ACCC considers that the following charges are not regulated charges that are subject to Part 6 of the WCIR:

- metering charges for State Water-owned meters, where the charge is imposed for unregulated river and groundwater meters
- metering charges for customer-owned unregulated river and groundwater meters.

The ACCC considers that these charges are not for services provided in relation to State Water's water service infrastructure. Therefore, the ACCC does not have a role in approving or determining these charges.

### 4.1 Metering service charge

Metering service charges are levied for users of State Water owned meters on regulated rivers. The current metering service charges cover the cost of operating, maintaining and reading the State Water-owned meters as well as the provision, maintenance and operation of information systems to process water meter data.

The metering service charge was introduced in the 2010–14 regulatory period, applying to new meters installed under the NSW metering scheme. The first meters were installed under State Water's pilot program in 2011–12, in advance of a broader roll-out. New meters must satisfy new standards introduced by the Commonwealth and State governments.

Under the NSW metering scheme, customers receive a meter meeting the new national standards for accuracy, funded by a Commonwealth government subsidy. State Water assumes ownership and responsibility for these meters.

Customers may choose not to receive a State Water owned meter. These customers will retain their existing customer-owned meters. They do not pay the metering service charge, but through their bulk water charges pay the costs of State Water reading these meters for billing and compliance purposes. Customers choosing not to receive a State Water-owned meter must still have a meter complying with the new standards by 2020.

#### 4.1.1 Final decision – metering service charge

The ACCC does not approve State Water's proposed metering service charges. The ACCC does not consider State Water's proposed charges represent the prudent and efficient cost of providing infrastructure services. The ACCC's final decision is to determine State Water's metering service charges based on the ACCC's forecast of prudent and efficient costs.



In its draft decision the ACCC allowed charges based on actual costs incurred by State Water in its metering pilot program, with an additional allowance for replacement of failing meters. The final decision will allow charges that are higher than the draft decision and current charges but lower than those proposed by State Water.

Attachment 10 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in regard to its proposed metering charges and the ACCC's draft decision. The ACCC's draft decision<sup>22</sup> also contains information and analysis supporting this final decision.

### **Meter operating and maintenance costs**

Meter operating and maintenance costs apply to all customers that use a State Water owned meter. The ACCC considers the cost forecast by State Water does not reflect the prudent and efficient cost of providing the service. Specifically:

- for meters that have been in installation for less than two years, State Water should be able to operate and maintain meters at a similar level of cost to that experienced in the pilot program
- for meters that have been in installation for longer, State Water's proposed operating and maintenance cost forecasts are reasonable, with the following adjustments:
  - the cost of telemetry and information systems has been adjusted to align with historic costs for reading and processing meter data
  - the proposed corporate overheads allowance has been reduced to a level reflecting historical experience.

### **Meter capital costs**

There are two categories of capital expenditure that may apply to State Water's customers:

- the full purchase and installation cost of meters, which is only recovered from customers that use State Water owned meters not funded by the Commonwealth government
- the cost of replacing failing meters, which is recovered from all customers that use State Water owned meters.<sup>23</sup>

State Water proposed a building block approach to calculate depreciation and return on investment for these meters.

The ACCC considers that the initial input cost assumptions used for capital expenditure are prudent and efficient on the basis that they were developed through a detailed and transparent cost build-up that took into account the relevant activities, were based on appropriate data sources and were independently verified.

However, the ACCC does not consider that State Water's approach to modelling capital expenditure and calculating depreciation and a return on investment is appropriate. Also, State Water's approach contained a number of errors.

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<sup>22</sup> See attachment 9 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>23</sup> State Water forecasts that 1% of meters will fail each year for reasons not covered by warranty or insurance.

The ACCC considers that it is more appropriate to calculate capital cost components using an annuity approach. The annuity will determine the annual charge required to recover the capital cost of an asset over its expected life. An annuity can be determined that allows a flat real charge for a single asset across its expected life. The ACCC considers that this has advantages in transparency and certainty for customers. Consequently, the ACCC's final decision is to determine the capital cost component of metering based on an annuity approach.

## 4.2 Environmental gauging station charges

State Water proposed to introduce new charges for metering at in-river gauging stations. These charges will be payable by holders of water access entitlements that have gauging stations as their nominated works. These costs were previously shared between all users as part of the bulk water charge.

### 4.2.1 Final decision – gauging stations

State Water has proposed a separate metering charge to recover the cost of mandated upgrades to environmental gauging stations. The ACCC has approved new charges, but does not accept the amounts proposed by State Water. The ACCC considers that State Water's forecast cost components for upgrading the gauging stations are efficient given State Water's hydrometric monitoring obligations. However, State Water has double-counted the cost of operating the identified gauging stations. The cost of operating an upgraded gauging station is higher than the cost of operating a current gauging station. The base amount for operating a current gauging station is included in the base opex for bulk water charges. State Water's proposed gauging station charges included the full, higher operating cost of an upgraded gauging station, rather than only the difference in the operating cost for an upgraded station compared to a current gauging station.

The ACCC has determined gauging station charges based on the capital costs of upgrading gauging stations and the incremental cost of operating the upgraded stations, without double counting the base operating cost.

Attachment 10 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to State Water's proposed charges for environmental gauging stations and the ACCC's draft decision. The ACCC's draft decision<sup>24</sup> also contains information and analysis supporting this final decision.

## 4.3 Ancillary metering services

The ACCC also approves State Water's charge for a refundable deposit for resolving meter accuracy disputes. The ACCC considers that it is prudent and efficient to recover the costs of additional meter testing from the requesting customers, and the level of the charge is prudent and efficient given it is based on charges previously determined by IPART without any real step increases.<sup>25</sup>

Metering and miscellaneous charges are set out in appendix C.

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<sup>24</sup> See attachment 9 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>25</sup> For details on this charge, see the ACCC's review at section 9.1.4 of attachment 9 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014. No submissions on this charge were received in response to the Draft decision.

## 5 Forecast water extraction and entitlement volumes

In order to set charges for bulk water services, the ACCC must approve or determine a forecast of water extraction and entitlement volumes for the regulatory period. This forecast is used in conjunction with the forecast of total revenue to determine charges that will allow State Water the opportunity to recover the efficient cost of providing the regulated services.

State Water has previously forecast extraction volumes by taking the average annual volumes for the 20 years prior to the commencement of the regulatory period. State Water proposed maintaining a 20 year average, but adopting a “moving average” that is updated annually at the ACCC’s price review, rather than using a static number determined before the start of the regulatory period.

### 5.1 Final decision

The ACCC approves the forecast of water extractions for the first year of the 2014-17 regulatory period, 2014–15, as proposed by State Water for all valleys, except Fish River. The ACCC also approves forecast and entitlement volumes for the 2014-17 regulatory period as proposed by State Water for all valleys. The ACCC is satisfied that the proposed forecasts of water extractions and entitlement volumes for each valley:<sup>26</sup>

- have been developed using an appropriate forecasting methodology
- are based on reasonable assumptions about key drivers of demand
- utilise the best available information; and
- take into account current demand and economic conditions.

For Fish River, the ACCC has adjusted the proposed forecast minimum annual quantity (MAQ) to reflect the current water sharing plan for Fish River to ensure that forecasts are based on the best information available. State Water’s proposal relied on out-dated data from a previous water sharing plan.

The ACCC approves the use of the 20 year moving average to forecast water extraction volumes. However, the ACCC does not approve the inputs proposed by State Water. This is because the proposed data range includes data that will not be available to the ACCC at the time of its annual price review. For example, State Water proposed using data from 1995–96 to 2014–15 in setting the forecast for the 2015–16 price review. As the price review will take place before the end of the 2014-15 financial year, actual data from 2014–15 will not be available at this time.

The ACCC has amended the inputs to the 20 year moving average so that they start and end one year earlier. The ACCC considers this is consistent with its pricing principles, which require that a forecasting approach utilise the best information available.<sup>27</sup>

Attachment 7 discusses the ACCC’s consideration of the issues raised by stakeholders in regard to forecasting water extractions and the ACCC’s draft decision. The ACCC’s draft decision<sup>28</sup> also contains information and analysis supporting this final decision.

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<sup>26</sup> ACCC, *ACCC Pricing Principles*, section 3.13, p.53.

<sup>27</sup> ACCC, *ACCC Pricing Principles*, p.54.

## 6 Operating expenditure

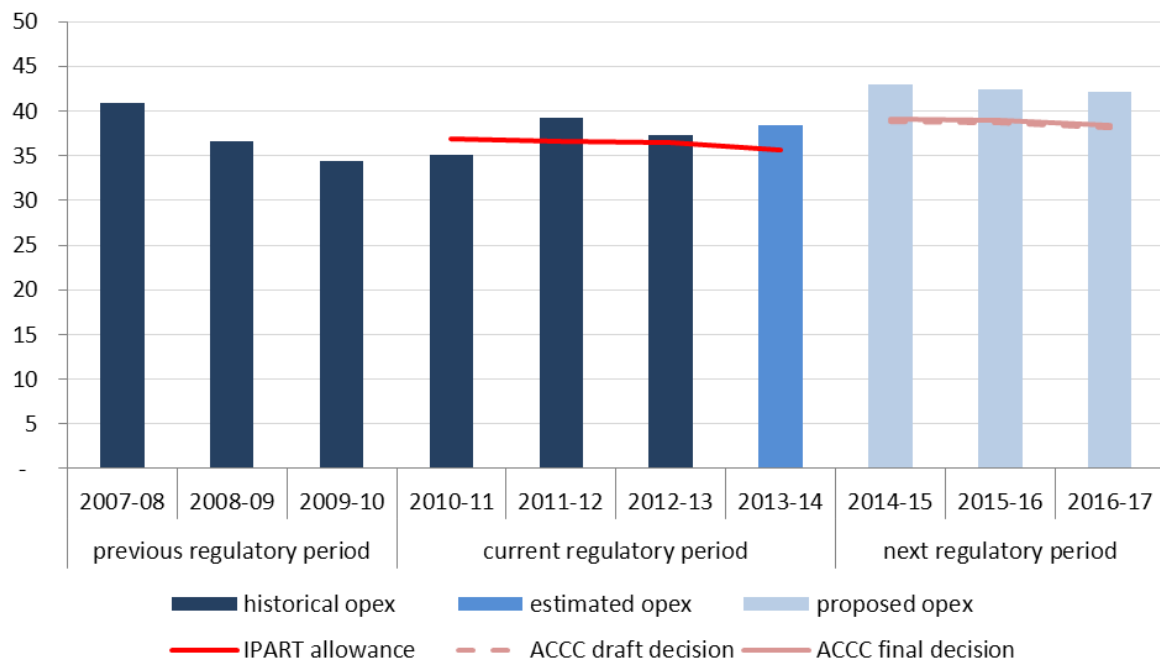
Operating expenditure (opex) is the operating, maintenance and other non-capital costs that are incurred by State Water in providing water storage and delivery services. The ACCC has assessed whether State Water's proposed opex is consistent with the prudent and efficient costs of providing infrastructure services in the 2014-17 regulatory period.<sup>29</sup> The ACCC's findings and final decision are set out in this chapter and in attachment 2. The ACCC's draft decision<sup>30</sup> also contains information and analysis supporting this final decision.

### 6.1 Final decision

State Water has forecast opex of \$127.5 million (real \$2013-14) over the regulatory period. This includes a user share of \$117.6 million (real \$2013-14).

The ACCC does not consider State Water's forecast of opex to be prudent and efficient. The ACCC considers that \$116.5 million (real \$2013-14) of opex is prudent and efficient for the regulatory period. The user component of forecast opex is \$107.3 million (real \$2013-14). Figure 6-1 shows the ACCC's final decision on opex, and compares it with State Water's proposal and IPART's decision for the previous regulatory period.

**Figure 6-1 Opex for bulk water charges (millions, real \$2013-14)<sup>31</sup>**



<sup>28</sup> See attachment 7 of Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014.

<sup>29</sup> WCIR, rule 29(2).

<sup>30</sup> See attachment 2 of Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014.

<sup>31</sup> 2013-14 is based on a budget estimate provided by State Water.

## 6.2 Summary of reasons

To assess State Water's opex proposal the ACCC developed a forecast of efficient opex. This forecast was then compared with State Water's proposal. Where inefficiencies were identified the ACCC substituted its own estimates.

The ACCC used a 'base-and-step' methodology to develop its forecast of efficient opex for each valley. Under this approach, the ACCC used actual opex from a previous regulatory year as a base opex amount (in this case the financial year 2012-13). The ACCC assessed this base opex amount to determine whether it represented the opex required by State Water to provide its bulk water services in an efficient manner. The ACCC then considered whether an additional opex allowance was required to allow State Water to undertake expenditure that was not incorporated in the base year (step increases).

### 6.2.1 Base opex amount

The ACCC assessed the opex incurred in the 2012–13 base year to determine whether it was likely to reflect an efficient level of opex. To do this, the ACCC examined the incentives to achieve cost savings in the 2010-14 regulatory period, and whether State Water responded to these incentives. State Water demonstrated that it has been responding to the incentives established by IPART's determination. Over the 2010-14 regulatory period it outperformed the regulatory allowances set by IPART.

The ACCC also undertook a detailed engineering review of State Water's base opex, and benchmarked it with other Australian water utilities. The ACCC found that State Water's asset management practices were in line with good industry practice and that it compared positively to other Australian water utilities.

On this basis, the ACCC considers it reasonable to include opex for the financial year 2012-13 as the base opex amount, with some small adjustments that are detailed in attachment 2.

### 6.2.2 Step increases

Step increases allow State Water to obtain additional funding to allow for new obligations or changes in circumstance that were not accounted for in base opex. Examples of a change in circumstances that may result in a step increase in forecast opex include: the imposition of new safety regulations or other new legislative requirements, changes in the price of inputs such as labour and materials or gains in productivity (which would reduce the required amount of opex).

The ACCC assessed the step increases proposed by State Water to determine if they were prudent and efficient. In general, the ACCC considers that State Water's proposed step increases are in excess of the amount required by a prudent and efficient operator. The ACCC considers that:

- State Water's opex for changes in regulatory obligations is too high. A number of obligations do not represent a material change in circumstances. In some areas a lower cost solution is available.
- A number of proposed step increases in opex to address non-recurrent expenditure are not justified. The ACCC considers that in many instances the base opex already includes amounts sufficient to recover non-recurrent expenditure.
- Some of State Water's proposed discretionary projects are not justified by the benefits they are expected to produce.

- State Water's forecast changes in input prices are not realistic.
- Past performance indicates that State Water is likely to achieve a larger productivity gain than it has proposed.

Table 6-1 sets out the main reasons why the ACCC's forecast of efficient step increases differs from State Water's forecast.

**Table 6-1 ACCC adjustments to step increase categories (\$million, real \$2013–14)**

Step increase	State Water's proposal	ACCC final decision	Reason for difference
regulatory obligations	2.94	2.12	The ACCC accepts the additional costs for environmental management, drinking water monitoring, and hydrometric monitoring, but considers that these could be done at a lower cost. The ACCC considers that crop statistics and basin plan obligations are already funded through base opex.
non-recurrent expenditure	18.61	1.26	Non-recurrent expenditure refers to one-off expenses that do not present an ongoing cost to State Water. The base year opex will include some non-recurrent expenditure as well as recurrent expenditure. Consequently, a step increase to opex is not always necessary to fund non-recurrent opex, as the base year opex already includes an allowance for this in the next period. The ACCC considers that a number of State Water's proposed step increases are for non-recurrent business-as-usual activities and are already funded through the base opex. The ACCC accepts some non-annual routine maintenance and investigations into cold water pollution were delayed and would not be included in base year opex. The ACCC has accepted a small step increase for these items.
business transformation	0.40	(0.97)	The ACCC accepts there is a need for IT refurbishment but considers that these projects could be delivered at a lower cost. The ACCC also accepts the NSW meter upgrade scheme, which will result in cost savings, as efficient. This cost saving has resulted in a negative step change overall for the business transformation program.
customer requested projects	1.32	1.32	The ACCC accepts these step changes as they are endorsed by customers.
output growth	0.78	0.67	The ACCC accepts the additional costs of monitoring more fish passages, and delivering more water in Fish River.
input price changes	3.21	0.40	The ACCC forecasts that productivity adjusted input prices for labour, energy, or chlorine will not increase above CPI, but acknowledges that State Water's insurance premiums have increased.
efficiency gains	-	(1.11)	The ACCC considers that State Water is capable of achieving an ongoing efficiency gain of 1 per cent per year.

Source: ACCC analysis.

## 7 Capital Expenditure

Capital expenditure (capex) is incurred when a business spends money either to buy assets or to add to the value of an existing asset. The ACCC has assessed whether State Water's proposed capital expenditure reflects the prudent and efficient costs of providing infrastructure services in the 2014-17 regulatory period.<sup>32</sup>

### 7.1 Final decision

The ACCC does not approve State Water's total capex forecast of \$204.1 million (gross, real \$2013-14) for the 2014–17 regulatory period. This is because the ACCC is not satisfied that State Water's proposal reflects the prudent and efficient costs of providing infrastructure services in the regulatory period. The ACCC considers that a capex allowance of \$132.0 million (gross, real \$2013-14) reflects the prudent and efficient costs of providing infrastructure services. The user share of capex is \$43.9 million while the government share is \$88.1 million.

Table 7-1 compares the ACCC's final decision with State Water's proposal in its pricing application. It outlines the various components of the ACCC's final decision and shows where adjustments have been made, and the user and government shares of the components. State Water provided updated capital expenditure budgets for 2014-15 to 2016-17. These updated forecasts are set out in attachment 4.

**Table 7-1 ACCC final decision on State Water's approved capital expenditure (\$ '000, real \$2013-14)**

	State Water proposal	ACCC Draft decision	ACCC final decision			Difference between proposal & final (%)	Difference between draft & final (%)
			User share	Government share	Total		
Dam safety compliance - Pre 1997 Construction	100,067	83,945	8,799	77,224	86,024	-14%	2%
Renewal & replacement	19,921	15,507	16,747	1,373	18,121	-9%	17%
Corporate systems	9,155	6,639	7,605	-	7,605	-17%	15%
Environmental planning and protection	57,254	45,355	9,546	9,546	19,092	-67%	-58%
Water delivery and other operations	17,720	351	1,153	-	1,153	-93%	229%
<b>Gross capex</b>	<b>204,117</b>	<b>151,798</b>	<b>43,851</b>	<b>88,143</b>	<b>131,994</b>	<b>-35%</b>	<b>-13%</b>
Capital contributions	8,237	8,237	-	20,642	20,642	151%	151%
<b>Net capex</b>	<b>195,880</b>	<b>143,561</b>	<b>43,851</b>	<b>67,501</b>	<b>111,352</b>	<b>-43%</b>	<b>-22%</b>

Source: ACCC analysis.

<sup>32</sup> WCIR, rule 29(2)(b).

## 7.2 Summary of reasons

The ACCC's reasons are set out in full in its draft decision<sup>33</sup> and in attachment 4 of this final decision.

### 7.2.1 Updated capex program

State Water has changed its capex program since it provided its pricing application to the ACCC on 30 July 2013. The ACCC has amended its capex forecasts having regard to the updated information. The capex approved by the ACCC reduces capex by \$72 million (real \$2013–14) over the regulatory period compared to State Water's application.

### 7.2.2 Overheads allocation

The ACCC's final decision is to accept the internal labour and overheads allowances included in State Water's proposed capex, to the extent that the projects are accepted. The ACCC's draft decision reduced the overheads allowance on the grounds that embedded internal labour in a number of projects appeared higher than in the past. State Water provided additional information showing that the amount of internal labour in capex forecasts was less than estimated by the ACCC. The ACCC has now accepted that State Water's forecast overheads are likely to be efficient and within the historical range.

### 7.2.3 Contingencies

The ACCC's final decision is not to accept the 10 per cent contingency allowance proposed by State Water on top of its Environmental planning and protection capex estimates. This maintains the ACCC's position in its draft decision.

### 7.2.4 Dam Safety Compliance – Pre 1997 Construction

The ACCC accepts the majority of State Water's dam safety compliance projects as being prudent and efficient and largely maintains the positions that it took in its draft decision. In its draft decision the ACCC did not accept the Oberon dam safety project, and re-categorised Rydal dam works as dam safety rather than renewals,

However, additional information provided by State Water has shown that:

- the Burrendong Dam project has been reduced in scope
- the Keepit Dam project has been re-phased with the expenditure occurring in later years
- the Wyangala Dam Phase 0 program has been revised and \$7.1 million (real \$2013–14) of expenditure will now be incurred in 2014-15
- the Chaffey Dam Augmentation (externally funded) has increased in cost compared to State Water's initial proposal.<sup>34</sup>

The ACCC accepts these changes to State Water's proposed capex program. The ACCC's final decision is to approve capex on dam safety and compliance of \$82.6 million (real \$2013–14).

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<sup>33</sup> See attachment 4 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>34</sup> State Water, email to the ACCC, 16 May 2014.



## 7.2.5 Environmental planning and protection

The ACCC's final decision is not to accept State Water's proposed \$57.3 million (real \$2013–14) in Environmental Planning and Protection (EPP) expenditure. In its draft decision the ACCC accepted that all State Water's proposed fish passage works were required by regulation and were prudent and efficient. However, additional information provided by State Water has indicated that [REDACTED - CONFIDENTIAL].<sup>35</sup> The ACCC has approved a third of State Water's initial proposed amount as the capex allowance in the last year of the 2014-17 regulatory period. The ACCC considers this is the best forecast available in the circumstances. The ACCC's final decision is to approve capex on EPP of \$19.1 million (real \$2013–14).

## 7.2.6 Renewal and replacement

In its draft decision the ACCC approved State Water's renewal replacement program as prudent and efficient. However, additional information provided by State Water has shown that State Water intends to re-phase its expenditure on renewal and replacement. The ACCC accepts the re-phasing of part of State Water's proposed capex program from 2014-15 to 2015-16, and the minor increases in some other projects in 2014-15. The ACCC's final decision is to approve capex on renewal and replacement of \$18.1 million (real \$2013–14).

## 7.2.7 Water delivery and other operations

The ACCC does not accept State Water's proposal for \$17.7 million (real \$2013–14) in expenditure on its water delivery and other operations program. The ACCC generally maintains the positions it took in its draft decision. The reduction in this category relates to the CARMS and Crooked Creek water efficiency projects. The ACCC did not accept these projects as prudent and efficient in its draft decision. State Water did not submit additional information regarding these projects as part of its submission to the draft decision.

The ACCC's final decision also approves capex totalling \$0.75 million (real \$2013–14) for the Gunidgera Creek capacity project. This is supported by the Namoi-Peel CSC and Namoi Water as a discretionary project, but had not been approved in time to be included in State Water's pricing application.

The ACCC considers that \$1.2 million (real \$2013–14) in expenditure reflects the prudent and efficient cost of the water delivery and other operations program in the 2014-17 regulatory period.

## 7.2.8 Corporate systems

The ACCC considers that the majority of State Water's proposed corporate systems capex is prudent and efficient, and is justified by the need to replace ageing systems and avoid risk of failure of business and operating systems. However, the ACCC in its draft decision did not approve several smaller projects and reduced the proportion of certain corporate projects that is allocated to regulated valleys. The ACCC generally maintains the positions it set out in section 4.5.7 of its draft decision.<sup>36</sup> However, the ACCC has made a number of adjustments to reflect information included in the updated 2014-15 budget provided by State Water. The final decision is to approve capex on corporate systems of \$7.6 million (real \$2013–14).

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<sup>35</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>36</sup> See attachment 4 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

## 8 Regulatory asset base

The regulatory asset base (RAB) is the value of the assets that State Water uses to provide its regulated infrastructure services. The assets in State Water's RAB include its dams, IT systems, plant and machinery, vehicles and buildings. The value of the RAB is used to determine the return on capital and regulatory depreciation components of total revenue.

The methodology for establishing the opening RAB is set out in the WCIR.<sup>37</sup> This involves:

- confirming the value of the opening RAB as at 1 July 2010 (the first year of the 2010–14 regulatory period).
- rolling forward the opening RAB from 1 July 2010 to determine the closing RAB as at 30 June 2014.
- using the ACCC's final decision on depreciation, capex, disposals and inflation forecasts for the 2014–17 regulatory period to roll forward State Water's projected RAB for each year of that regulatory period.<sup>38</sup>

### 8.1 Final decision

The ACCC does not approve State Water's total proposed opening RAB as at 1 July 2014 of \$726.1 million (nominal) for its ACCC regulated valleys. The ACCC has determined a total opening RAB as at 1 July 2014 of \$657.3 million (nominal). The user share of the opening RAB as at 1 July 2014 is \$219.3 million (nominal). The ACCC's changes to State Water's proposed inputs to the RAB roll forward model (RFM) are required under Schedule 2 of the WCIR and include:

- Correcting State Water's estimates of forecast capex, depreciation and associated user share inputs for 2009–10. The ACCC considers these to be in error and has amended the amounts to be consistent with those approved by IPART.
- Using forecast depreciation (adjusted for actual inflation) to roll forward the RAB instead of actual depreciation as proposed by State Water. The ACCC considers the forecast depreciation allowance as approved previously by IPART (adjusted for actual inflation) should be used in the roll forward.
- Updating 2012–14 forecast CPI with actual CPI.<sup>39</sup>

The ACCC has also determined its own estimate of 2013–14 net capex in response to concerns regarding the estimate used in the draft decision and the lack of an updated expenditure forecast from State Water. This is discussed further in attachment 3.

Table 8-1 shows the ACCC's final decision on the roll forward of State Water's RAB from 2009–10 (the last year of the 2006–10 regulatory period) through to the 2010–14 regulatory period.

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<sup>37</sup> WCIR, rule 29.

<sup>38</sup> Forecast capex is added to the RAB, while forecast depreciation and disposals are removed from the RAB. Forecast inflation is used to index the RAB for the 2014–17 regulatory period.

<sup>39</sup> The ACCC's final decision includes an update to the actual CPI for 2013–14.

**Table 8-1 ACCC's final decision on State Water's opening RAB roll forward for 2009–10 to 2013–14 (\$million, nominal)**

	2009–10	2010–11	2011–12	2012–13	2013–14
Opening value	354.4	434.6	519.2	583.5	614.1
CPI indexation	8.6	12.7	16.9	9.5	15.4
Net capex	72.3	76.4	53.4	28.3	38.6
Less: straight-line depreciation	0.7	4.5	5.9	7.3	8.2
Difference in actual and forecast 2009–10 net capex	0.0	0.0	0.0	0.0	-1.9
Return on difference	0.0	0.0	0.0	0.0	-0.6
<b>Closing value (Govt + user)</b>	<b>434.6</b>	<b>519.2</b>	<b>583.5</b>	<b>614.1</b>	<b>657.3</b>
Closing value (User)	173.8	189.4	207.2	213.6	219.3
Closing value (Govt)	260.8	329.8	376.3	400.4	438.1

Note: Net capex figures are based on gross capex less any capital contributions from customers or third parties.  
Disposals not presented as there were no asset disposals recorded by State Water.

Source: ACCC analysis.

The ACCC has determined a total projected closing RAB as at 30 June 2017 of \$786.6 million (nominal) for State Water's ACCC regulated valleys.

This is based on:

- a total opening RAB as at 1 July 2014 of \$657.3 million (nominal)
- a forecast inflation rate of 2.55 per cent per annum
- forecast net capex of \$119.7 million (nominal), discussed further in attachment 4
- a total straight-line depreciation of \$43.8 million (nominal) and total inflation indexation to the opening RAB of \$53.4 million, discussed further in attachment 6

The user share of the projected closing RAB at 30 June 2017 is \$268.2 million (nominal).

Table 8-2 sets out the projected roll forward of State Water's RAB during the 2014–17 regulatory period.

**Table 8-2 ACCC's final decision on State Water's projected RAB roll forward during the 2014–17 regulatory period (\$million, nominal)**

	2014–15	2015–16	2016–17
Opening value	657.3	701.5	736.0
Inflation indexation	16.8	17.9	18.8
Net capex	40.8	31.3	47.7
Less: straight-line depreciation	13.4	14.7	15.8
Closing value (Govt + user)	701.5	736.0	786.6
Closing value (User)	229.2	243.6	268.2
Closing value (Govt)	472.3	492.4	518.5

Note: Disposals not presented as no asset disposals were proposed by State Water.  
Source: ACCC analysis.

Attachment 3 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to the ACCC's draft decision on the opening RAB. The ACCC's draft decision<sup>40</sup> also contains information and analysis supporting this final decision.

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<sup>40</sup> See attachment 3 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

## 9 Rate of return

The rate of return compensates a regulated business for servicing the interest on its borrowings and providing a return on equity to its investors. The cost of capital building block is calculated by multiplying the rate of return by the value of the regulatory asset base (RAB).

The ACCC adopts the nominal vanilla weighted average cost of capital (WACC) formulation to estimate the rate of return.<sup>41</sup> This is consistent with State Water's pricing application and the ACCC's water pricing principles. In outlining the ACCC's rationale for the pricing principles, the ACCC stated:

In determining the WACC, it will be necessary to ensure the rate of return is commensurate with the commercial risk associated with the business' regulated activities such that the business recovers its efficient costs.<sup>42</sup>

### 9.1 Final decision

The ACCC has not approved a rate of return of 8.96 per cent, as proposed in State Water's pricing application.<sup>43</sup> Consistent with its draft decision, the ACCC has applied a rate of return consistent with the methodology set out in the ACCC's water pricing principles.

For the period 1 July 2014 to 30 June 2017, the ACCC has applied a rate of return of 6.92 per cent to State Water's RAB. As indicated in the draft decision, and consistent with the water pricing principles, the ACCC has updated the risk free rate and debt risk premium (DRP) applied in the draft decision.<sup>44</sup> The ACCC updated these parameters using an averaging period of 40 business days commencing as close as practically possible to the start of the regulatory period. Specifically, the ACCC used market data from 26 March 2014 to 23 May 2014. The ACCC considers a rate of return of 6.92 per cent to be commensurate with the commercial risk associated with State Water's regulated activities such that it recovers its efficient costs.

As the ACCC has applied its water pricing principles for setting the rate of return, the ACCC agrees with the following aspects of State Water's pricing application:

- Adopting the Sharpe–Lintner capital asset pricing model (CAPM) to calculate the return on equity.
- Adopting the yield on 10 year Commonwealth Government Securities (CGS) as the proxy for the risk free rate.
- Adopting a market risk premium (MRP) of 6.0 per cent.
- Specifying the return on debt as the DRP over the risk free rate.
- Using corporate bonds with a BBB credit rating to estimate the DRP. The ACCC defines the benchmark bond as a 10 year Australian corporate bond with a BBB+ credit rating. However, due to data inadequacies, the DRP can be calculated using BBB rated bonds in practice.
- Adopting a 60 per cent gearing ratio.

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<sup>41</sup> A nominal vanilla WACC is the combination of a nominal post–tax return on equity and a nominal pre–tax return on debt.

<sup>42</sup> ACCC, *Pricing principles under the WCIR*, July 2011, p. 26.

<sup>43</sup> State Water, *Pricing application to the ACCC*, June 2013, p. 99.

<sup>44</sup> In its Draft decision, the ACCC proposed an indicative rate of return of 7.44 per cent. It based this indicative rate of return on an indicative averaging period reflecting market data from 16 December 2013 to 15 January 2014.

In its pricing application, State Water departed from the water pricing principles for several parameters. The ACCC does not agree with these proposed departures, which included:

- Adopting a 10 year historical average risk free rate in estimating the return on equity.<sup>45</sup> Rather, the ACCC adopted a short term averaging period as close as practicably possible to the start of the regulatory period.
- Adopting an equity beta of 0.9. Rather, the ACCC adopted an equity beta of 0.7. This is consistent with the pricing principles and is based on evidence from comparative businesses and regulatory decisions for Australian water businesses.<sup>46</sup>
- Using a DRP based on a 10 year historical average. Rather, the ACCC estimated a prevailing 10 year forward looking DRP.

Table 9-1 sets out the rate of return parameters determined by the ACCC. For the period 1 July 2014 to 30 June 2017, the ACCC has applied a rate of return of 6.92 per cent. This is lower than the rate of return proposed in State Water's pricing application. In its submission to the ACCC's draft decision, State Water recommended the ACCC reconsider the risk free rate, MRP and equity beta.<sup>47</sup> State Water was not explicit on the values it considered the ACCC should apply to these parameters in its final decision. Stakeholder submissions to State Water's pricing application and the ACCC's draft decision supported applying a lower rate of return than 8.96 per cent<sup>48</sup> as proposed by State Water.

Attachment 5 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to the ACCC's draft decision on the opening RAB. The ACCC's draft decision<sup>49</sup> also contains information and analysis supporting this final decision.

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<sup>45</sup> Specifically, the 10 year period ending 22 March 2013.

<sup>46</sup> ACCC, *Pricing principles under the WCIR*, July 2011, pp. 34–38.

<sup>47</sup> State Water Corporation, *Response to the ACCC Draft decision on State Water pricing application*, April 2014, p. 6.

<sup>48</sup> Namoi Water, *Submission to the ACCC Draft decision*, April 2014, p. 3; NSW Irrigators' Council, *Submission to the ACCC Draft decision*, April 2014, p. 23; Murray Irrigation Ltd., *Submission to the ACCC Draft decision*, April 2014, p. 3; Lachlan Valley Water, *Submission to the ACCC Draft decision*, April 2014, p. 3; Gwydir Valley Irrigators Association Inc., *Submission to the ACCC on Draft decision on State Water pricing application*, May 2014, p. 8; Lachlan Valley Water Inc., *Submission to the ACCC on State Water Corporation's regulated charges 2014–2017*, September 2013, p. 4; NSW Irrigators' Council, *Submission to the ACCC on State Water Corporation's pricing application*, September 2013, p. 25; Macquarie River Food and Fibre, *Submission on State Water Corporation's pricing application for regulated charges from 1 July 2014*, September 2013, pp. 14, 20.

<sup>49</sup> See attachment 5 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

**Table 9-1 ACCC's final decision on State Water's rate of return (nominal)<sup>50</sup>**

Parameter	State Water's pricing application	ACCC's final decision
Nominal risk free rate	5.26%	3.98% <sup>a</sup>
Equity beta	0.9	0.7
Market risk premium	6.0%	6.0%
Debt risk premium	2.55%	2.10% <sup>a</sup>
Gearing level	60%	60%
Nominal post-tax return on equity	10.66%	8.18%
Nominal pre-tax return on debt	7.82%	6.08%
Nominal vanilla WACC	8.96%	6.92%

Source: State Water, *Pricing application to the ACCC*, June 2013, p. 99; ACCC, *Draft decision on State Water pricing application 2014–15 to 2016–17*, 5 March 2014, p. 38; ACCC analysis.

Note: (a) The ACCC has based the nominal risk free rate and DRP on a 40 business day averaging period from 26 March 2014 to 23 May 2014. This produces a different WACC to the indicative WACC set out in the draft decision, where the ACCC applied an indicative averaging period from 16 December 2013 to 15 January 2014.

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<sup>50</sup> This final decision does not address gamma because State Water did not propose a tax building block. Typically, the ACCC would specify gamma in the WACC decision, even though it is not required to estimate the nominal vanilla WACC. Gamma would be required for calculating regulatory allowances for corporation tax.

## 10 Regulatory depreciation

Regulatory depreciation is used to determine the value of State Water's capital assets for each year of that asset's economic life. An allowance for regulatory depreciation is used as a building block to determine State Water's total revenue requirement. The allowance is provided so that capital investors can receive a return of their invested capital over the economic life of the asset (return of capital). The value of the regulatory depreciation allowance is also subtracted from the regulatory asset base so that the value of the asset is only recovered once.

Various factors determine the regulatory depreciation allowance for the 2014–17 regulatory period. Two key factors include:

- the remaining economic lives for depreciating existing assets in the opening RAB
- the standard economic lives for depreciating new assets associated with forecast net capex.

The approved capex allowance and the opening RAB also affect the regulatory depreciation allowance.<sup>51</sup>

### 10.1 Final decision

The ACCC approves State Water's proposal to use the straight-line method to calculate the regulatory depreciation allowance. However, the ACCC does not approve State Water's total proposed regulatory depreciation allowance of –\$22.1 million (nominal) for its regulated valleys over the 2014–17 regulatory period.

The ACCC's final decision on capital expenditure for the 2014–17 regulatory period has also affected the proposed regulatory depreciation allowance. The ACCC's final decision reduces the capital expenditure allowance, which offsets somewhat the increase in the regulatory depreciation building block due to the shorter asset lives.

The ACCC's final decision is to determine State Water's total regulatory depreciation allowance over the 2014–17 regulatory period of –\$9.6 million (nominal). This represents an increase of \$12.5 million (nominal) compared to State Water's proposal. The total amount is negative because State Water's asset base is depreciating at a slower rate than inflation. Table 10-1 shows the calculation of this figure. Given the relatively long lives of some assets, the regulatory depreciation allowance across all ACCC regulated valleys is negative overall, as the indexation (inflation) adjustment to the RAB outweighs the straight-line depreciation component of regulatory depreciation.

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<sup>51</sup> This is relevant for nine of the ten valleys regulated by the ACCC. Lowbidgee is a new valley so it does not have an opening RAB.



**Table 10-1 ACCC's final decision on State Water's depreciation allowance (\$million, nominal)**

	2014–15	2015–16	2016–17	Total
Straight-line depreciation	13.4	14.7	15.8	43.8
Less: indexation on opening RAB	16.8	17.9	18.8	53.4
<b>Regulatory depreciation</b>	<b>-3.4</b>	<b>-3.2</b>	<b>-3.0</b>	<b>-9.6</b>

Source: ACCC analysis.

Attachment 6 discusses the ACCC's consideration of the issues raised by stakeholders and State Water in response to the ACCC's draft decision on regulatory depreciation. The ACCC's draft decision<sup>52</sup> also contains information and analysis supporting this final decision.

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<sup>52</sup> See attachment 6 of *Attachments to ACCC Draft decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

## Appendix A – Charges and revenue requirement by valley

The following is a summary of the charges and revenue requirements for each MDB valley serviced by State Water as determined by the ACCC's final decision. Charges for 2015-16 and 2016-17 are indicative as set out in appendix B. The ACCC's draft decision also contains valley-based information regarding its consideration of State Water's 2014-17 pricing application.

### Border valley

As shown in Table A 1, the ACCC's final decision will lead to lower bulk water entitlement charges for high security entitlements and usage in the Border valley in the next regulatory period compared to 2013-14 levels. The general security entitlement charge will be slightly higher.

**Table A 1 ACCC final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Border valley \***

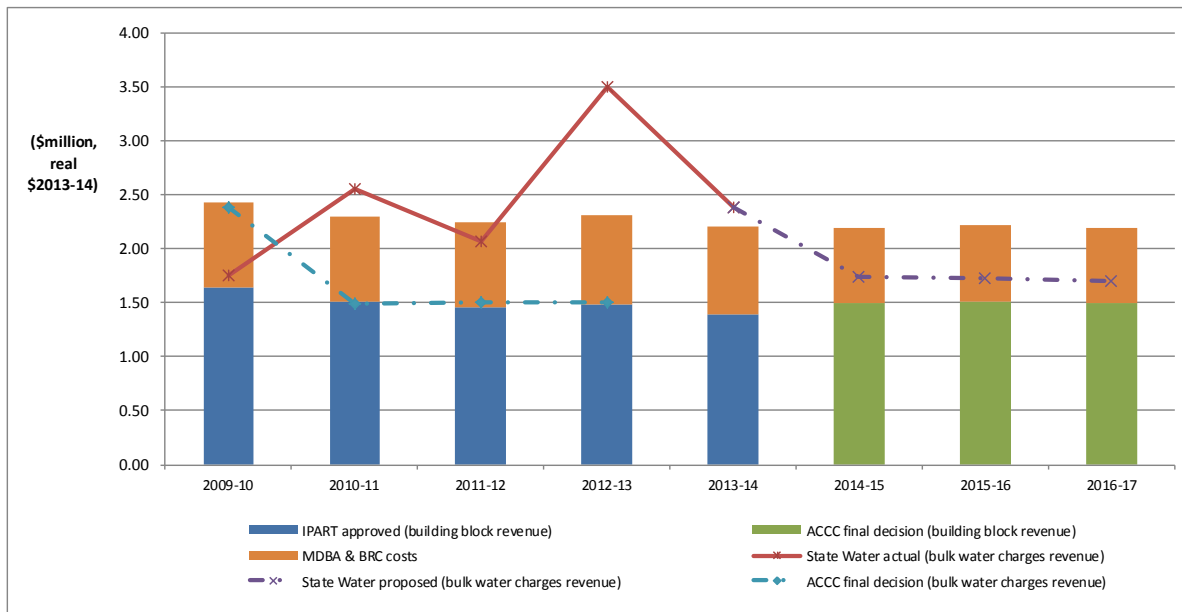
	2013-14 (IPART)	2014-15	2015-16	2016-17
High security (\$/ML)	\$11.45	\$9.55	\$9.59	\$9.62
General security (\$/ML)	\$3.21	\$3.22	\$3.23	\$3.24
Usage (\$/ML delivered)	\$9.43	\$9.35	\$9.39	\$9.42

\* IPART charges include MDBA and BRC costs, and ACCC charges include BRC costs. There are no MDBA costs for the 2014-17 period.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Border valley over the 2014–17 regulatory period should be set at \$5.0 million, \$0.8 million lower than the amount proposed by State Water. The Border River Commission (BRC) costs determined by the NSW government total \$2.1 million over the period.

Figure A 1 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The component of revenues due to the BRC cost pass through is shown separately.

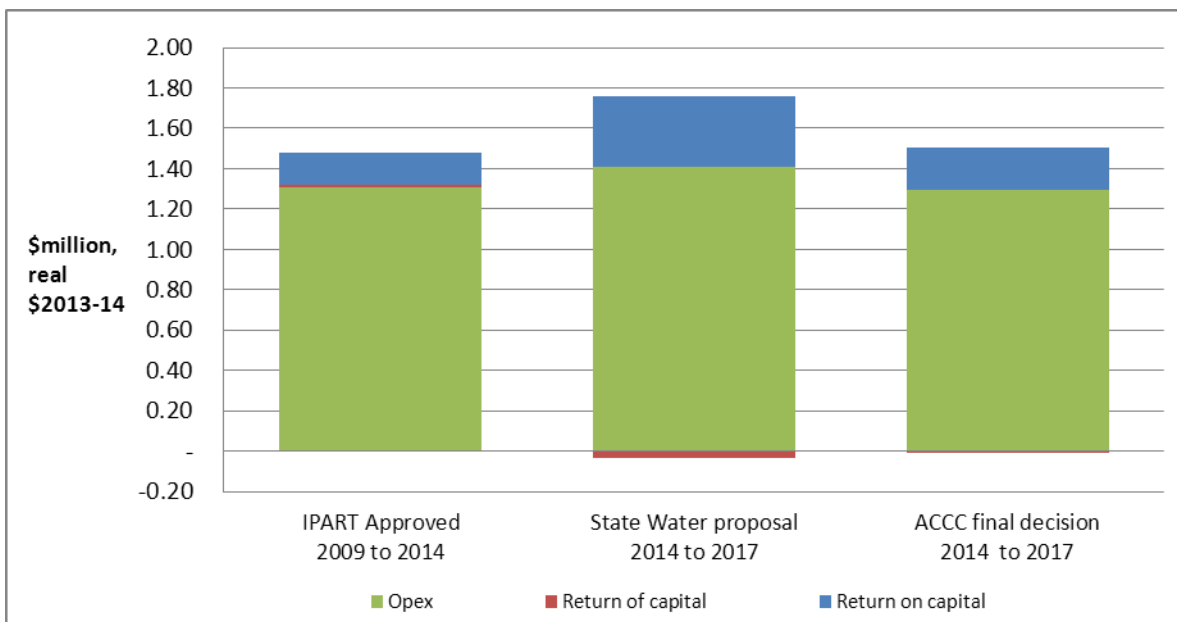
**Figure A 1 State Water proposed and ACCC final decision total revenue – user share – Border valley**



Source: ACCC analysis.

Figure A 2 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

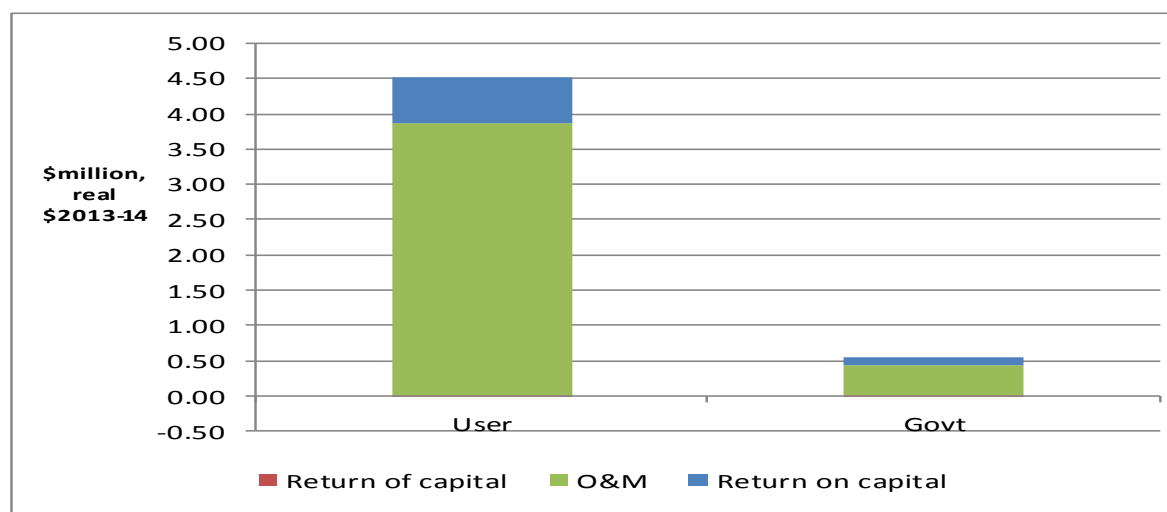
**Figure A 2 Average annual revenue by building block components – user share – Border valley**



Note: Building blocks in this chart exclude MDBA and BRC costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 3 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 3 ACCC final decision – Revenue requirement by user and government share and component, total 2014–17 – Border valley**



Note: Building blocks in this chart exclude MDBA and BRC costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

## Gwydir valley

As shown in Table A 2, bulk water entitlement and usage charges in the Gwydir valley will be generally lower over the 2014–17 period compared to 2013-14.

**Table A 2 ACCC final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Gwydir valley**

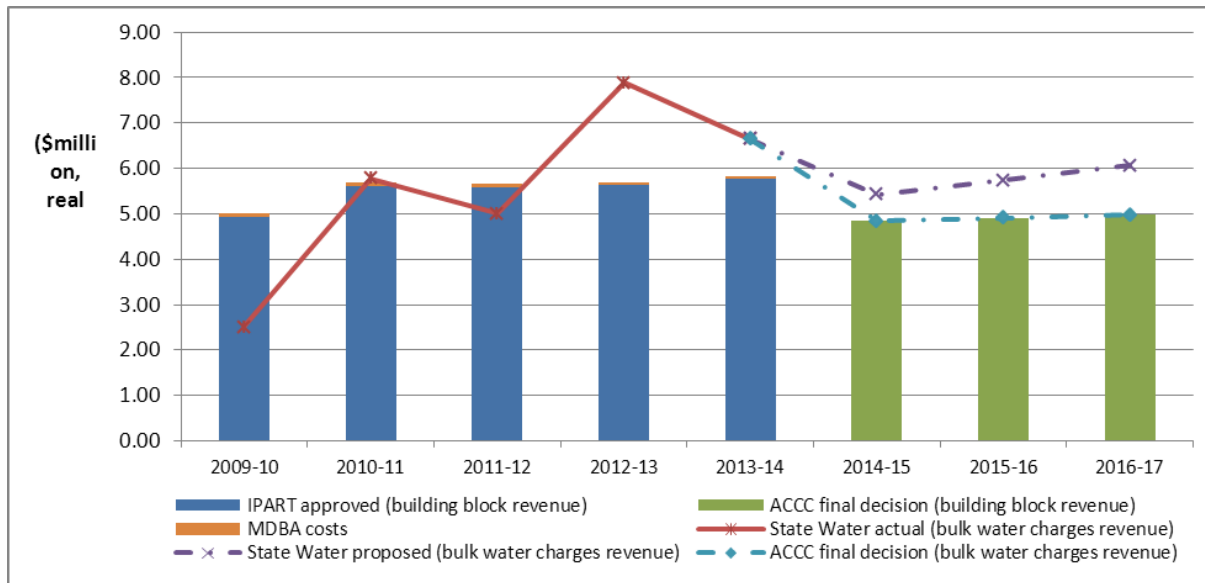
	2013-14 (IPART)*	2014-15	2015-16	2016-17
High security (\$/ML)	\$14.55	\$13.18	\$13.36	\$13.55
General security (\$/ML)	\$4.06	\$3.24	\$3.29	\$3.33
Usage (\$/ML delivered)	\$12.97	\$11.80	\$11.97	\$12.14

\* IPART charges include MDBA costs. There are no MDBA costs for the 2014-17 period.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Gwydir valley over the 2014–17 regulatory period should be set at \$33.5 million, \$10.6 million lower than the amount proposed by State Water.

Figure A 4 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The component of revenues due to the MDBA cost pass through is shown separately.

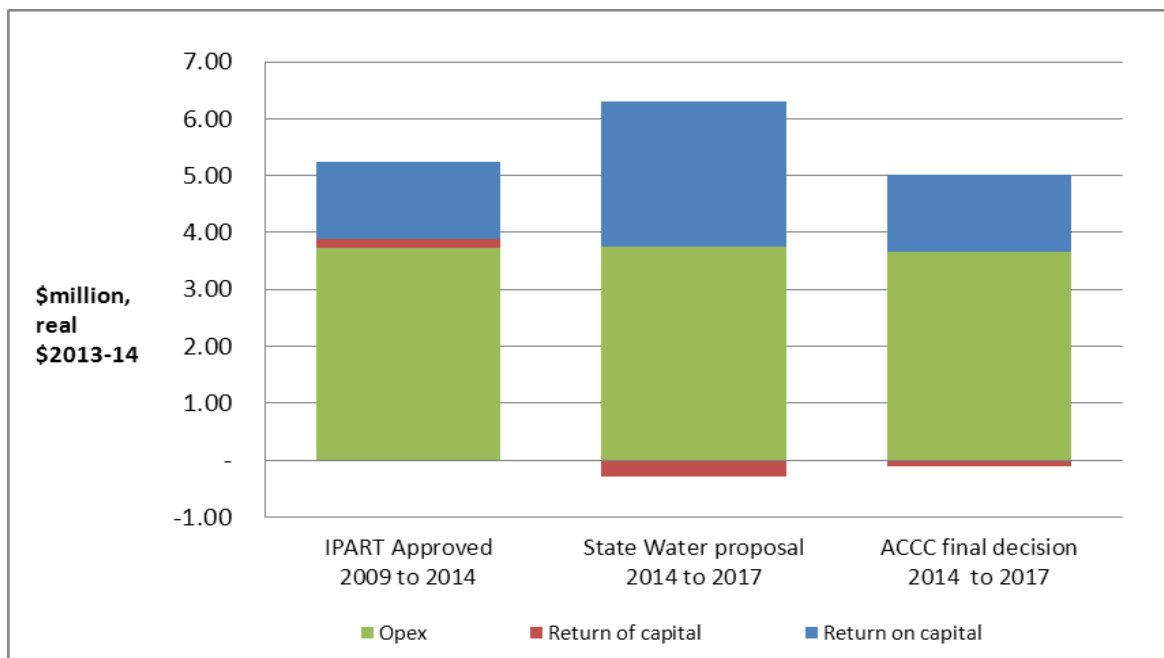
**Figure A 4 State Water proposed and ACCC final decision total revenue – user share – Gwydir valley**



Source: ACCC analysis.

Figure A 5 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

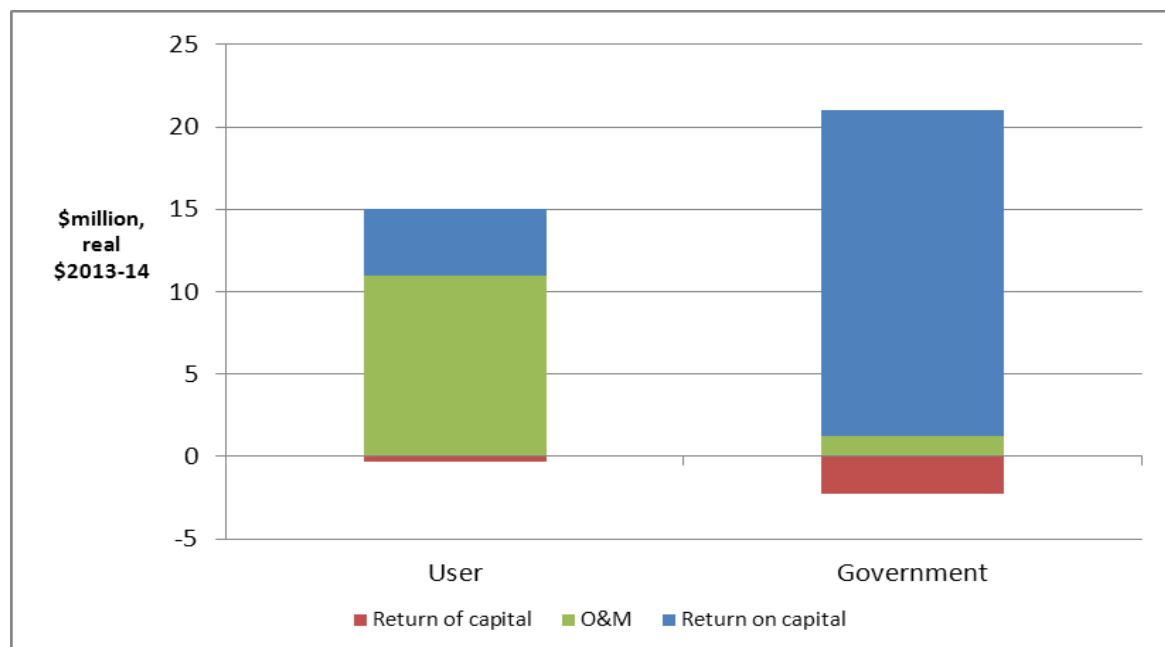
**Figure A 5 Average annual revenue – user share – by building block components – Gwydir valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 6 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 6 ACCC final decision – Revenue requirement by user and government share and component – Gwydir valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

## Namoi valley

As shown in Table A 3, bulk water charges in the Namoi valley will be lower in the 2014-17 regulatory period compared to 2013-14, with the largest decrease being in the general security entitlements charge.

**Table A 3 ACCC final decision –Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Namoi valley**

	2013-14 (IPART)*	2014-15	2015-16	2016-17
High security (\$/ML)	\$16.22	\$16.04	\$16.15	\$16.26
General security (\$/ML)	\$9.09	\$7.46	\$7.51	\$7.56
Usage (\$/ML delivered)	\$19.98	\$19.37	\$19.50	\$19.63

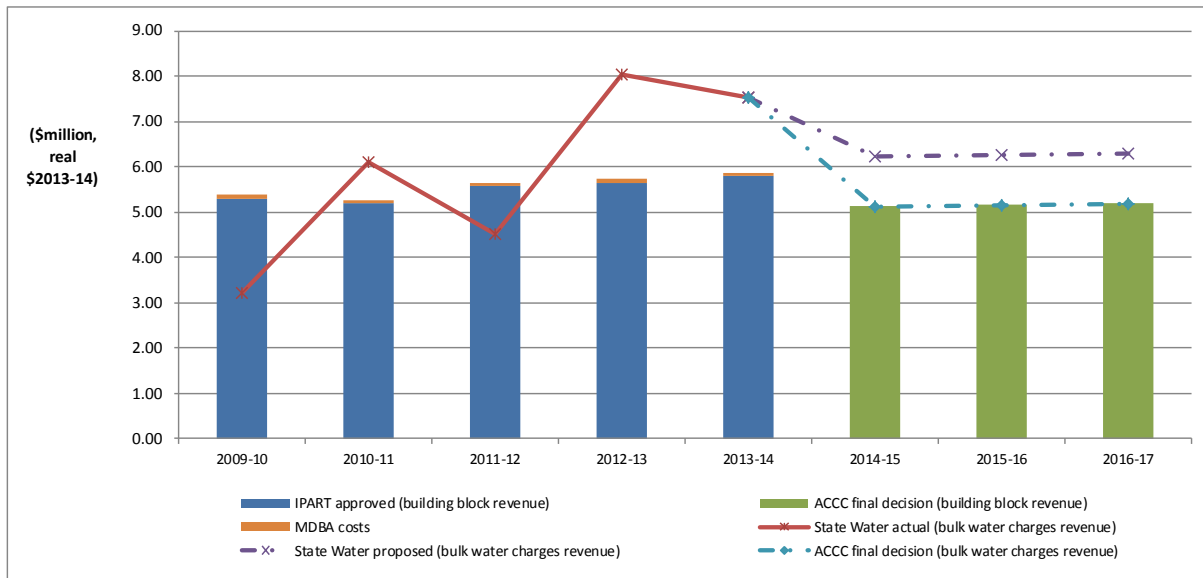
\* IPART charges include MDBA costs. There are no MDBA costs for the 2014-17 period.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Namoi valley over the 2014–17 regulatory period should be set at \$40.8 million, \$17.9 million lower than the amount proposed by State Water.

Figure A 7 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered

from bulk water charges over the 2010–14 regulatory period. The component of revenues due to the MDBA cost pass through is shown separately.

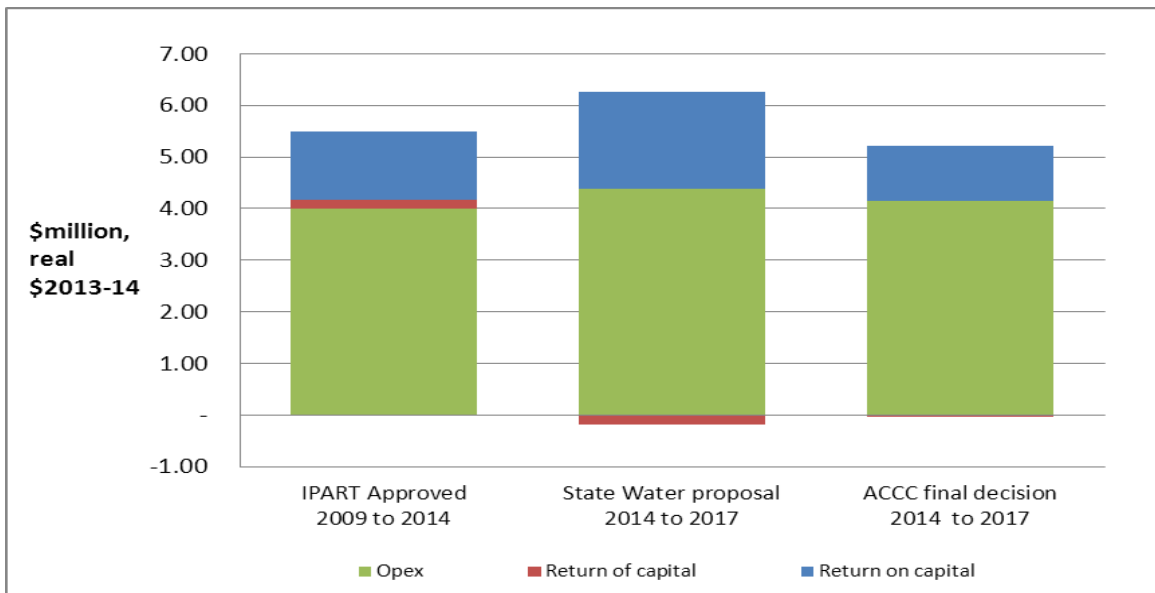
**Figure A 7 State Water proposed and ACCC final decision total revenue – user share – Namoi valley**



Source: ACCC analysis.

Figure A 8 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

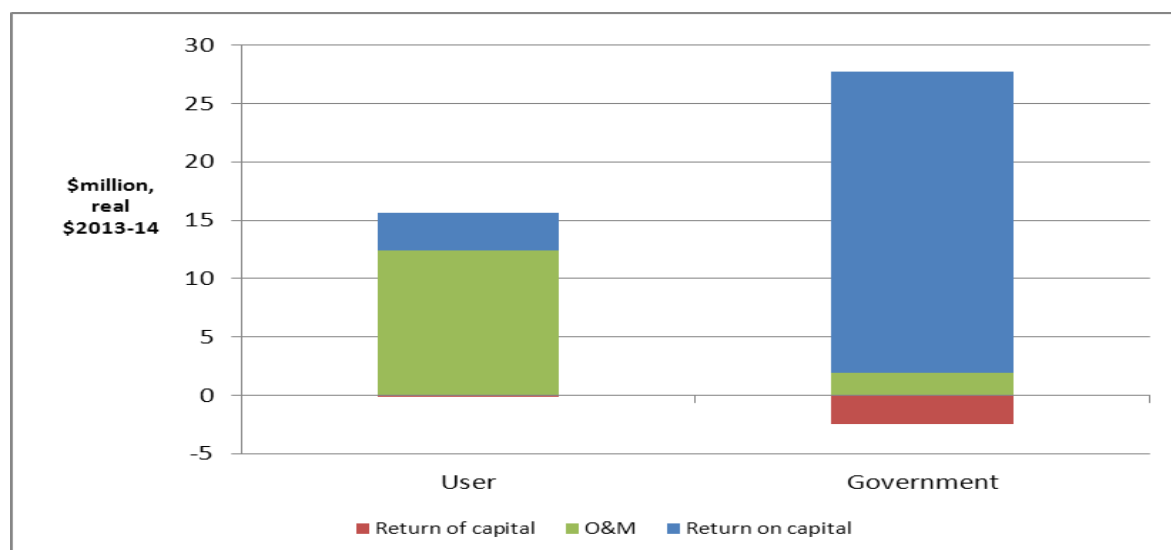
**Figure A 8 Average annual revenue – user share – by building block components – Namoi valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 9 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 9 ACCC final decision – Revenue requirement by user and government share and component – Namoi valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

## Peel valley

The charges for Peel valley in Table A 4 below reflect the ACCC's final decision to set a 10 per cent cap on annual price increases in entitlement and usage charges.

**Table A 4 ACCC final decision –Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Peel valley**

	2013-14 (IPART)*	2014-15	2015-16	2016-17
High security (\$/ML)	\$25.19	\$27.58	\$30.34	\$33.38
General security (\$/ML)	\$2.77	\$3.03	\$3.34	\$3.67
Usage (\$/ML delivered)	\$41.61	\$45.56	\$50.12	\$55.13

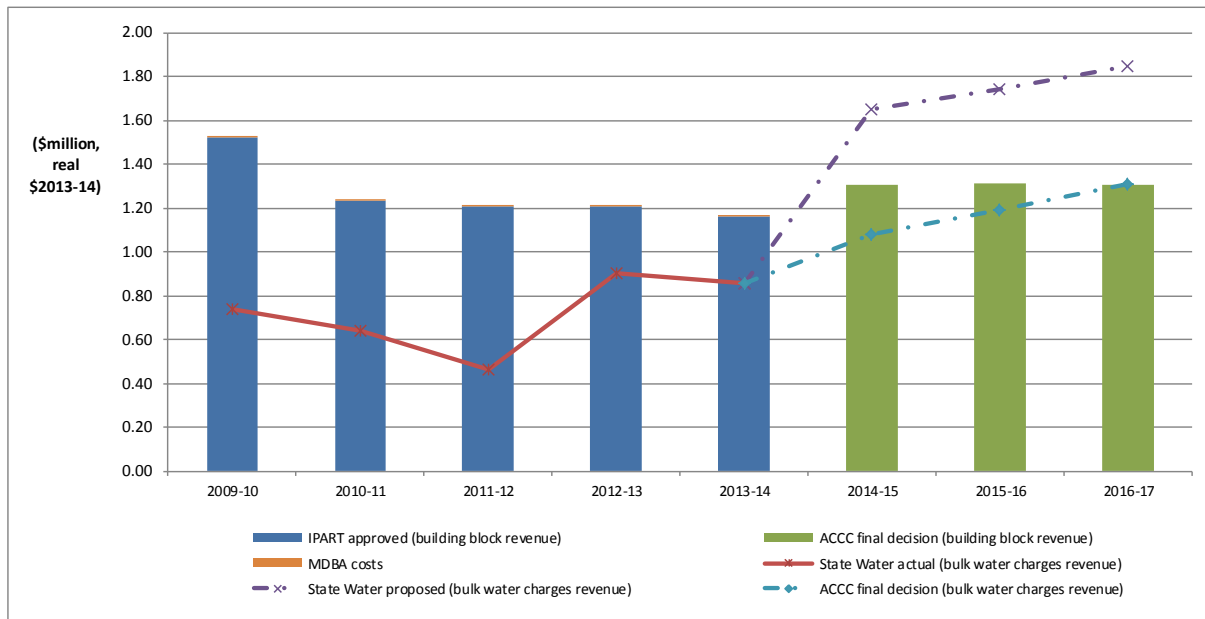
\* IPART charges include MDBA costs. There are no MDBA costs for the 2014-17 period. The 10% increase is calculated on State Water's charges exclusive of the MDBA costs.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue requirement for Peel valley over the 2014–17 regulatory period is \$12.2 million, \$3.3 million lower than the amount proposed by State Water.

Figure A 10 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. The component of revenues due to the MDBA cost pass through is shown separately. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The chart shows that forecast revenue from the capped charges will increase to the full cost recovery level in 2016-17.



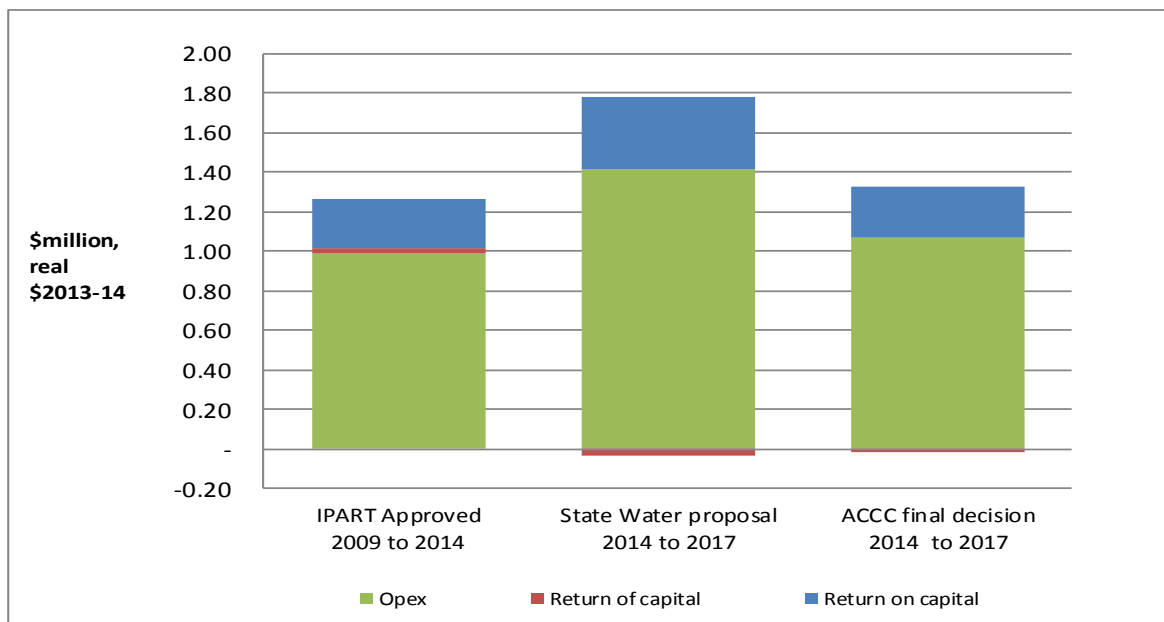
**Figure A 10 State Water proposed and ACCC final decision total revenue – user share – Peel valley**



Source: ACCC analysis.

Figure A 11 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

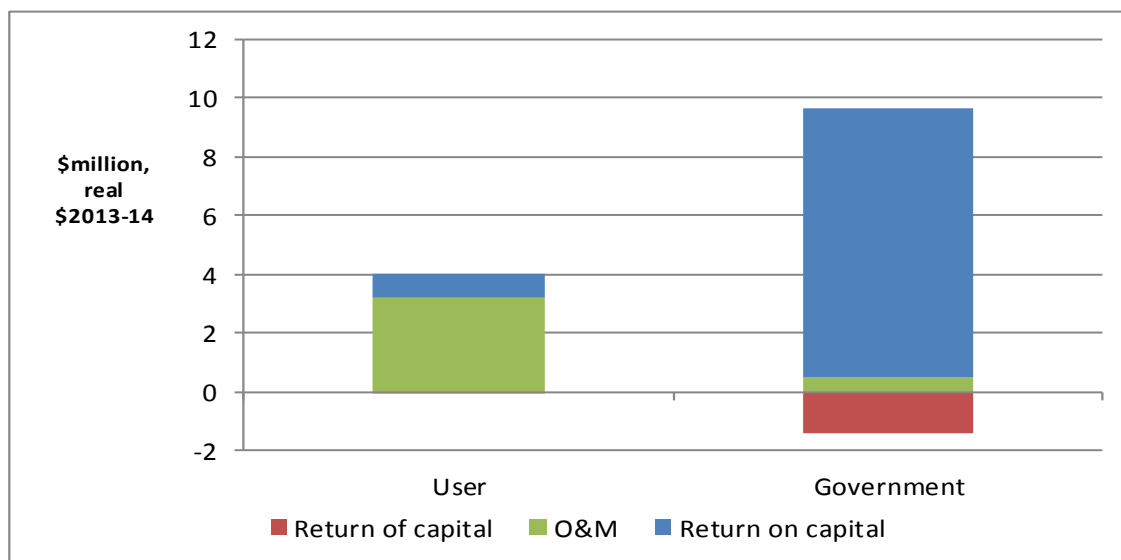
**Figure A 11 Average annual revenue – user share – by building block components – Peel valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 12 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 12 ACCE final decision – Revenue requirement by user and government share and component – Peel valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCE analysis.

## Lachlan valley

As shown in Table A 5, the general security bulk water entitlement charge in the Lachlan valley will be lower in the 2014-17 period compared to 2013-14. The high security entitlement charge and usage charge will increase slightly.

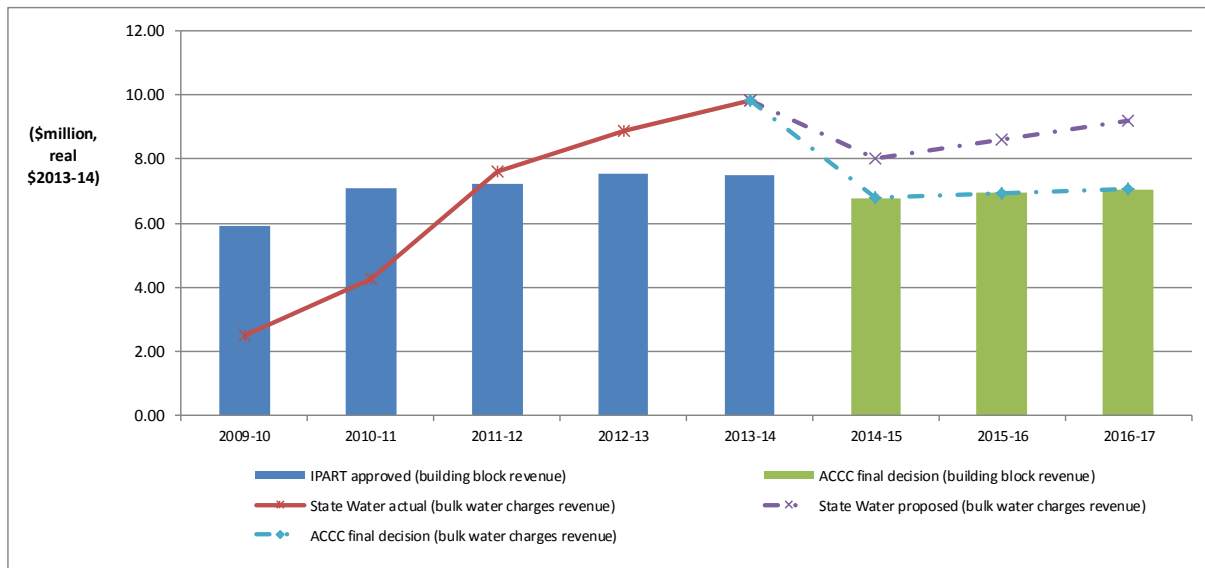
**Table A 5 ACCE final decision –Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Lachlan valley**

	2013-14	2014-15	2015-16	2016-17
High security (\$/ML)	\$12.36	\$12.47	\$12.72	\$12.98
General security (\$/ML)	\$4.42	\$3.09	\$3.16	\$3.22
Usage (\$/ML delivered)	\$18.04	\$17.89	\$18.25	\$18.62

Following an assessment of efficient costs, the ACCE considers that State Water’s total revenue for Lachlan valley over the 2014–17 regulatory period should be set at \$32.6 million, \$11.2 million lower than the amount proposed by State Water.

Figure A 13 compares the ACCE's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period.

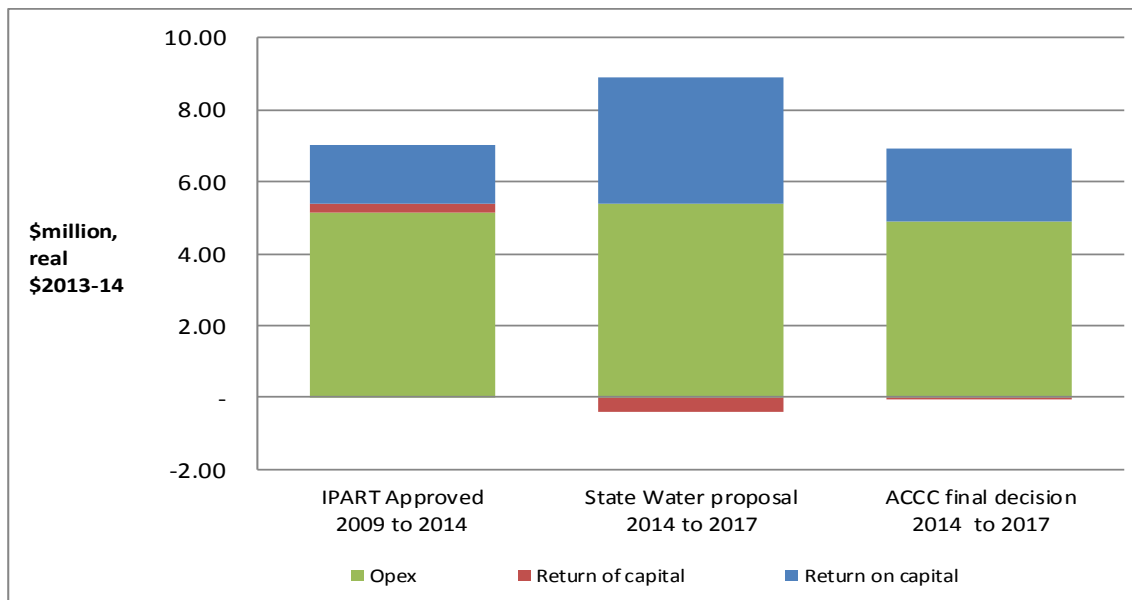
**Figure A 13 State Water proposed and ACCC final decision total revenue – user share – Lachlan valley**



Source: ACCC analysis.

Figure A 14 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

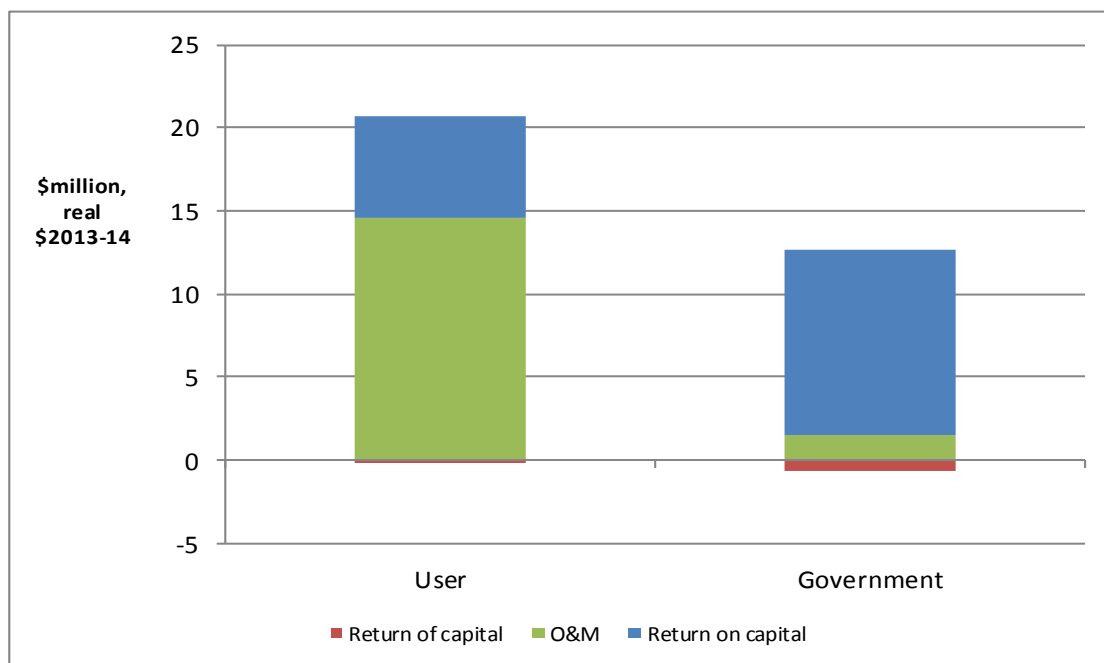
**Figure A 14 Average annual revenue – user share – by building block components – Lachlan valley**



Source: ACCC analysis.

Figure A 15 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 15 ACCC final decision – Revenue requirement by user and government share and component – Lachlan valley**



Source: ACCC analysis.

## Macquarie valley

As shown in Table A 6, the general security bulk water entitlement charge in the Macquarie valley will be lower in the next regulatory period compared to the 2013-14. The high security entitlement charge and usage charge will increase.

**Table A 6 ACCC final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) – Macquarie valley**

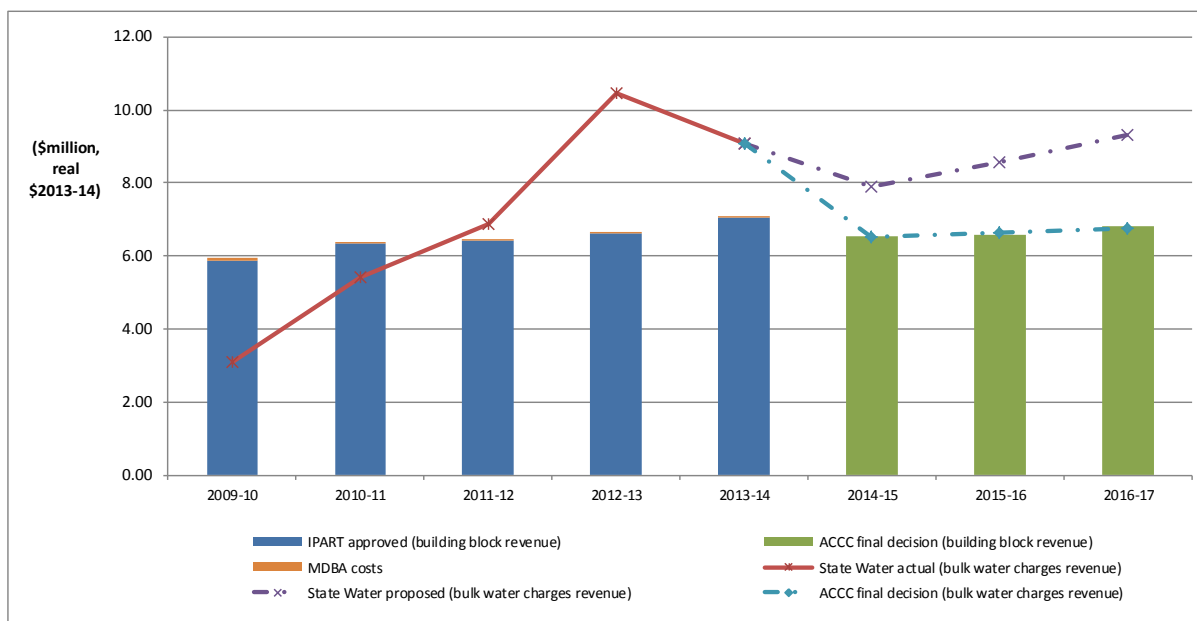
	2013-14*	2014-15	2015-16	2016-17
High security (\$/ML)	\$11.42	\$12.19	\$12.42	\$12.65
General security (\$/ML)	\$4.24	\$3.31	\$3.37	\$3.43
Usage (\$/ML delivered)	\$13.98	\$13.99	\$14.25	\$14.52

\* IPART charges include MDBA costs. There are no MDBA costs for the 2014-17 period.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Macquarie valley over the 2014–17 regulatory period should be set at \$28.8 million, \$14.0 million lower than the amount proposed by State Water.

Figure A 16 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The component of revenues due to the MDBA cost pass through is shown separately.

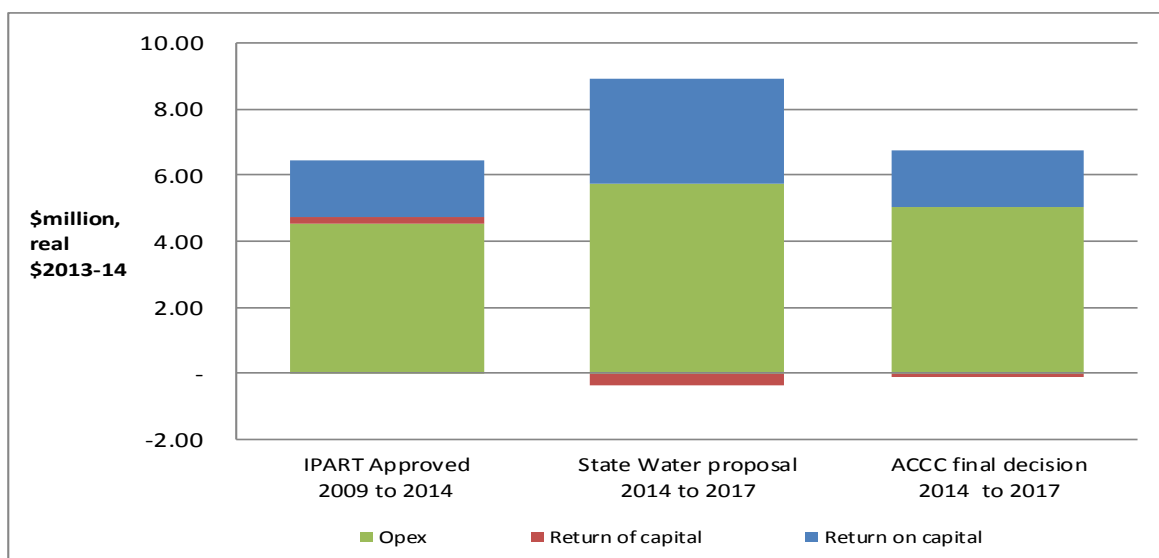
**Figure A 16 State Water proposed and ACCC final decision total revenue – user share – Macquarie valley**



Source: ACCC analysis.

Figure A 17 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

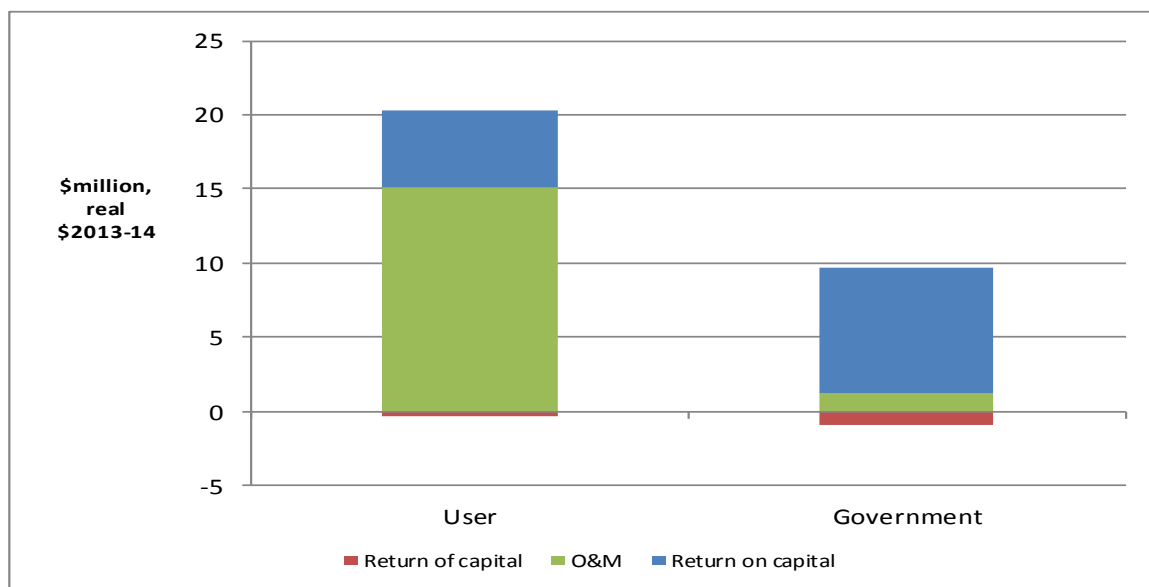
**Figure A 17 Average annual revenue – user share – by building block components – Macquarie valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 18 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 18** ACCC final decision – Revenue requirement by user and government share and component – Macquarie valley



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

## Murray valley

As shown in Table A 7, bulk water charges in the Murray valley will increase over the 2014-17 period, due to the increase in the MDBA cost component.

**Table A 7** ACCC final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) — Murray valley

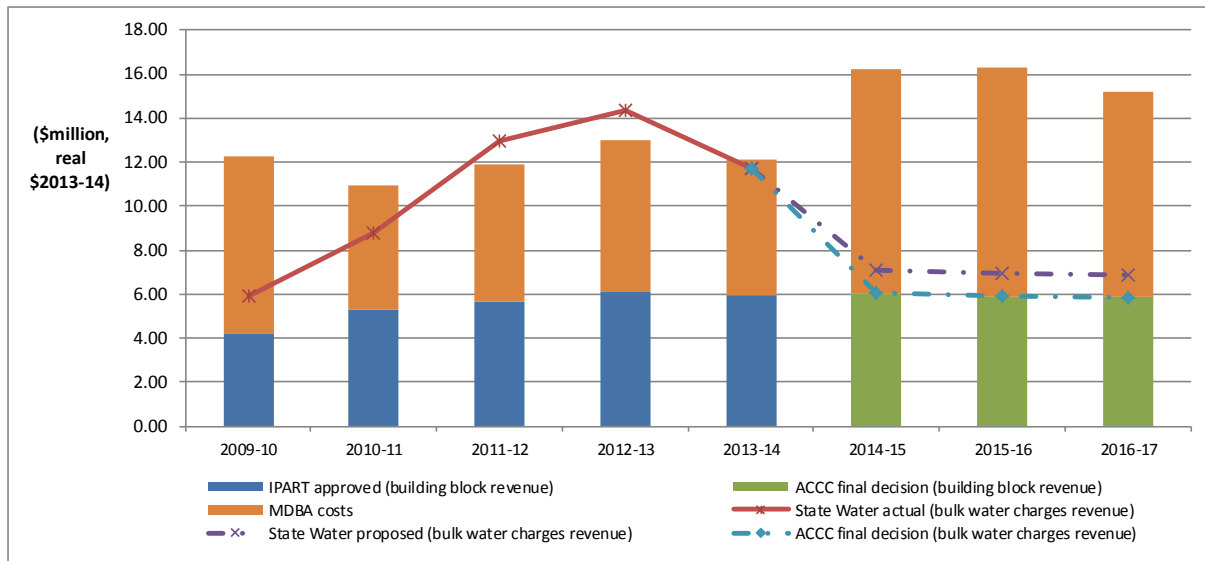
	2013-14*	2014-15	2015-16	2016-17
High security (\$/ML)	\$3.14	\$4.52	\$4.55	\$4.21
General security (\$/ML)	\$2.33	\$2.56	\$2.58	\$2.39
Usage (\$/ML delivered)	\$4.97	\$6.68	\$6.72	\$6.23

\* Both IPART and ACCC charges include MDBA costs.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Murray valley over the 2014–17 regulatory period should be set at \$17.7 million, \$7.1 million lower than the amount proposed by State Water. MDBA costs are an additional component in charges, and average around \$10.0 million each year over the 2014–17 period, compared with \$6.1 million in 2013-14.

Figure A 19 compares the ACCC's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The MDBA cost component is shown separately in the chart.

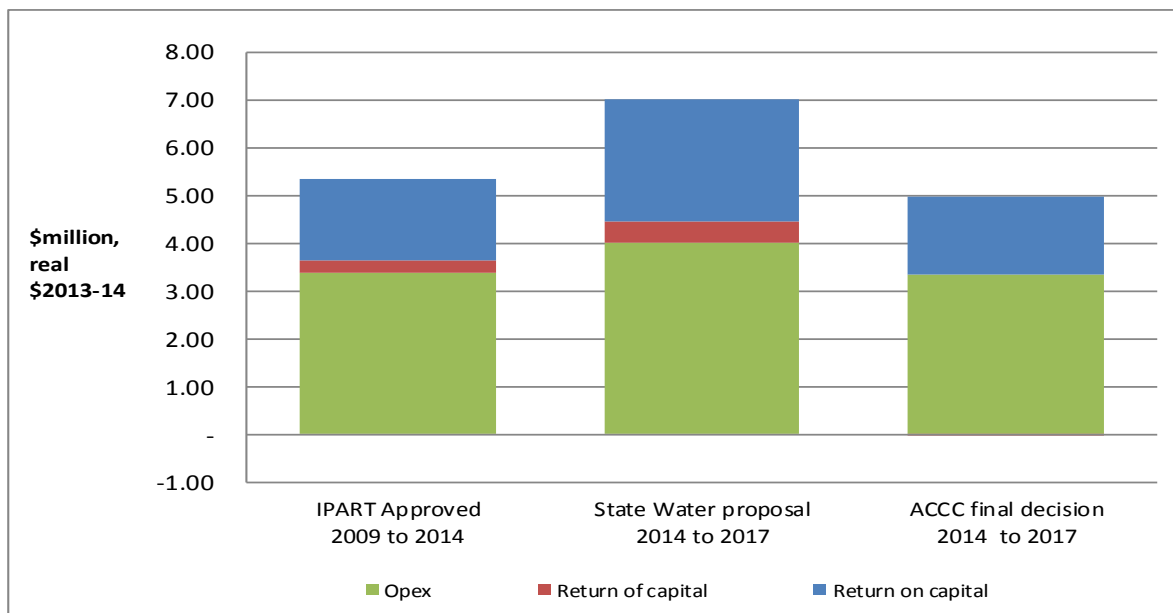
**Figure A 19 State Water proposed and ACCC final decision total revenue – user share – Murray valley \***



Source: ACCC analysis.

Figure A 20 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

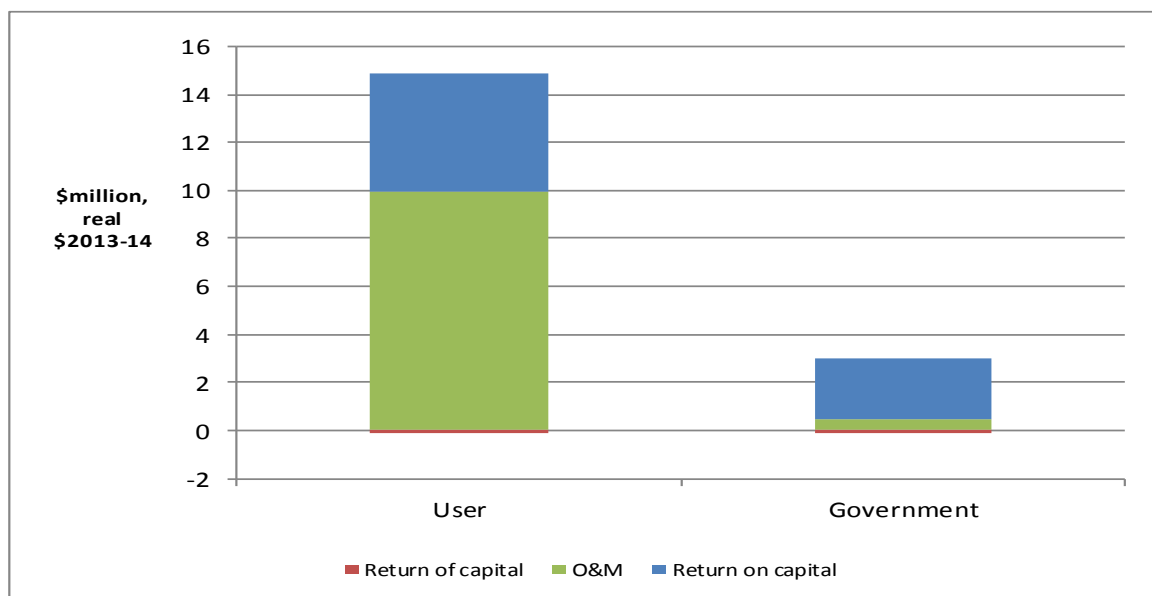
**Figure A 20 Average annual revenue – user share – by building block components – Murray valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 21 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 21 ACCE final decision – Revenue requirement by user and government share and component – Murray valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCE analysis.

## Murrumbidgee valley

As shown in Table A 8, the high security bulk water entitlement charge and usage charge in the Murrumbidgee valley will be higher in the 2014-17 regulatory period, while the general security entitlement charge will decrease slightly compared to 2013-14.

**Table A 8 ACCE final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) — Murrumbidgee valley**

	2013-14 (IPART)*	2014-15	2015-16	2016-17
High security (\$/ML)	\$2.98	\$3.46	\$3.46	\$3.39
General security (\$/ML)	\$1.59	\$1.50	\$1.50	\$1.47
Usage (\$/ML delivered)	\$3.78	\$4.19	\$4.18	\$4.10

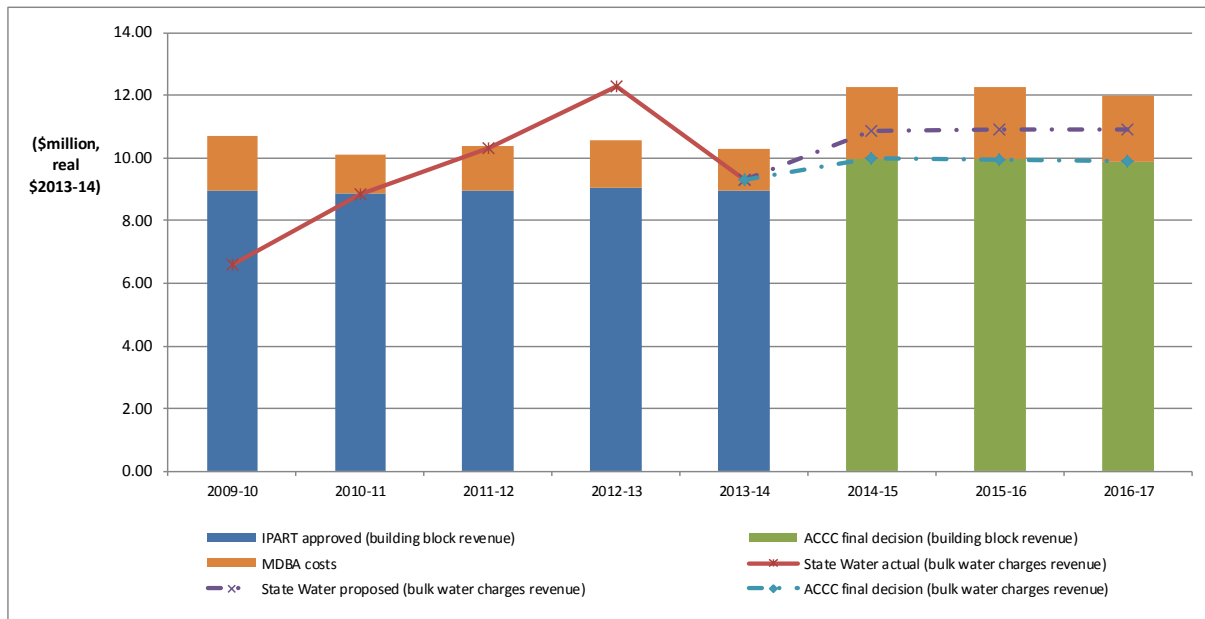
\* Both IPART and ACCE charges include MDBA costs.

Following an assessment of efficient costs, the ACCE considers that State Water's total revenue for Murrumbidgee valley over the 2014–17 regulatory period should be set at \$44.2 million, \$10.3 million lower than the amount proposed by State Water. MDBA costs are an additional component in charges, and average around \$2.2 million each year over the 2014–17 period, compared with \$1.4 million in 2013-14.

Figure A 22 compares the ACCE's final decision and State Water's proposal on the user share of its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period. The component of revenues due to the MDBA cost pass through is shown separately.



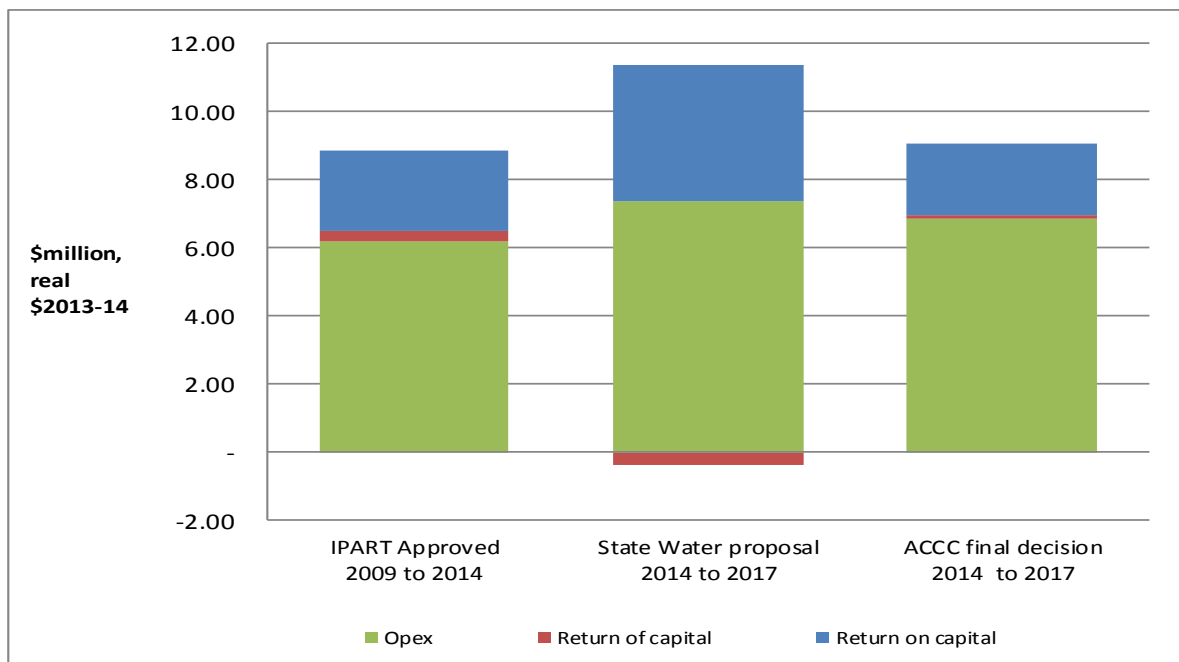
**Figure A 22 State Water proposed and ACCC final decision total revenue – user share – Murrumbidgee valley**



Source: ACCC analysis.

Figure A 23 shows the building block components of the user share of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period, with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

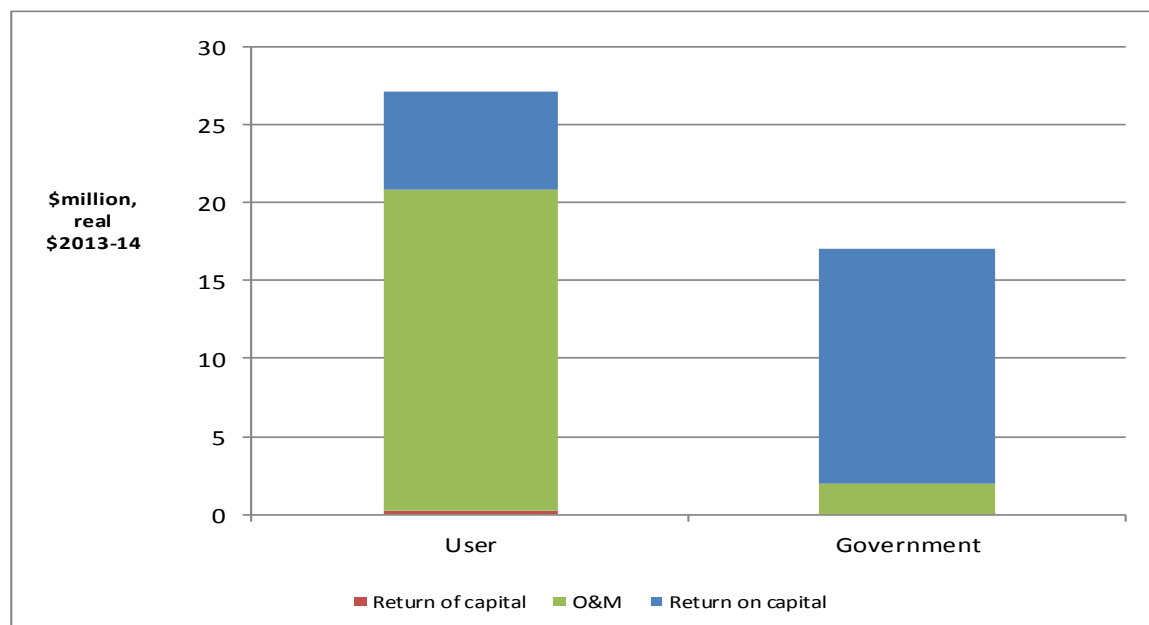
**Figure A 23 Average annual revenue – user share – by building block components – Murrumbidgee valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

Figure A 24 compares the user and government shares of State Water's building block revenue requirement for the 2014–17 regulatory period.

**Figure A 24 ACCC final decision – Revenue requirement by user and government share and component – Murrumbidgee valley**



Note: Building blocks in this chart exclude MDBA costs and the IPART approved revenue volatility allowance.  
Source: ACCC analysis.

## Lowbidgee

The Lowbidgee catchment, which is located within the Murrumbidgee valley, will be a regulated valley from the start of the 2014-17 regulatory period. Customers in Lowbidgee hold supplementary licences only and have water delivered only when there is excess water in the Murrumbidgee valley.

Table A 9 shows Lowbidgee's bulk water charges for the 2014-17 regulatory period. The ACCC has approved only a fixed charge for Lowbidgee which is set to recover 100 per cent of its costs. As this is the first time Lowbidgee will be a regulated valley, there are no 2013-14 charges to compare the ACCC's final decision against.

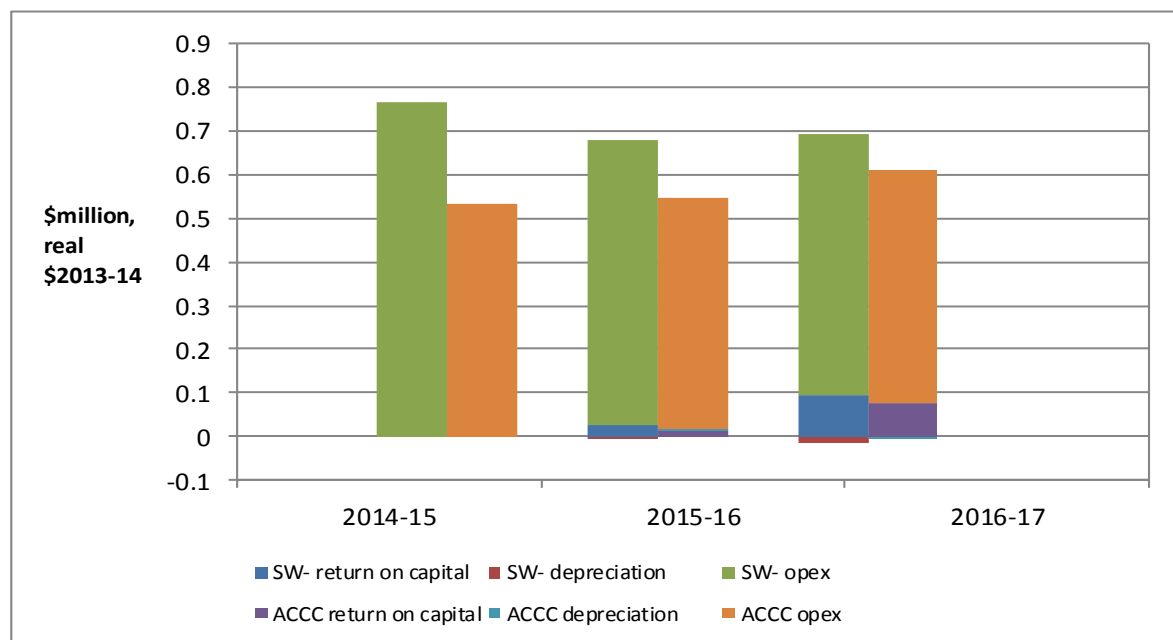
**Table A 9 ACCC final decision – Bulk water charges 2014-15 to 2016-17 (real \$2013-14) — Lowbidgee**

	2013-14	2014-15	2015-16	2016-17
High security (\$/ML)	n/a	n/a	n/a	n/a
General security (\$/ML)	n/a	0.71	0.75	0.79
Usage (\$/ML delivered)	n/a	n/a	n/a	n/a

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Lowbidgee over the 2014–17 regulatory period should be set at \$1.7 million, \$0.4 million lower than the amount proposed by State Water. Revenue is recovered 100 per cent from users, with no State Government contribution.

Figure A 25 compares the ACCC's final decision and State Water's proposal on its revenue requirement for each year of the 2014–17 regulatory period.

**Figure A 25 State Water proposed and ACCC final decision total revenue – user share – Lowbidgee**



Source: ACCC analysis.

## Fish River Water Supply Scheme

The Fish River Water Supply Scheme (FRWSS) supplies water to the Oberon Council, Lithgow Council, the former Sydney Catchment Authority,<sup>53</sup> Delta Electricity and approximately 278 smaller customers.

The ACCC notes that charges levied for Lithgow and Oberon councils and the former Sydney Catchment Authority (SCA) are not regulated charges under section 91(3) of the Water Act 2007. Accordingly the ACCC cannot determine charges for these customers, which will be regulated by IPART. The ACCC agreed with IPART to include all Fish River charges in the ACCC’s review. IPART will review the charges for Lithgow and Oberon councils and SCA in 2014-15, and intends to use information from the ACCC’s review in its review process.

As shown in Table A 10, the ACCC’s final decision will result in reductions in all charges for raw water. For filtered water there will be reductions in charges for minor customers, with slight increases for major customers.

<sup>53</sup> Sydney Catchment Authority is to become part of Bulk Water NSW.

**Table A 10 ACCC final decision Fish River Water Supply Scheme - Access and usage charges (real \$2013-14)**

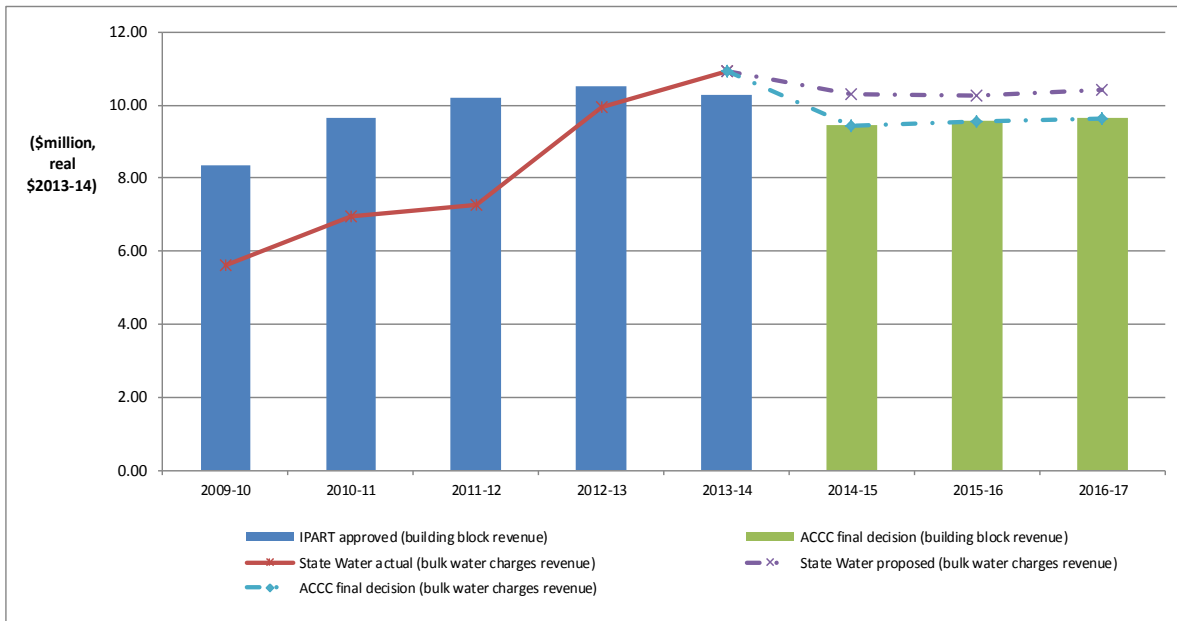
Raw Water	2013-14	2014-15	2015-16	2016-17
<b>Major customers (Delta, SCA, Oberon)</b>				
Access charge for minimum annual quantity (MAQ) (\$/kL)	0.38	0.32	0.33	0.33
Usage charge up to MAQ (\$/kL)	0.43	0.36	0.37	0.37
Usage charge in excess of MAQ (\$/kL)	0.81	n.a.	n.a.	n.a.
<b>Minor customers</b>				
Annual water service charge	94.00*	64.37	65.07	65.79
Annual usage up to 200kL (\$/kL)	0.85	0.36	0.37	0.37
Annual usage over 200kL (\$/kL)	1.33	0.68	0.69	0.70
<b>Filtered Water</b>				
<b>Major customers (Delta, SCA, Oberon)</b>				
Access charge for minimum annual quantity (MAQ) (\$/kL)	0.57	0.62	0.63	0.64
Usage charge up to MAQ (\$/kL)	0.61	0.63	0.63	0.64
Usage charge in excess of MAQ (\$/kL)	1.18	n.a.	n.a.	n.a.
<b>Minor customers</b>				
Annual water service charge	134.66*	124.57	125.94	127.32
Annual usage up to 200kL (\$/kL)	1.04	0.63	0.63	0.64
Annual usage over 200kL (\$/kL)	1.71	1.25	1.26	1.28

\*Converted from \$/KL at MAQ = 200KL to annual format so to compare with 2014-15 to 2016-17.

Following an assessment of efficient costs, the ACCC considers that State Water's total revenue for Fish River over the 2014–17 regulatory period should be set at \$28.6 million, \$2.4 million lower than the amount proposed by State Water. Revenue is recovered 100 per cent from users, with no State Government contribution.

Figure A 26 compares the ACCC's final decision and State Water's proposal on its revenue requirement for each year of the 2014–17 regulatory period with the IPART approved revenues in the 2010–14 regulatory period. It also presents State Water's actual revenue recovered from bulk water charges over the 2010–14 regulatory period.

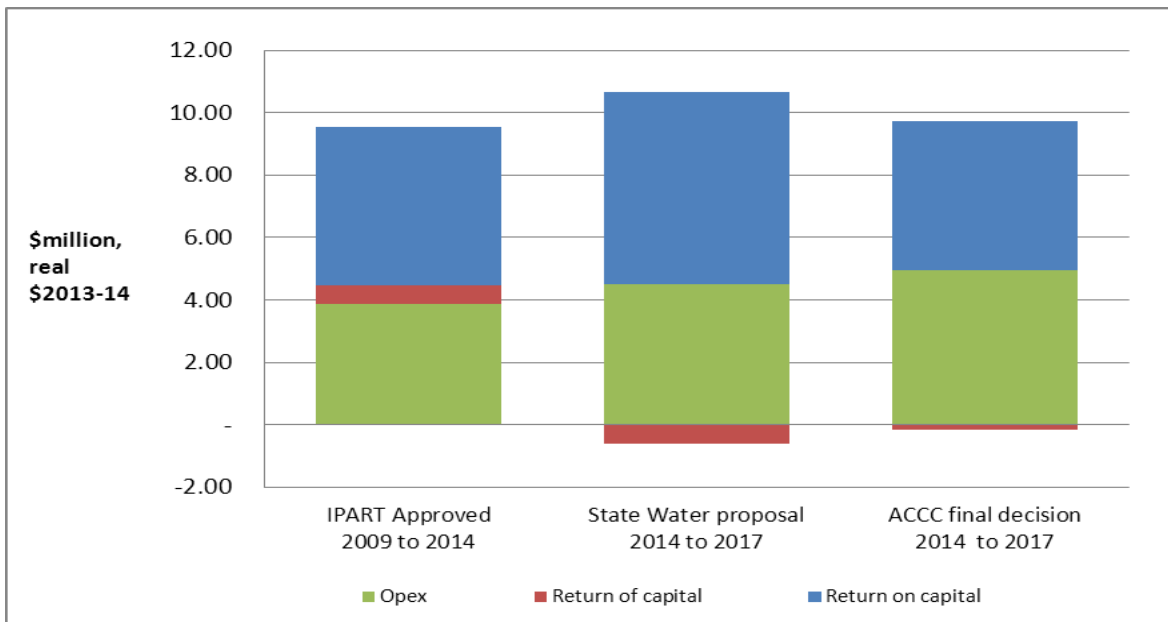
**Figure A 26 State Water proposed and ACCC Final Decision total revenue - Fish River**



Source: ACCC analysis

Figure A 27 shows the building block components of State Water's revenue requirement, comparing the ACCC's final decision for the 2014–17 regulatory period with State Water's proposal, and IPART's approved revenue for the 2009–14 regulatory period.

**Figure A 27 Average annual revenue – by building block components – Fish River**



Source: ACCC analysis.

## Appendix B — Bulk water charges, ICD rebates and form of control formulae

Bulk water charges for 2014-15 will be the charges shown in the tables below multiplied by the CPI adjustment factor of 1.0293 (the movement in the CPI from March quarter 2013 to March quarter 2014). Bulk water charges for 2015-16 and 2016-17 will depend on actual CPI movements, volume forecasts and unders and overs, calculated according to the Form of Control Formulae below.<sup>54</sup>

### State Water tariffs (excluding MDBA and BRC costs)

**Table B 1** ACCC Final Decision on high security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14) excludes MDBA and BRC costs

Valley	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
Border	\$6.50	\$6.54	\$6.57
Gwydir	\$13.18	\$13.36	\$13.55
Namoi	\$16.04	\$16.15	\$16.26
Peel	\$27.58	\$30.34	\$33.38
Lachlan	\$12.47	\$12.72	\$12.98
Macquarie	\$12.19	\$12.42	\$12.65
Murray	\$1.68	\$1.65	\$1.63
Murrumbidgee	\$2.82	\$2.81	\$2.80
Lowbidgee	n/a	n/a	n/a

Source: ACCC analysis

<sup>54</sup> The ACCC will provide a Form of Price Control Model to facilitate the calculation of charges.

**Table B 2 ACCC Final Decision on general security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14) excludes MDBA and BRC costs**

Valley	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
Border	\$2.19	\$2.20	\$2.21
Gwydir	\$3.24	\$3.29	\$3.33
Namoi	\$7.46	\$7.51	\$7.56
Peel	\$3.03	\$3.34	\$3.67
Lachlan	\$3.09	\$3.16	\$3.22
Macquarie	\$3.31	\$3.37	\$3.43
Murray	\$0.96	\$0.94	\$0.92
Murrumbidgee	\$1.22	\$1.22	\$1.22
Lowbidgee	\$0.71	\$0.75	\$0.79

Source: ACCC analysis

**Table B 3 ACCC Final Decision on usage charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14) excludes MDBA and BRC costs**

Valley	2014-15 delivered \$/ML	2015-16 indicative prices \$/ML delivered	2016-17 indicative prices \$/ML delivered
Border	\$6.37	\$6.40	\$6.43
Gwydir	\$11.80	\$11.97	\$12.14
Namoi	\$19.37	\$19.50	\$19.63
Peel	\$45.56	\$50.12	\$55.13
Lachlan	\$17.89	\$18.25	\$18.62
Macquarie	\$13.99	\$14.25	\$14.52
Murray	\$2.49	\$2.45	\$2.40
Murrumbidgee	\$3.40	\$3.39	\$3.38
Lowbidgee	n/a	n/a	n/a

Source: ACCC analysis

**Table B 4 ACCC Final Decision on raw water charges for Fish River for 2014-15 and indicative charges for 2015-16 and 2016-17 (\$Real 2013-14)**

Fish River - raw water	2014-15	2015-16 indicative price	2016-17 indicative price
Major customers (Delta, SCA, Oberon)			
Minimum annual quantity (MAQ) access charge (\$/kL)	\$0.32	\$0.33	\$0.33
Usage charge (\$/kL)	\$0.36	\$0.37	\$0.37
Minor customers			
Annual water service charge	\$64.37	\$65.07	\$65.79
Annual usage up to 200kL (\$/kL)	\$0.36	\$0.37	\$0.37
Annual usage over 200kL (\$/kL)	\$0.68	\$0.69	\$0.70

Source: ACCC analysis

**Table B 5 ACCC Final Decision on filtered water charges for Fish River for 2014-15 and indicative charges for 2015-16 and 2016-17 (\$Real 2013-14)**

Fish River - filtered water	2014-15	2015-16 indicative price	2016-17 indicative price
Major customers (Delta, SCA, Oberon)			
Minimum annual quantity (MAQ) access charge (\$/kL)	\$0.62	\$0.63	\$0.64
Usage charge (\$/kL)	\$0.63	\$0.63	\$0.64
Minor customers			
Annual water service charge	\$124.57	\$125.94	\$127.32
Annual usage up to 200kL (\$/kL)	\$0.63	\$0.63	\$0.64
Annual usage over 200kL (\$/kL)	\$1.25	\$1.26	\$1.28

Source: ACCC analysis



## ICD Rebates

**Table B 6 ACCC Final decision – Number of entitlements and average costs for the regulatory period used to calculate rebates for 2014 Determination (2013/14)**

	Lachlan	Murray	Murrumbidgee
Entitlements	693,582	2,337,223	2,697,041
Metering and Compliance	\$304,854	\$592,227	\$261,151
Billing	\$103,293	\$150,199	\$148,014
Telemetry installation	\$23,329	\$581,802	\$746,118
Data transfer costs	\$8,069	\$201,245	\$258,082
Total costs	\$439,545	\$1,525,473	\$1,413,366
Average cost per entitlement	\$0.63	\$0.65	\$0.52

Source: ACCC analysis

**Table B 7 ACCC final decision - Annual ICD rebates for 2014-15 to 2016-17**

	Entitlements (ML)	2014/15 (\$2013-14)	2015/16 (\$2013-14)	2016/17 (\$2013-14)
Jemalong	99,087	67,448	61,654	59,282
Murray Irrigation	1,392,519	958,438	896,972	871,224
Western Murray	48,657	33,489	31,342	30,442
West Corugan	77,278	53,189	49,778	48,349
Moira	38,615	26,578	24,873	24,159
Eagle Creek	13,620	9,374	8,773	8,521
Murrumbidgee Irrigation	1,198,779	650,931	622,704	611,001
Coleambally	526,074	285,656	273,269	268,133
Total rebates		2,085,102	1,969,364	1,921,112

Source: ACCC analysis

## MDBA and BRC Tariffs

**Table B 8      MDBA and BRC high security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
Border	\$3.05	\$3.05	\$3.05
Murray	\$2.84	\$2.89	\$2.59
Murrumbidgee	\$0.65	\$0.65	\$0.59

Source: ACCC analysis

**Table B 9      MDBA and BRC general security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 delivered \$/ML	2015-16 indicative prices \$/ML delivered	2016-17 indicative prices \$/ML delivered
Border	\$1.03	\$1.03	\$1.03
Murray	\$1.61	\$1.64	\$1.47
Murrumbidgee	\$0.28	\$0.28	\$0.26

Source: ACCC analysis

**Table B 10      MDBA and BRC usage charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 delivered \$/ML	2015-16 indicative prices \$/ML delivered	2016-17 indicative prices \$/ML delivered
Border	\$2.99	\$2.99	\$2.99
Murray	\$4.19	\$4.27	\$3.82
Murrumbidgee	\$0.78	\$0.78	\$0.72

Source: ACCC analysis

## Combined State Water tariffs and MDBA and BRC tariffs for relevant valleys

**Table B 11 Total high security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
Border	\$9.55	\$9.59	\$9.62
Murray	\$4.52	\$4.55	\$4.21
Murrumbidgee	\$3.46	\$3.46	\$3.39

Source: ACCC analysis

**Table B 12 Total general security entitlement charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 \$/ML	2015-16 indicative prices \$/ML	2016-17 indicative prices \$/ML
Border	\$3.22	\$3.23	\$3.24
Murray	\$2.56	\$2.58	\$2.39
Murrumbidgee	\$1.50	\$1.50	\$1.47

Source: ACCC analysis

**Table B 13 Total usage charges by valley for 2014-15 and indicative charges for 2015-16 and 2016-17 (real \$2013-14)**

Valley	2014-15 delivered \$/ML	2015-16 indicative prices \$/ML delivered	2016-17 indicative prices \$/ML delivered
Border	\$9.35	\$9.39	\$9.42
Murray	\$6.68	\$6.72	\$6.23
Murrumbidgee	\$4.19	\$4.18	\$4.10

Source: ACCC analysis

## Form of Control Formulae

### Calculation of valley charges

The unders and overs form of control does not apply to the Peel valley and Lowbidgee. For the Peel valley the ACCC has determined a 10 per cent annual real increase in fixed and variable charges for each year of the regulatory period. Therefore charges for the Peel valley will be indexed by CPI.<sup>55</sup> For Lowbidgee the ACCC has determined a fixed charge for each year of the regulatory period indexed by CPI.

The approach to Fish River charges is set out under 'Calculation of Fish River charges' below.

The charges which State Water is allowed to levy in the other valleys are determined using a set of base revenues given by the building block model which are adjusted for the unders-and-overs mechanism and then allocated across the different charges.

Specifically, in valley  $i$ , at time  $t$ , the allowed charges are:

- (a) For high-security entitlements (\$/ML):

$$HSEC_{i,t} = \frac{CF_{i,t} \times Share \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM})}{(CF_{i,t} \times EHSE_{i,t} + EGSE_{i,t})}$$

- (b) For general-security entitlements (\$/ML):

$$GSEC_{i,t} = \frac{Share \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM})}{(CF_{i,t} \times EHSE_{i,t} + EGSE_{i,t})}$$

- (c) For usage (\$/ML):

$$UC_{i,t} = \frac{(1 - Share) \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM})}{EWU_{i,t}}$$

These are defined in Table B 14.

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<sup>55</sup> CPI refers to the ABS consumer price index value for March, all groups, weighted average of eight capital cities.

**Table B 14 Description of terms used in formulae**

Definitions	
<i>i</i>	Valley: Border, Gwydir, Namoi, Lachlan, Macquarie, Murray, and Murrumbidgee.
<i>t</i>	Year: 2014-15, 2015-16, and 2016-17.
<i>CF<sub>i,t</sub></i>	Conversion factor for valley <i>i</i> , in year <i>t</i> , calculated as set out below.
<i>Share</i>	The share of entitlement charges (40 per cent) in State Water's tariff structure.
<i>Rev<sub>i,t</sub><sup>BBM</sup></i>	The component of the (nominal) revenue allowance paid by water users for valley <i>i</i> , in year <i>t</i> , given by the Building Block Model at the start of the regulatory period.
<i>Rev<sub>i,t</sub><sup>UOM</sup></i>	The (nominal) revenue allowance for valley <i>i</i> , in year <i>t</i> , given by the unders-and-overs mechanism as set out below.
<i>EHSE<sub>i,t</sub></i>	The expected number of high-security entitlements issued for valley <i>i</i> , in year <i>t</i> .
<i>EGSE<sub>i,t</sub></i>	The expected number of general-security entitlements issued for valley <i>i</i> , in year <i>t</i> .
<i>EWU<sub>i,t</sub></i>	The expected water usage for valley <i>i</i> , in year <i>t</i> , based on a 20-year moving average of past water usage.
RealWACC <sub>t</sub>	Is the real pre-tax weighted average cost of capital of 5.18%
HSEC <sub>i,t</sub>	High security entitlement charge for valley <i>i</i> in year <i>t</i>
GSEC <sub>i,t</sub>	General security entitlement charge for valley <i>i</i> in year <i>t</i>
UC <sub>i,t</sub>	Usage charge for valley <i>i</i> in year <i>t</i>
CPI <sub>t</sub>	Is the level of the CPI (measured as the weighted average of eight capital cities) for the March quarter immediately preceding year <i>t</i> (relative to the base year).

With the charges set in this way, if actual water usage is equal to expected water usage (and provided the number of entitlements is equal to the forecast number of entitlements), State Water should recover revenue from its water users equal to the sum of the user share of the water allowance (from the building block model) and the revenue adjustment from the unders-and-overs mechanism:

$$\begin{aligned}
 Rev_{i,t} &= HSEC_{i,t} \times EHSE_{i,t} + GSEC_{i,t} \times EGSE_{i,t} + UC_{i,t} \times EWU_{i,t} \\
 &= Share \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM}) + (1 - Share) \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM}) \\
 &= Rev_{i,t}^{BBM} + Rev_{i,t}^{UOM}
 \end{aligned}$$

The building block model yields a real revenue allowance for each year of the regulatory period (i.e. a revenue allowance relative to the level of the CPI in some designated base year – typically the year before the start of the regulatory period). This is converted to a nominal revenue allowance by multiplying by the CPI, as follows:

$$Rev_{i,t}^{BBM} = CPI_t \times RealRev_{i,t}^{BBM}$$

Here  $CPI_t$  is the level of the consumer price index for year t relative to the base year. This is measured as the CPI reported by the ABS (the weighted average of eight capital cities) for the March quarter immediately preceding the start of financial year t, divided by the level of the corresponding CPI for the base year.

The conversion factor for valley i, in year t,  $CF_{i,t}$ , is the product of the Water Sharing Plan ratio  $WSP_i$  and the Average Water Allocation ratio  $AWA_{i,t}$ :

$$CF_{i,t} = WSP_i \times AWA_{i,t}$$

The Water Sharing Plan ratio for a valley  $WSP_i$  is given in Table B 15.

**Table B 15 WSP ratios for each valley**

Valley	WSP ratio
Border	1.28
Gwydir	1.81
Namoi	1.25
Peel	6.73
Lachlan	2.45
Macquarie	1.88
Murray	1.25
Murrumbidgee	1.63

The Average Water Allocation for valley i, in year t,  $AWA_{i,t}$  is calculated by dividing the average actual allocation to high security entitlements over the last 20 years by the average actual allocation to general security entitlements over the last 20 years. The 20 year period for calculating the average is given in the Table B 16 below:

**Table B 16 Proposed actual data series from which to derive the 20 year average allocations and expected water usage**

Forecast Year	Actual data series from which to derive a 20 year average
First regulatory year 2014-15	1993-94 to 2012-13
Second regulatory year 2015-16	1994-95 to 2013-14
Third regulatory year 2016-17	1995-96 to 2014-15

Source: see attachment 7 – Demand Forecasts of this decision.

The number of high security entitlements, general security entitlements, and expected water usage for 2014-15 is given in Table B 17.

**Table B 17 Water entitlements for 2014-15 (Forecast)**

Valley	High security entitlements	General security entitlements	Expected Water usage for 2014-15
Border	3,122	263,238	140,677
Gwydir	21,458	509,665	245,877
Namoi	8,881	256,076	158,961
Peel	17,382	30,528	11,164
Lachlan	60,745	632,837	227,697
Macquarie	42,606	631,716	279,671
Murray	261,401	2,075,822	1,459,689
Murrumbidgee	436,928	2,260,133	1,759,740
Lowbidgee		747,00	-

Source: Attachment 7 – Demand Forecasts of this decision.

### Calculation of unders and overs revenue adjustment for valley charges

The unders-and-overs revenue adjustment for valley i in year t is calculated as follows:

$$Rev_{i,t}^{UOM} = WACC_t \times RAB_{i,t}^{UOM}$$

Here:

$WACC_t$  is the nominal weighted average cost of capital for financial year t. This is calculated as the product of the real WACC (determined in the regulatory process) and the annual change in the level of the CPI:

$$WACC_t = \frac{CPI_t}{CPI_{t-1}} \times (1 + RealWACC_t) - 1$$

Where, as before,  $CPI_t$  is the level of the CPI (measured as the weighted average of eight capital cities reported for the March quarter immediately preceding year t) and  $RealWACC_t$  is the real weighted average cost of capital determined in the regulatory process.

$RAB_{i,t}^{UOM}$  is the account balance in the unders-and-overs account which is calculated as the difference between the forecast and out-turn revenue in each year. However, at the time when new prices are proposed the precise out-turn revenue will not be known. The precise out-turn revenue for any given year is not known until after that year is completed, whereas new prices must be proposed and approved before the end of the current regulatory year. However, at the time when new prices

are proposed State Water can make a more accurate forecast of the likely level of the out-turn revenue. Any remaining difference between this end-of-year forecast and the actual value will then be added to the unders-and-overs account in the subsequent years.

The account balance in the unders-and-overs account is therefore calculated as follows:

$$RAB_{i,t}^{UOM} = RAB_{i,t-1}^{UOM} + Rev_{i,t-1}^{BBM} - Rev_{i,t-1}^{FCOut-turn} + Rev_{i,t-2}^{FCOut-turn} - Rev_{i,t-2}^{Out-turn}$$

Here:

$Rev_{i,t}^{FCOut-turn}$  is the improved forecast of the out-turn revenue for valley i and year t which is made towards the end of the regulatory year t, at the time when new prices (for the subsequent regulatory year) must be proposed and approved.

$Rev_{i,t}^{Out-turn}$  is the actual out-turn revenue for valley i and year t, which is only known after regulatory year t is completed. The out-turn revenue is calculated as follows:

$$Rev_{i,t}^{Out-turn} = HSEC_{i,t} \times HSE_{i,t} + GSEC_{i,t} \times GSE_{i,t} + UC_{i,t} \times WU_{i,t}$$

Where  $WU_{i,t}$  is the actual water usage in valley i in year t, and for year t=2014-15,  $RAB_{i,t-1}^{UOM} = 0$ .

$HSE_{i,t}$  is the actual or out-turn number of high-security entitlements and  $GSE_{i,t}$  is the actual or out-turn number of general-security entitlements in valley i in year t.

### Calculation of Fish River charges

The structure of charges in the Fish River valley is different to the other valleys. There are different charges for raw and filtered water. The charges for each type of water are structured into access and usage charges. Large (major) customers pay an access charge based on their nominated Minimum Annual Quantity (MAQ). They also pay a usage charge based on their actual usage. Small (minor) customers pay an access charge based on a deemed MAQ of 200 kl. For usage below this deemed MAQ they pay the same usage charge as the major customers. For usage above this deemed MAQ they pay an additional charge equal to the access charge paid by the major customers.

More specifically, the charges to be determined are the access charge  $AC_t^i$  and the usage charge  $UC_t^i$  where i=Raw, Filtered, and t=2014-15, 2015-16, 2016-17.

Major customers pay the access charge  $AC_t^i$  for each unit of their nominated MAQ plus the usage charge  $UC_t^i$  for their actual usage. Minor customers pay the access charge  $AC_t^i$  multiplied by their deemed MAQ (200 kl) plus the usage charge  $UC_t^i$  for the first tier of their actual usage (usage below the deemed MAQ of 200) and the usage charge  $UC_t^i + AC_t^i$  for the second tier of the actual usage (usage above the deemed MAQ).

The charges are determined as follows:

- (a) For the access charge (\$/kl):



$$AC_t^{RAW} = \frac{AccessShare_t \times RawShare_t \times (Rev_t^{BBM} + Rev_t^{UOM})}{(MAQMajor_t^{RAW} + DeemedMAQMinor_t^{RAW} + ExcessUsageMinor_t^{RAW})}$$

And

$$AC_t^{Filtered} = \frac{AccessShare_t \times (1 - RawShare_t) \times (Rev_t^{BBM} + Rev_t^{UOM})}{(MAQMajor_t^{Filtered} + DeemedMAQMinor_t^{Filtered} + ExcessUsageMinor_t^{Filtered})}$$

(b) For the usage charge (\$/kl):

$$UC_t^{RAW} = \frac{(1 - AccessShare_t) \times RawShare_t \times (Rev_t^{BBM} + Rev_t^{UOM})}{(UsageMajor_t^{RAW} + ExcessUsageMinor_t^{RAW} + NonExcessUsageMinor_t^{RAW})}$$

And

$$UC_t^{Filtered} = \frac{(1 - AccessShare_t) \times (1 - RawShare_t) \times (Rev_t^{BBM} + Rev_t^{UOM})}{(UsageMajor_t^{Filtered} + ExcessUsageMinor_t^{Filtered} + NonExcessUsageMinor_t^{Filtered})}$$

**Table B 18 Description of terms used in formulae**

Definitions	
<b><i>AccessShare<sub>t</sub></i></b>	Is the share of total Fish River allowed revenue recovered in the access charges in year t
<b><i>RawShare<sub>t</sub></i></b>	Is the share of the total Fish River allowed revenue recovered from raw water customers in year t
<b><i>MAQMajor<sub>t</sub><sup>i</sup></i></b>	Is the total MAQ of the major customers of water of type i=Raw, Filtered, in year t.
<b><i>UsageMajor<sub>t</sub><sup>i</sup></i></b>	Is the total expected usage of the major customers of water of type i=Raw, Filtered, in year t.
<b><i>DeemedMAQMinor<sub>t</sub><sup>i</sup></i></b>	Is the deemed MAQ of the minor customers of water of type i=Raw, Filtered, in year t (equal to 200 times the number of minor customers).
<b><i>ExcessUsageMinor<sub>t</sub><sup>i</sup></i></b>	Is the total expected usage in excess of the deemed MAQ (200 kl) for minor customers of water of type i=Raw, Filtered, in year t.
<b><i>NonExcessUsageMinor<sub>t</sub><sup>i</sup></i></b>	Is the total expected usage below the deemed MAQ for minor customers of water of type i=Raw, Filtered, in year t.
ACtFiltered	Access charge for filtered water in year t
ACtRaw	Access charge for raw water in year t
UCtFiltered	Usage charge for filtered water in year t
UCtRaw	Usage charge for raw water in year t

As before, these charges are set in such a way as to yield the total building block revenue allowance (plus the unders-and-overs revenue adjustment) for Fish River when out-turn usage is equal to expected usage:

$$\begin{aligned}
 Rev_t &= \sum_{i=Raw,Filtered} AC_t^i (MAQMajor_t^i + DeemedMAQMinor_t^i + ExcessUsageMinor_t^i) \\
 &\quad + \sum_{i=Raw,Filtered} UC_t^i (UsageMajor_t^i + ExcessUsageMinor_t^i + NonExcessUsageMinor_t^i) \\
 &= AccessShare_t \times RawShare_t \times (Rev_t^{BBM} + Rev_t^{UOM}) + AccessShare_t \\
 &\quad \times (1 - RawShare_t) \times (Rev_t^{BBM} + Rev_t^{UOM}) + (1 - AccessShare_t) \times RawShare_t \\
 &\quad \times (Rev_t^{BBM} + Rev_t^{UOM}) + (1 - AccessShare_t) \times (1 - RawShare_t) \\
 &\quad \times (Rev_t^{BBM} + Rev_t^{UOM}) = Rev_t^{BBM} + Rev_t^{UOM}
 \end{aligned}$$

As in the other values, the nominal building block revenue allowance is calculated as the real revenue allowance (determined in the regulatory process) multiplied by the CPI, as follows:

$$Rev_t^{BBM} = CPI_t \times RealRev_t^{BBM}$$

As before,  $CPI_t$  is the level of the consumer price index for year t relative to the base year.

The unders-and-overs revenue adjustment for Fish River is calculated in the same manner as in other valleys. As before, the actual or out-turn revenue for a regulatory year t is not known at the time when new prices must be set. As before, this is addressed by requiring State Water to make an improved forecast of the out-turn revenue before the end of regulatory year t. Any remaining difference between the improved forecast and the actual or out-turn revenue is recovered in subsequent years. The unders and overs adjustment is calculated as:

$$Rev_t^{UOM} = WACC_t \times RAB_t^{UOM}$$

As before, the nominal weighted average cost of capital for financial year t is calculated as the product of the real WACC (determined in the regulatory process) and the annual change in the level of the CPI:

$$WACC_t = \frac{CPI_t}{CPI_{t-1}} \times (1 + RealWACC_t) - 1$$

**Table B 19 Description of terms used in formulae**

Definitions	
<b>RealWACC</b>	Is the regulatory real pre-tax weighted-average cost of capital, given as 5.18%
<b>RAB<sub>t</sub><sup>UOM</sup></b>	Is the account balance in the unders-and-overs account which is calculated as follows:  $RAB_t^{UOM} = RAB_{t-1}^{UOM} + Rev_{t-1}^{BBM} - Rev_{t-1}^{FCOut-turn} + Rev_{t-2}^{FCOut-turn} - Rev_{t-2}^{Out-turn}$ and  $Rev_{i,t}^{Out-turn} = \sum_{i=Raw,Filtered} AC_t^i (MAQMajor_t^i + DeemedMAQMinor_t^i + OTEExcessUsageMinor_t^i) + \sum_{i=Raw,Filtered} UC_t^i (OTUsageMajor_t^i + OTEExcessUsageMinor_t^i + OTNonExcessUsageMinor_t^i)$ Where $OTUsageMajor_t^i$ is the actual water usage of the major customers in year t, $OTNonExcessUsageMinor_t^i$ is the actual water usage below the deemed MAQ for the minor customers and $OTEExcessUsageMinor_t^i$ is the actual water usage above the deemed MAQ for the minor customers.  As before, for year t=2014-15, $RAB_{t-1}^{UOM} = 0$

### Calculation of MDBA and BRC charges

In addition to the charges above, State Water will be required to recover through its tariffs other charges related to the operation of the MDBA and in the case of Border valley, the BRC. These charges are calculated in exactly the same manner as the State Water charges above (that is, they are recovered 60% through usage charges and 40% through entitlement charges – split between high-security and general security charges). In addition, there is an unders-and-overs mechanism to recover any revenue shortfall arising from variation in water usage. Unlike the unders-and-overs mechanism above, the full revenue shortfall is recovered (or paid back) in the subsequent regulatory year.

Specifically, in valley <sup>i</sup>, at time <sup>t</sup>, the allowed charges are:

- (a) For high-security entitlements (\$/ML):

$$HSEC_{i,t}^{AC} = \frac{CF_{i,t} \times Share \times (Rev_{i,t}^{AC} + Rev_{i,t}^{AC,UOM})}{(CF_{i,t} \times EHSE_{i,t} + EGSE_{i,t})}$$

(b) For general-security entitlements (\$/ML):

$$GSEC_{i,t}^{AC} = \frac{Share \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{AC\_UOM})}{(CF_{i,t} \times EHSE_{i,t} + EGSE_{i,t})}$$

(c) For usage (\$/ML):

$$UC_{i,t}^{AC} = \frac{(1 - Share) \times (Rev_{i,t}^{BBM} + Rev_{i,t}^{AC\_UOM})}{EWU_{i,t}}$$

**Table B 20 Description of terms used in the formulae for MDBA and BRC costs**

Definitions	
<i>i</i>	Valley: Border, Murray, and Murrumbidgee.
<i>t</i>	Year: 2014-15, 2015-16, and 2016-17.
<i>CF<sub>i,t</sub></i>	Conversion factor for valley <i>i</i> , in year <i>t</i> , calculated as set out below.
<i>Share</i>	The share of entitlement charges (40 per cent) in State Water's tariff structure.
<i>Rev<sub>i,t</sub><sup>AC</sup></i>	The MDBA and BRC charges required to be recovered by State Water from water users in valley <i>i</i> , in year <i>t</i> , given by NSW Government <sup>56</sup> towards the end of year <i>t</i> -1.  These are assumed to be provided in nominal terms.
<i>Rev<sub>i,t</sub><sup>AC\_UOM</sup></i>	The (nominal) revenue allowance for valley <i>i</i> , in year <i>t</i> , given by the unders-and-overs mechanism as set out below.
<i>EHSE<sub>i,t</sub></i>	The expected number of high-security entitlements issued for valley <i>i</i> , in year <i>t</i> .
<i>EGSE<sub>i,t</sub></i>	The expected number of general-security entitlements issued for valley <i>i</i> , in year <i>t</i> .
<i>EWU<sub>i,t</sub></i>	The expected water usage for valley <i>i</i> , in year <i>t</i> , based on a 20-year moving average of past water usage.

The unders-and-overs mechanism allows State Water to recover any shortfall (or repay any excess) of revenue in the subsequent year. However, as noted above, the actual revenue shortfall will not be known at the time when new prices must be proposed. Therefore, State Water will be required to submit an improved forecast of the revenue shortfall at the time when new prices are determined and any remaining deviation in revenue recovered in the subsequent regulatory year.

The revenue allowance for the unders-and-overs account is therefore calculated as follows:

<sup>56</sup> As set out in the Direction to State Water Corporation by the NSW Treasurer pursuant to section 59B (2) of the *Public Finance and Audit Act 1983* (NSW), as in force from time to time.

$$Rev_{i,t}^{AC-UOM} = (1 + WACC_{t-1}) \times (Rev_{i,t-1}^{AC} - Rev_{i,t-1}^{ACFCOut-turn}) + (1 + WACC_{t-1}) \times (1 + WACC_{t-2}) \times (Rev_{i,t-2}^{ACFCOut-turn} - Rev_{i,t-2}^{ACOut-turn})$$

Here:

$WACC_t$  is the nominal WACC for financial year t (calculated as set out above).

$Rev_{i,t}^{AC\_FCOut-turn}$  is the improved forecast of the revenue recovered for charges for valley i and year t which is made towards the end of the regulatory year t, at the time when new prices (for the subsequent regulatory year) must be proposed and approved.

$Rev_{i,t}^{AC\_Out-turn}$  is the actual revenue recovered towards charges for valley i and year t, which is only known after regulatory year t is completed. This out-turn revenue is calculated as follows:

$$Rev_{i,t}^{AC\_Out-turn} = HSEC_{i,t}^{AC} \times HSE_{i,t} + GSEC_{i,t}^{AC} \times GSE_{i,t} + UC_{i,t}^{AC} \times WU_{i,t}$$

Where, as before,  $WU_{i,t}$  is the actual water usage in valley i in year t, and for year t=2014-15,

$RAB_{i,t-1}^{UOM} = 0$ ,  $HSE_{i,t}$  is the actual or out-turn number of high-security entitlements and  $GSE_{i,t}$  is the actual or out-turn number of general-security entitlements in valley i in year t.

## Appendix C — Metering and miscellaneous charges

### Metering service charges

Metering service charges for each year will be the charges shown in \$2013-14 in tables C1 to C4 below multiplied by the CPI adjustment factor for that year as set out in table C5. For 2014-15 charges the CPI adjustment factor is 1.0293 (the movement in the CPI from March quarter 2013 to March quarter 2014).

**Table C 1 Metering service charges per annum (\$2013-14) — Commonwealth-funded meters with telemetry**

Type of meter	State Water's proposal			ACCC final decision		
	2014-15	2015-16	2016-17	2014-15	2015-16	2016-17
50 mm	529.64	529.73	527.63	312.29	337.99	377.28
80 mm	529.72	529.81	527.70	312.34	338.07	377.41
100 mm	530.16	530.29	528.10	312.62	338.53	378.13
150 mm	554.45	554.63	552.29	328.64	355.97	397.74
200 mm	581.84	582.06	579.65	346.40	375.13	419.05
250 mm	587.94	588.22	585.67	350.41	379.68	424.42
300 mm	589.10	589.47	586.71	351.14	380.88	426.31
350 mm	599.68	600.38	596.81	357.99	389.77	438.22
400 mm	662.51	663.47	659.29	397.49	433.25	487.78
450 mm	801.16	802.19	797.84	483.84	526.08	590.54
500 mm	810.55	811.73	807.04	489.99	533.33	599.45
600 mm	848.42	849.87	844.52	514.75	561.11	631.80
700 mm	861.19	862.92	856.91	523.08	571.29	644.75
750 mm	862.16	863.97	857.77	523.69	572.30	646.34
800 mm	904.11	906.34	899.13	549.96	602.39	682.18
900 mm	968.11	970.48	962.95	592.18	648.23	733.56
1000 mm	971.29	973.91	965.79	594.19	651.52	738.75
Channel	9,844.49	9,847.21	10,040.26	6,058.30	6,510.65	7,228.52

Source: State Water application & ACCC calculations.

**Table C 2 Metering service charges per annum (\$2013-14) — Commonwealth-funded meters without telemetry**

Type of meter	State Water's proposal			ACCC final decision		
	2014–15	2015–16	2016–17	2014–15	2015–16	2016–17
50 mm	557.87	557.96	555.86	331.55	355.21	392.49
80 mm	557.95	558.04	555.93	331.60	355.30	392.62
100 mm	558.39	558.52	556.33	331.87	355.75	393.34
150 mm	582.68	582.86	580.52	347.89	373.19	412.95
200 mm	610.07	610.29	607.88	365.66	392.36	434.26
250 mm	616.17	616.45	613.90	369.66	396.91	439.63
300 mm	617.33	617.70	614.94	370.39	398.10	441.52
350 mm	627.91	628.61	625.04	377.25	406.99	453.43
400 mm	690.74	691.70	687.52	416.74	450.48	502.99
450 mm	829.62	830.65	826.30	502.85	543.01	605.39
500 mm	839.01	840.19	835.49	509.00	550.27	614.30
600 mm	876.87	878.33	872.98	533.76	578.05	646.66
700 mm	889.64	891.37	885.36	542.09	588.23	659.61
750 mm	890.61	892.42	886.23	542.70	589.24	661.19
800 mm	932.56	934.80	927.59	568.97	619.32	697.03
900 mm	996.57	998.94	991.41	611.19	665.17	748.41
1000 mm	999.75	1,002.37	994.25	613.20	668.46	753.60
Channel	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: State Water application & ACCC calculations.

**Table C 3 Metering service charges per annum (\$2013-14) — State Water-funded meters with telemetry**

Type of meter	State Water's proposal			ACCC final decision		
	2014–15	2015–16	2016–17	2014–15	2015–16	2016–17
50 mm	1,620.97	2,013.78	1,945.63	1,207.47	1,233.17	1,272.46
80 mm	1,628.92	2,025.31	1,956.85	1,215.03	1,240.75	1,280.09
100 mm	1,673.29	2,089.67	2,019.45	1,257.22	1,283.12	1,322.73
150 mm	1,777.15	2,229.72	2,156.31	1,349.14	1,376.47	1,418.25
200 mm	1,841.57	2,310.99	2,236.09	1,402.23	1,430.96	1,474.88
250 mm	1,919.55	2,421.67	2,343.90	1,474.81	1,504.08	1,548.82
300 mm	2,036.40	2,591.16	2,508.75	1,585.92	1,615.66	1,661.09
350 mm	2,478.14	3,229.03	3,129.36	2,004.10	2,035.87	2,084.33
400 mm	2,870.32	3,771.04	3,658.19	2,357.80	2,393.56	2,448.09
450 mm	3,098.73	4,040.28	3,923.84	2,529.78	2,572.02	2,636.48
500 mm	3,294.13	4,320.29	4,196.39	2,713.38	2,756.72	2,822.84
600 mm	3,683.51	4,869.58	4,731.61	3,073.49	3,119.85	3,190.54
700 mm	4,047.98	5,394.05	5,242.00	3,417.35	3,465.56	3,539.02
750 mm	4,146.20	5,536.50	5,380.56	3,510.73	3,559.34	3,633.38
800 mm	4,731.65	6,369.21	6,191.50	4,055.51	4,107.94	4,187.73
900 mm	4,967.66	6,683.46	6,498.86	4,261.82	4,317.87	4,403.20
1000 mm	5,289.05	7,149.60	6,952.27	4,567.40	4,624.73	4,711.96
Channel	15,895.78	18,543.67	18,481.34	11,685.32	12,137.66	12,855.53

Source: State Water application & ACCC calculations.

**Table C 4 Metering service charges per annum (\$2013-14) — State Water-funded meters without telemetry**

Type of meter	State Water's proposal			ACCC final decision		
	2014–15	2015–16	2016–17	2014–15	2015–16	2016–17
50 mm	1,214.84	1,513.27	1,486.09	958.29	981.96	1,019.24
80 mm	1,222.78	1,524.79	1,497.31	965.85	989.55	1,026.88
100 mm	1,267.16	1,589.16	1,559.91	1,008.04	1,031.92	1,069.51
150 mm	1,371.01	1,729.21	1,696.78	1,099.97	1,125.27	1,165.04
200 mm	1,435.43	1,810.47	1,776.55	1,153.06	1,179.76	1,221.66
250 mm	1,513.42	1,921.15	1,884.36	1,225.64	1,252.88	1,295.61
300 mm	1,630.27	2,090.64	2,049.21	1,336.75	1,364.46	1,407.87
350 mm	2,072.00	2,728.51	2,669.82	1,754.93	1,784.67	1,831.11
400 mm	2,464.19	3,270.53	3,198.65	2,108.63	2,142.36	2,194.87
450 mm	2,692.83	3,539.99	3,464.52	2,280.37	2,320.53	2,382.91
500 mm	2,888.22	3,820.00	3,737.08	2,463.96	2,505.23	2,569.26
600 mm	3,277.60	4,369.29	4,272.30	2,824.07	2,868.36	2,936.97
700 mm	3,642.08	4,893.76	4,782.69	3,167.93	3,214.07	3,285.45
750 mm	3,740.29	5,036.21	4,921.25	3,261.31	3,307.85	3,379.81
800 mm	4,325.75	5,868.92	5,732.19	3,806.09	3,856.45	3,934.15
900 mm	4,561.76	6,183.17	6,039.55	4,012.40	4,066.38	4,149.63
1000 mm	4,883.14	6,649.31	6,492.96	4,317.98	4,373.24	4,458.39
Channel	n.a	n.a	n.a	n.a.	n.a.	n.a.

Source: State Water application & ACCC calculations.

**Table C 5 Inflation factors for metering charges**

Year	Adjustment factors to apply to metering charges in \$2013-14
2014–15	$(1 + (CPI^{\text{March 2014}} - CPI^{\text{March 2013}}) / CPI^{\text{March 2013}})$
2015–16	$(1 + (CPI^{\text{March 2014}} - CPI^{\text{March 2013}}) / CPI^{\text{March 2013}}) \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}})$
2016–17	$(1 + (CPI^{\text{March 2014}} - CPI^{\text{March 2013}}) / CPI^{\text{March 2013}}) \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}}) \times (1 + (CPI^{\text{March 2016}} - CPI^{\text{March 2015}}) / CPI^{\text{March 2015}})$

Notes:  $CPI^{\text{March 2014}}$ , for example, refers to the ABS consumer price index value for March 2014, all groups, weighted average of eight capital cities.

## Miscellaneous charges

**Table C 6 Charges for testing meter accuracy under dispute**

	ACCC final decision
2014–15	\$1,666
2015–16	$\$1,666 \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}})$
2016–17	$\$1,666 \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}}) \times (1 + (CPI^{\text{March 2016}} - CPI^{\text{March 2015}}) / CPI^{\text{March 2015}})$

Notes:  $CPI^{\text{March 2014}}$  refers to the ABS consumer price index value for March 2014, all groups, weighted average of eight capital cities.

Source: State Water Corporation, ACCC analysis.



**Table C 7 Environmental gauging station charges**

ACCC final decision	
2014–15	\$8,562
2015–16	$\$8,562 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} )$
2016–17	$\$8,562 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) \times ( 1 + ( \text{CPI}^{\text{March 2016}} - \text{CPI}^{\text{March 2015}} ) / \text{CPI}^{\text{March 2015}} )$
Notes:	$\text{CPI}^{\text{March 2014}}$ refers to the ABS consumer price index value for March 2014, all groups, weighted average of eight capital cities.
Source:	State Water Corporation, ACCC analysis.

**Table C 8 Fish River connection and disconnection charges**

ACCC final decision - connection charge	
2014–15	\$461.26
2015–16	$\$461.26 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} )$
2016–17	$\$461.26 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) \times ( 1 + ( \text{CPI}^{\text{March 2016}} - \text{CPI}^{\text{March 2015}} ) / \text{CPI}^{\text{March 2015}} )$
ACCC final decision - disconnection charge	
2014–15	\$256.25
2015–16	$\$256.25 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} )$
2016–17	$\$256.25 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) \times ( 1 + ( \text{CPI}^{\text{March 2016}} - \text{CPI}^{\text{March 2015}} ) / \text{CPI}^{\text{March 2015}} )$
Notes:	$\text{CPI}^{\text{March 2014}}$ refers to the ABS consumer price index value for March 2014, all groups, weighted average of eight capital cities.
Source:	State Water Corporation, ACCC analysis.

### Allocation trade processing charges

Charges for allocation trade processing for each year will be the charges shown in table C9, up to a maximum charged amount per trade of \$150 (nominal \$). The charged amount per trade is the sum of the amount charged per application and the amount charged per ML of allocation traded. For example, if a trade in 2014–15 involved 250 ML of water allocation, the notional charged amount would be  $\$38 + 250 \times \$0.50 = \$163$ , which is greater than \$150, so the charged amount would then be capped at \$150.

**Table C 9 Allocation trade processing charges**

ACCC final decision - charge per application	
2014–15	\$38
2015–16	$\$38 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) )$
2016–17	$\$38 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) ) \times ( 1 + ( \text{CPI}^{\text{March 2016}} - \text{CPI}^{\text{March 2015}} ) / \text{CPI}^{\text{March 2015}} ) )$
ACCC final decision - charge per ML of allocation traded	
2014–15	\$0.50
2015–16	$\$0.50 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) )$
2016–17	$\$0.50 \times ( 1 + ( \text{CPI}^{\text{March 2015}} - \text{CPI}^{\text{March 2014}} ) / \text{CPI}^{\text{March 2014}} ) ) \times ( 1 + ( \text{CPI}^{\text{March 2016}} - \text{CPI}^{\text{March 2015}} ) / \text{CPI}^{\text{March 2015}} ) )$
Notes:	$\text{CPI}^{\text{March 2014}}$ refers to the ABS consumer price index value for March 2014, all groups, weighted average of eight capital cities.
Source:	State Water Corporation, ACCC analysis.

**Table C 10 Yanco Creek levy**

ACCC final decision	
2014–15	\$0.90 per ML of Yanco System water entitlement
2015–16	\$0.90 per ML of Yanco System water entitlement
2016–17	\$0.90 per ML of Yanco System water entitlement
Notes:	The Yanco System is defined in the <i>Water Sharing Plan for the Murrumbidgee Regulated River Water Source 2003</i> .
Source:	State Water Corporation, ACCC analysis.

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