



Australian  
Competition &  
Consumer  
Commission

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

June 2014

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## Shortened forms

2010-14 regulatory period	Regulatory period from 1 July 2010 to 30 June 2014
2014-17 regulatory period	Regulatory period from 1 July 2014 to 30 June 2017
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACG	Allen Consulting Group
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AIR	Annual Information Return (IPART)
ALARP	as low as reasonably practical
AMS	asset management system
ANCOLD	Australian National Committee On Large Dams
ATO	Australian Tax Office
AWA	average water allocations
BRC	Dumaresq–Barwon Borders Rivers Commission
BTP	Business Transformation Program
BWCOP	Basin water charging objectives and principles (Water Act 2007)
Capex	Capital expenditure
CAPM	capital asset pricing model
CARMS	computer-aided river management systems
CEPA	Cambridge Economic Policy Associates
CEWO	Commonwealth Environmental Water Office
CGS	commonwealth government securities
CIE	Centre for International Economics
CPI	Consumer price index <sup>1</sup>
CSC	customer service committee

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<sup>1</sup> Measured as the weighted average of eight capital cities.

Deloitte	Deloitte Access Economics
DGM	dividend growth model
DLWC	Department of Land and Water Conservation
DLWC	NSW Department of Land and Water Conservation
DPI	Department of Primary Industries (Fisheries)
DR/BCP	Disaster recovery and business continuity planning
DRP	debt risk premium
DSU	Dam safety upgrade
EMS	Environmental Management System
EPP	environmental and planning and protection
ERA	Economic Regulatory Authority
ERP	Enterprise Resource Planning
ESC	Essential Services Commission (Victoria)
ESCOSA	Essential Services Commission of South Australia
FASP	Future Asset Service Potential
Fish River	Fish River Water Supply Scheme
Frontier	Frontier Economics
FVC	fair value curve
GIS	geographic information system
GPT	General Property Trust
GVIA	Gwydir Valley Irrigators Association
ICDs	irrigation corporations and districts
ICT	Information and Communications Technology
IIO	Irrigation Infrastructure Operator
IPART	Independent Pricing and Regulatory Tribunal (NSW)
IQQM	Integrated Quantity and Quality Model
iSMART	Integrated Surveillance Monitoring, Automation & Remote Telemetry

JIL	Jemalong Irrigation Ltd
KL	Kilolitres
LAD	least absolute deviations
LVW	Lachlan Valley Water
MAQ	Minimum/Maximum Annual Quantity
MDB	Murray-Darling Basin
MDBA	Murray-Darling Basin Authority
MI	Murrumbidgee Irrigation Limited
MIL	Murray Irrigation Limited
ML	Megalitres
MPII	Murrumbidgee Private Irrigators Incorporated
MRFF	Macquarie River Food and Fibre
MRP	market risk premium
MVFFA	Murrumbidgee Valley Food and Fibre Association
NMBC	North Macquarie Bypass Channel
NOW	NSW Office of Water
NPV	net present value
NSP	Network Service Plan
NSW DSC	NSW Dams Safety Committee
NSW	New South Wales
NSWIC	New South Wales Irrigators Council
NWC	National Water Commission
NWI	National Water Initiative
NWMS	National Water Market System
Ofgem	Office of Gas and Electricity Markets
OLS	Ordinary least squares
Opex	Operating expenditure

PIIOP	Private Irrigation Infrastructure Operators Program (NSW)
PRA	portfolio risk analysis
pricing principles	pricing principles under the Water Charge (Infrastructure) Rules 2010
PTRM	post tax revenue model
PwC	PricewaterhouseCooper's
QCA	Queensland Competition Authority
RAB	regulatory asset base
RFM	RAB roll-forward model
RIT	regulatory information template
SCA	Sydney Catchment Authority
SFG	SFG Consulting
SRWUIP	Sustainable Rural Water Use and Infrastructure Program
State Water	State Water Corporation of New South Wales
SWW	StateWaterWISE
TAB	Tax asset base
VAA	Value Adviser Associates
VicGAAR	AER's Victorian Gas Access Arrangement Review 2012
WACC	weighted average cost of capital
WAS	water accounting system
WCIR	Water Charge (Infrastructure) Rules 2010
WHS	work health and safety
WMA	NSW Water Management Act 2000
WSP	Water Sharing Plans
YCATAC	Yanco Creek and Tributaries Advisory Council



# 1 Total revenue

The total revenue requirement is a forecast of an operator's prudent and efficient costs in the provision of water infrastructure services. Under the Water Charge (Infrastructure) Rules 2010 (WCIR), the ACCC cannot approve the regulated charges set out in a pricing application unless it is satisfied that the total forecast revenue used to calculate those charges for each year of the regulatory period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services.<sup>2</sup>

The ACCC's final determination of State Water's total revenue requirement for the 2014–17 regulatory period is presented in this chapter. The total revenue is the outcome of the ACCC's assessment of the individual building blocks presented in this final decision and the relevant attachments.

## 1.1 Final decision

The ACCC has determined a forecast total (unsmoothed) revenue requirement of \$257.8 million (nominal) over the 2014–17 regulatory period for all of State Water's regulated valleys. This revenue requirement is \$82.2 million (nominal) or 24.2 per cent lower than State Water's original proposal.

The ACCC arrived at its final decision on State Water's forecast total revenue by summing the building blocks across each of the ACCC regulated valleys. These building blocks comprise the return on capital, regulatory depreciation, and operating expenditure. The ACCC's final decision approves a zero corporate tax allowance for the 2014–17 regulatory period for the reasons stated in the draft decision.<sup>3</sup> The ACCC determines the forecast capital expenditure (attachment 4) and operating expenditure (attachment 2) based on its assessment of the prudent and efficient costs. The ACCC determines the weighted average cost of capital (WACC) used to set the return on capital allowance for State Water (attachment 5). The return on capital is calculated for each valley regulated by the ACCC based on the value of the opening Regulatory Asset Bases (RABs) in those valleys. In each of these valleys, the forecast regulatory depreciation allowance (attachment 6) is determined based on the opening RAB (attachment 3), forecast capital expenditure, the remaining asset lives and the standard asset lives.

The forecast total revenue varies in each valley depending on the opening RAB, and the approved forecast capital expenditure and forecast operating expenditure. For each valley, the forecast total revenue (unsmoothed) requirement is allocated between users and the NSW Government using the cost sharing ratios for each activity approved by IPART.<sup>4,5</sup> The ACCC has used these cost shares to calculate the user share of the forecast total revenue from which it determines the forecast bulk water charges for the 2014–17 regulatory period.

The ACCC's final decision has revised certain aspects of the draft decision in response to submissions made by State Water and other stakeholders. The main elements of the ACCC's final decision that reduces State Water's total (unsmoothed) revenue requirement relative to its proposal are:

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<sup>2</sup> *Water Charge (Infrastructure) Rules 2010*, r. 29(2).

<sup>3</sup> ACCC, *Draft decision on State Water Pricing Application: 2014–15 – 2016–17, Attachments*, March 2014, p. 31.

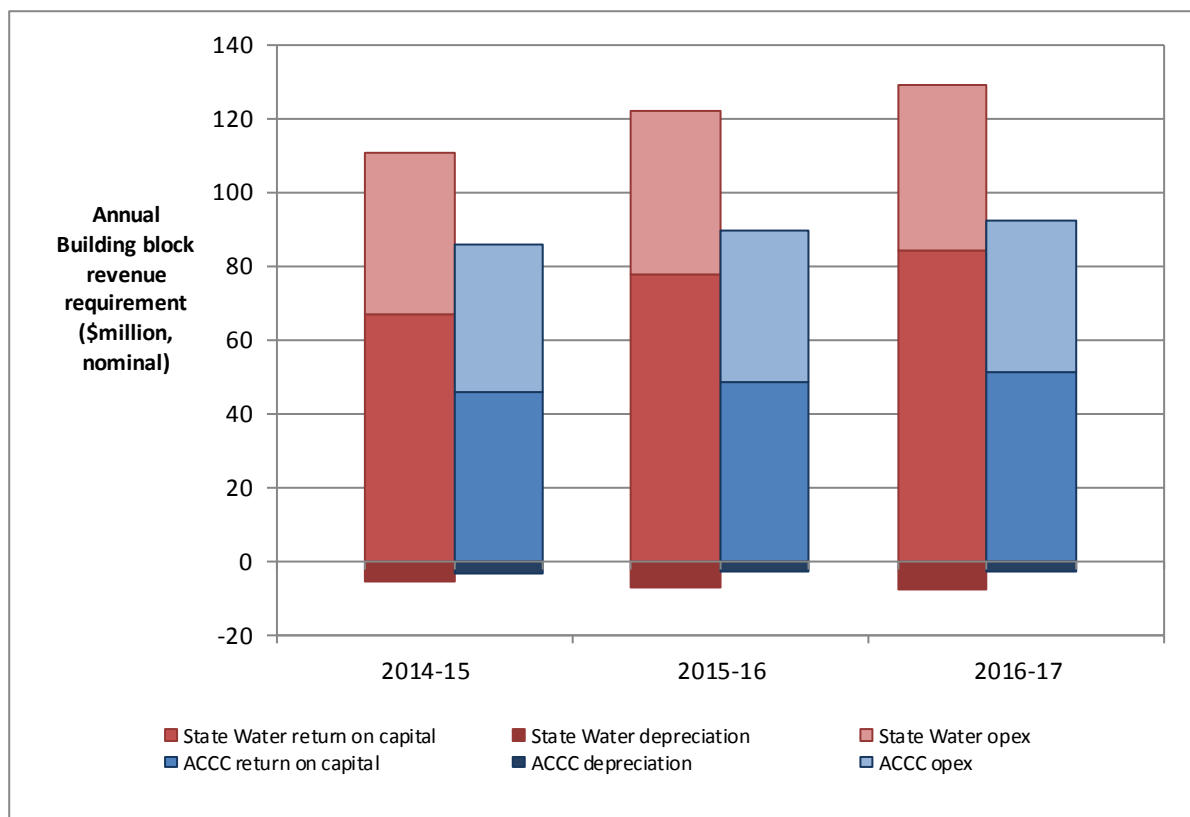
<sup>4</sup> IPART, *Review of bulk water charges for State Water from 1 July 2010 to 30 June 2014 - Final report*, June 2010, p. 108.

<sup>5</sup> The user share percentages are based on an agreement between State Water and the NSW Government to maintain the cost sharing ratios determined by IPART in the *Review of bulk water charges for State Water*, June 2010.  
Hon Katrina Hodgkinson, MP, NSW Minister for Primary Industries, letter to Rod Sims, Chairman ACCC, 21 November 2012.

- A rate of return of 6.92 per cent, compared to 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, a reduction of 35.3 per cent.
- Forecast operating expenditure of \$116.5 million (real \$2013-14), compared with State Water's proposed \$127.5 million, a reduction of 8.7 per cent.

Figure 1-1 compares the ACCC's final decision on total revenue by building block with State Water's proposal for the 2014–17 regulatory period. It shows the ACCC's decision reduces each of the building blocks consistent with each of the above points. The effect of the ACCC's decision relative to State Water's proposed building blocks is discussed below.

**Figure 1-1 ACCC's final decision and State Water's proposed annual revenue requirement by building block (\$ million, nominal)**



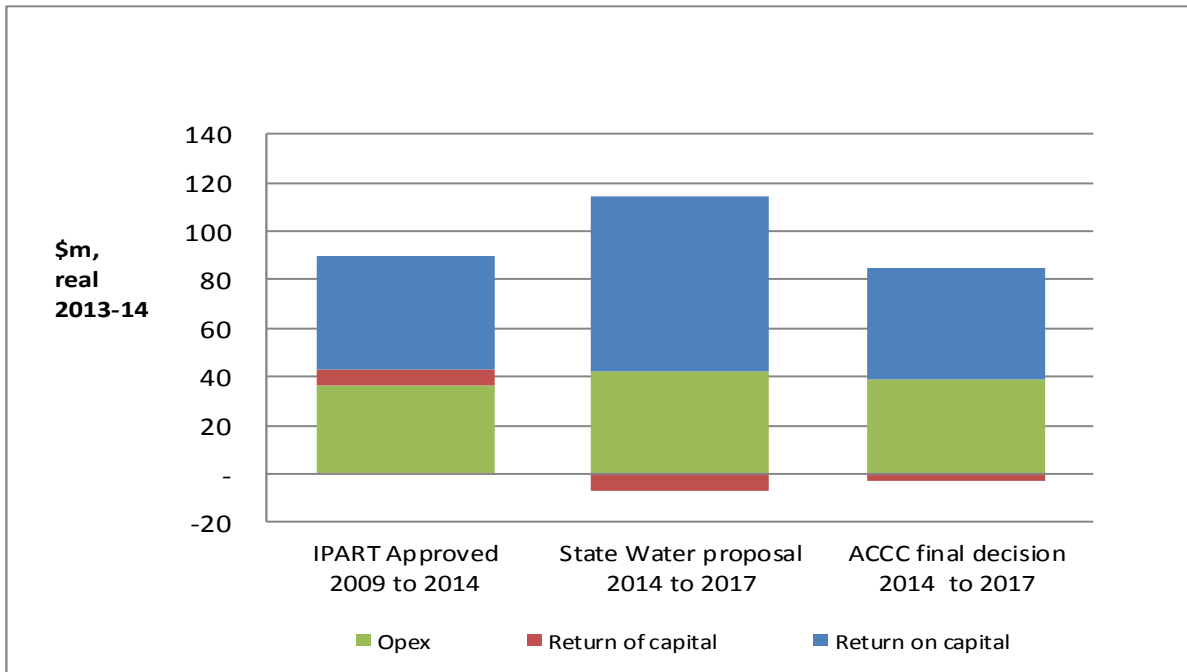
Source: ACCC analysis.

Note: The 2014–17 regulatory period annual allowance for regulatory depreciation (return of capital) is negative. This is because regulatory depreciation equals normal straight-line depreciation less CPI indexation on the RAB. With State Water's long-lived assets, the value of inflation indexation on the RAB more than offsets the value of straight-line depreciation.

Figure 1-2 compares the annual average revenue derived from the ACCC's final decision building blocks with State Water's proposed building blocks for the 2014–17 regulatory period, and the IPART approved revenue for the 2009–14 regulatory period. 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 9.4 per cent lower in real terms (\$2013–14) than the average revenue approved by IPART for the 2010–14 regulatory period.<sup>6</sup>

**Figure 1-2 Annual average revenue of ACCC's final decision compared to State Water's proposal 2014–17 and IPART approved revenue for 2010–14 (\$million, real \$2013–14)**



Source: ACCC analysis.

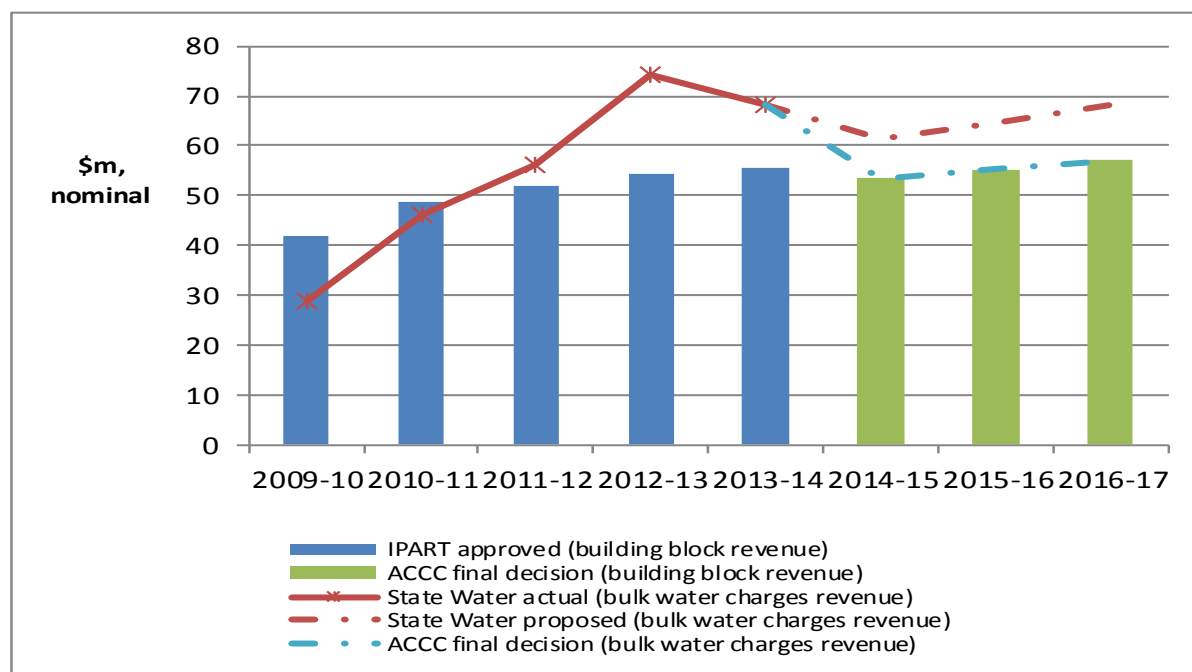
IPART, *Review of bulk water charges for State Water*, June 2010, p. 46.

Note: The 2014–17 regulatory period annual average allowance for regulatory depreciation (return of capital) is negative. This is because the value of inflation indexation on the opening RAB offsets the value of depreciation.

Figure 1-3 compares the ACCC's final decision on the user share component of State Water's building block revenue requirement for the 2014–17 regulatory period to the IPART approved forecast 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.

<sup>6</sup> In Figure 1-2, the comparison of annual average revenue is calculated based on the building blocks, the return of and return on capital, and operating expenditure. The analysis excludes the MDBA and BRC costs and the IPART approved revenue volatility allowance.

**Figure 1-3** ACCC's final decision on State Water's revenue requirement for 2014–15 to 2016–17 and IPART approved revenue for 2009–10 to 2016–17 - User share (\$million, nominal)



Source: ACCC analysis.

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

Note: IPART approved revenues from 2009–14 are calculated net of MDBA and BRC costs and exclude revenue from the North Coast, Hunter and South Coast valleys not regulated by the ACCC. State Water's actual 2013–14 is an estimate based on State Water's proposed building blocks. The bulk water charges revenue refers to the summation of revenue recovered from bulk water charges for each of the State Water valleys regulated by the ACCC.

Table 1-1 presents the ACCC's final decision on the total unsmoothed revenue requirement broken down by each building block. This total revenue includes rebates allowed to Irrigation Corporations and Districts (ICDs). ICDs in the Lachlan, Murray and Murrumbidgee valleys receive rebates in return for costs savings they provide for State Water. Accordingly these cost savings are not included in State Water's forecast building block revenues.

**Table 1-1** ACCC final decision - State Water's total revenue requirement (unsmoothed) by building block for 2014–17 (\$million, nominal)

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

Source: ACCC analysis.

Note: Numbers may not sum due to rounding.

Table 1-2 presents the ACCC's final decision on the total (unsmoothed) revenue requirement for each valley.

**Table 1-2 ACCC's final decision - State Water's total revenue requirement (unsmoothed) by valley for 2014–17 (\$million, nominal)**

	2014–15	2015–16	2016–17	Total
<b>Border</b>	1.7	1.8	1.8	5.3
<b>Gwydir</b>	11.5	11.7	12.0	35.2
<b>Namoi</b>	13.6	14.2	15.1	42.9
<b>Peel</b>	3.6	4.5	4.7	12.8
<b>Lachlan</b>	10.7	11.7	12.0	34.4
<b>Macquarie</b>	9.7	10.1	10.5	30.4
<b>Murray</b>	6.1	6.5	6.3	18.6
<b>Murrumbidgee</b>	15.2	15.5	15.8	46.5
<b>Lowbidgee</b>	0.5	0.6	0.6	1.8
<b>Fish River</b>	9.7	10.1	10.4	30.1
<b>Total</b>	<b>82.2</b>	<b>86.2</b>	<b>89.4</b>	<b>257.8</b>

Source: ACCC analysis.

Note: Numbers may not sum due to rounding.

Table 1-3 and Table 1-4 present the ACCC's final decision on the user and government shares of State Water's total revenue requirement by valley.

**Table 1-3 ACCC's final decision - User cost share of State Water's total revenue requirement (unsmoothed) by valley for 2014–17 (\$million, nominal)**

	2014–15	2015–16	2016–17	Total
Border	1.5	1.6	1.6	4.7
Gwydir	5.0	5.2	5.4	15.5
Namoi	5.3	5.4	5.6	16.3
Peel	1.3	1.4	1.4	4.1
Lachlan	6.9	7.3	7.5	21.7
Macquarie	6.7	6.9	7.4	21.0
Murray	5.1	5.2	5.3	15.5
Murrumbidgee	9.3	9.6	9.7	28.6
Lowbidgee	0.5	0.6	0.6	1.8
Fish River	9.7	10.1	10.4	30.1
<b>Total</b>	<b>51.3</b>	<b>53.1</b>	<b>54.9</b>	<b>159.3</b>

Source: ACCC analysis.

Note: Numbers may not sum due to rounding.

**Table 1-4 ACCC's final decision - Government cost share of State Water's total revenue requirement (unsmoothed) for 2014–17 (\$million, nominal)**

	2014–15	2015–16	2016–17	Total
Border	0.2	0.2	0.2	0.6
Gwydir	6.5	6.6	6.7	19.7
Namoi	8.3	8.8	9.5	26.6
Peel	2.3	3.1	3.3	8.7
Lachlan	3.8	4.4	4.5	12.7
Macquarie	3.0	3.1	3.2	9.3
Murray	1.0	1.0	1.0	3.0
Murrumbidgee	5.9	5.9	6.1	17.9
Lowbidgee	0.0	0.0	0.0	0.0
Fish River	0.0	0.0	0.0	0.0
<b>Total</b>	<b>30.9</b>	<b>33.1</b>	<b>34.4</b>	<b>98.5</b>

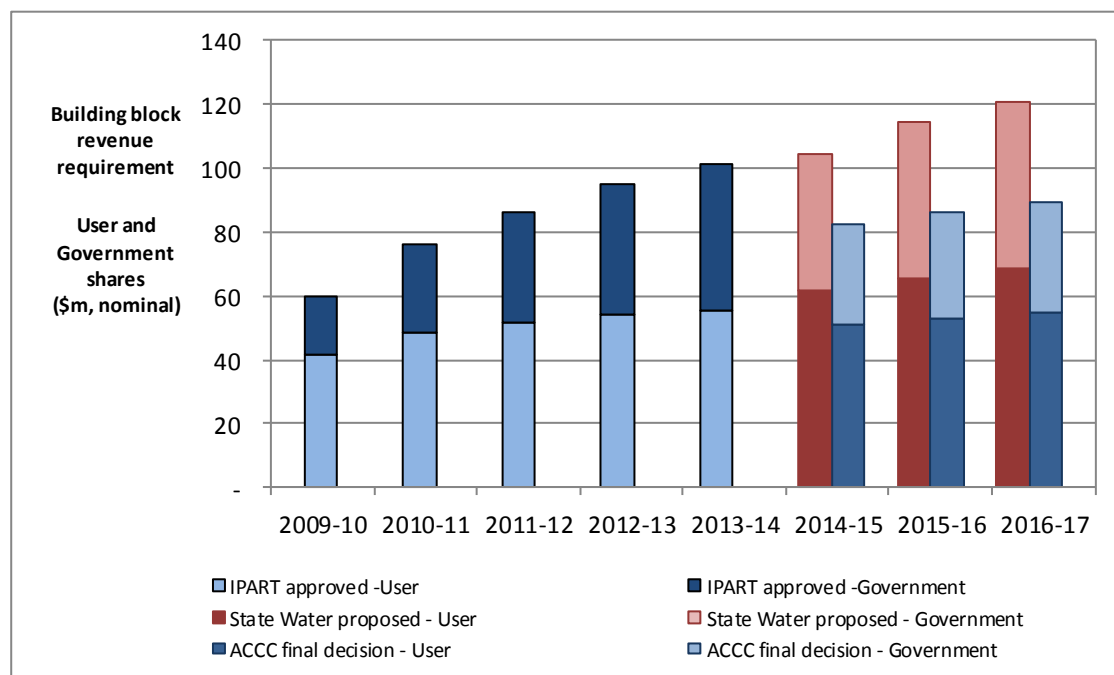
Source: ACCC analysis.

Note: Numbers may not sum due to rounding.

Figure 1-4 shows State Water's allocation of total costs between users and the NSW Government from 2009–10 to 2016–17. The ACCC's approved forecast total revenue requirement is lower than State Water's proposal, and recovers a lower proportion of revenue from the NSW Government compared to State Water's proposal. This is because the ACCC has reduced State Water's proposed

capex and opex in activities that allocate a higher proportion of costs to the NSW Government, relative to users. The ACCC's final decision results in the recovery of forecast annual average of \$53.1 million (nominal) from users or 62 per cent of total revenue. State Water's proposed total revenue requirement would have resulted in recovering annual average revenue of \$65.1 million (nominal) or 57 per cent of total revenue from users over the 2014–17 regulatory period.

**Figure 1-4 ACCC's final decision and State Water's proposed total revenue requirement (unsmoothed) - User and Government allocation of costs (\$million, nominal)**



Source: ACCC analysis.

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

Note: IPART approved revenues are calculated based on the ACCC regulated valleys and exclude MDBA and BRC costs.

## 1.2 Submissions

The ACCC received a number of submissions in response to the draft decision. The ACCC's review of the submissions and its responses are detailed in this final decision and in each of the relevant attachments.

State Water's submission did not accept the ACCC's draft decision on the forecast revenue requirement. State Water's submission disagreed with the following aspects of the ACCC's draft decision:

- the forecast capex and opex allowances
- the weighted average costs of capital
- the approach of maintaining the 40:60 fixed to variable cost tariff structure
- the approach of addressing State Water's revenue volatility through the application of an 'unders and overs' account.

These issues are discussed in detail in the relevant attachments to this final decision.

State Water stated the ACCC should revise its draft decision on the above matters with respect to the new information being submitted by it.<sup>7</sup>

The ACCC received submissions from other stakeholders in support of its draft decision on State Water's forecast total revenue requirement for the 2014–17 regulatory period. However, stakeholders raised issues regarding the final level of total revenue to determine bulk water charges once the MDBA and BRC costs, and adjustment for State Water's under or over recovery were taken into account.

### 1.3 Assessment approach

The ACCC's approach to assessing State Water's proposed total forecast building block revenue for the 2014–17 regulatory period is set out in section 1.2 of attachments to the draft decision.<sup>8</sup>

The ACCC in forming its final decision of the forecast total revenue requirement took into account submissions received in response to the draft decision.

### 1.4 Reasons for decision

The ACCC's final decision does not accept State Water's proposed total revenue requirement of \$340 million (nominal).<sup>9</sup> The ACCC has determined a total forecast revenue requirement across all ACCC regulated valleys of \$257.8 million (nominal) over the 2014–17 regulatory period. The ACCC approved forecast total revenue requirement is 24.2 per cent lower than State Water's proposal. The ACCC's final decision represents a decrease of 8.9 per cent, relative to the ACCC's draft decision.

The ACCC's has adjusted some aspects of its draft decision in response to the submissions received. The main elements of the ACCC's final determination that reduce State Water's forecast total revenue requirement relative to the proposal are:

- A rate of return of 6.92 per cent, compared to 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, a reduction of 35.3 per cent.
- Forecast operating expenditure of \$116.5 million (real \$2013-14), compared with State Water's proposed \$127.5 million, a reduction of 8.7 per cent.

The ACCC's final decision on State Water's total revenue requirement is made by assessing the information contained in State Water's submission and other stakeholder submissions in response to the draft decision. State Water did not provide any updated modelling of the total revenue requirement to support its submission to the draft decision. Therefore, the ACCC's analysis compares the final decision total revenue requirement to State Water's proposed total revenue requirement in its original application.

The ACCC's final decision approves a zero corporate tax allowance for the 2014–17 regulatory period for the reasons stated in the draft decision.<sup>10</sup> The ACCC's draft decision accepted State Water's

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<sup>7</sup> State Water, *Response to the ACCC draft decision on State Water pricing application 2014–15 - 2016–17*, April 2014, p.7.

<sup>8</sup> See attachment 1 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, pp.15–16.

<sup>9</sup> The ACCC presents State Water's proposed total revenue requirement based upon its original application. This means that the forecast capex and opex, and WACC parameters are as proposed in the original application.

<sup>10</sup> ACCC, *Draft decision on State Water Pricing Application: 2014–15 – 2016–17, Attachments*, March 2014, p. 31.



proposal not to include a cost of corporate tax building block for the 2014–17 regulatory period. State Water's proposal stated that it does not expect to incur any tax liabilities during that period. The ACCC considered State Water will need to comply with the information requirements under the WCIR by providing corporate tax data for its pricing application for regulated charges from 1 July 2017. The ACCC noted the issues for State Water to address in estimating the cost of corporate tax building block for the regulatory period commencing 1 July 2017. No submissions were received in relation to the ACCC's draft decision on this matter. The ACCC's final decision therefore affirms its draft decision to approve a zero corporate tax allowances under clause 29(2)(b)(i) of the WCIR.

The ACCC's final decision approves a forecast total revenue requirement to be recovered from user charges of \$159.3 million (nominal). This is \$35.3 million (nominal) or 18.4 per cent lower than State Water's proposal.<sup>11</sup>

### 1.4.1 Cost sharing ratios

The ACCC's final decision maintains its draft decision on accepting the NSW Government's cost sharing arrangements for 2014–17 regulatory period.<sup>12</sup> These cost sharing ratios are applied to expenditures allocated by activity types. The ACCC's approved cost sharing ratios applied to the capex and opex activity types are set out in Table 1-5 and Table 1-6, respectively.

**Table 1-5 IPART approved capex cost shares by activity type (per cent)**

Activity	User share (%)	Government share (%)
Asset management planning	100	0
Routine maintenance	100	0
Dam safety compliance - Pre 1997 construction	0	100
Dam safety compliance	50	50
Renewal and replacement	90	10
Structural and other enhancements	100	0
Corporate systems	100	0
Environmental planning and protection	50	50
Flood operations	50	50
Office accommodation projects	100	0
Information management projects	100	0
River channel protection works	50	50
Water delivery and other operations	100	0

Source: IPART, *Review of bulk water charges for State Water*, June 2010, p.108.

<sup>11</sup> The forecast total revenue requirement to be recovered from user charges does not include the pass through of MDBA and BRC costs. The inclusion of MDBA and BRC costs does not affect the magnitude of the difference between the forecast total revenue approved by the ACCC in its final decision and State Water's proposal.

<sup>12</sup> ACCC, *Draft decision on State Water Pricing Application: 2014–15 – 2016–17, Attachments*, March 2014, pp. 22–23.

**Table 1-6 IPART approved opex cost shares by activity type (per cent)**

Activity	User share (%)	Government share (%)
Customer support	100	0
Customer billing	100	0
Metering and compliance	100	0
Water delivery and operations	100	0
Flood operations	50	50
Hydrometric monitoring	90	10
Water quality monitoring	50	50
Corrective maintenance	100	0
Routine maintenance	100	0
Asset management planning	100	0
Dam safety compliance capital projects - Pre 1997	0	100
Dam safety compliance	50	50
Environmental planning and protection	50	50
Insurance	100	0

Source: IPART, *Review of bulk water charges for State Water*, June 2010, p.108.

These cost shares allocate a proportion of the ACCC's forecast capex and opex allowances to users (government) based on the activity type. The user (government) allocation of the RAB is affected by the capex user (government) cost shares. The user (government) share of the return on capital and return of capital (regulatory depreciation) building blocks are determined by the user (government) share of the RAB. Therefore, the user share of forecast total revenue will vary from year-to-year and between individual valleys dependent on the user allocation of the RAB, and approved forecasts of capex and opex. The user (government) share may vary from year to year dependent on the amount of expenditure attributed to particular activities. The ACCC's decision on the user share of forecast total revenue is then used to determine bulk water charges. Table 1-7 shows the ACCC's decision on the user share and government share of the total revenue requirement (unsmoothed).<sup>13</sup>

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<sup>13</sup> The ACCC's revenue model and valley Post-Tax Revenue Models (PTRM) provide the calculation of the allocation of opex and capex between users and the NSW Government. The RAB is allocated between user and government based on the value of capex being rolled into the RAB. The RAB value and capex determined for an asset class is based on the allocation of capex to activities that attract different user shares.

**Table 1-7 ACCC's final decision on the user and government shares of total revenue requirement (unsmoothed) for 2014–17 (\$million, nominal)**

Valley	Share type	2014–15	2015–16	2016–17
<b>Border</b>	User	1.5	1.6	1.6
	Government	0.2	0.2	0.2
<b>Gwydir</b>	User	5.0	5.2	5.4
	Government	6.5	6.6	6.7
<b>Namoi</b>	User	5.3	5.4	5.6
	Government	8.3	8.8	9.5
<b>Peel</b>	User	1.3	1.4	1.4
	Government	2.3	3.1	3.3
<b>Lachlan</b>	User	6.9	7.3	7.5
	Government	3.8	4.4	4.5
<b>Macquarie</b>	User	6.7	6.9	7.4
	Government	3.0	3.1	3.2
<b>Murray</b>	User	5.1	5.2	5.3
	Government	1.0	1.0	1.0
<b>Murrumbidgee</b>	User	9.3	9.6	9.7
	Government	5.9	6.0	6.1
<b>Lowbidgee</b>	User	0.5	0.6	0.7
	Government	n/a	n/a	n/a
<b>Fish River</b>	User	9.7	10.1	10.4
	Government	n/a	n/a	n/a

Source: ACCC analysis.

Note: n/a - not applicable.

## 1.4.2 Smoothed total revenue requirement

The ACCC's final decision determines State Water's forecast smoothed total revenue requirement of \$165.6 million (nominal). The ACCC applies smoothing to the revenue to be recovered from user regulated charges. Generally, infrastructure investment and associated expenditures can be considered to be "lumpy". This "lumpiness" can result in variation in costs from year-to-year and creates annual variation in the forecast (unsmoothed) building block revenue. The ACCC's approach to smoothing reduces the variation in bulk water charges that would otherwise occur due to the transformation of variable unsmoothed building block revenue to bulk water charges over the regulatory period.

The ACCC's final determination of State Water's bulk water charges is based upon the allocation of forecast building block revenues between users and the NSW Government. The annual capex and

opex can vary by the level of expenditure and the allocation to certain activities. These sources of variation can affect the amount of capex and opex attributed to users (government) in a given year.

The ACCC's final decision applies a constant X factor during the 2014–17 regulatory period to minimise the variation in the forecast (unsmoothed) building block revenue. The ACCC's determination of the smoothed revenue requirement is set equal to the net present value (NPV) of the unsmoothed revenue requirement. The NPV equality of these revenue profiles ensures that forecast revenue to be recovered from bulk water charges is reasonably likely to meet that part of the prudent and efficient costs of providing infrastructure services (that is not met from other revenue).<sup>14</sup> The purpose of smoothing price variation is to maintain price stability within a regulatory period and between regulatory periods. Maintaining price stability is consistent with rule 37 of the WCIR and the water charging objectives and principles under the Water Act (2007).<sup>15</sup>

NSWIC's submission raised concerns with the ACCC's approach to determining smoothed revenue and suggested the IPART approach should be employed.<sup>16</sup> The IPART approach to the determination of the notional revenue included the revenue volatility allowance and the pass through of MDBA and BRC costs.<sup>17</sup> IPART describes its approach to smoothing as follows:

To convert State Water's target revenue into prices, we decided to target a smoothed NPV neutral price path...It is described as 'smoothed' because it flattens out any year-on-year fluctuation to achieve more equal annual price increases over the period.<sup>18</sup>

The ACCC considers its approach to smoothing revenue is similar to the IPART approach. The difference between the two approaches is the calculation of the unsmoothed (notional) building block revenue requirement. The ACCC's determination of State Water's building blocks excludes the MDBA and BRC costs and addresses State Water's revenue volatility outside of the building block assessment. Therefore these elements of the ACCC's determination are external to the smoothing process when compared to IPART's approach. The ACCC's determination of building block revenue reflects its assessment of the prudent and efficient costs in State Water's provision of infrastructure services under rule 29(2)(b)(ii) of the WCIR.

The ACCC's final decision has addressed the issue of transparency of MDBA and BRC costs, by determining separate charges for these costs as discussed in attachment 9.4. The ACCC's approach improves the transparency of bulk water charges by separating out the proportion of bulk water charges attributable to State Water's prudent and efficient costs and the pass through of MDBA and BRC costs.

The ACCC's final decision on the forecast smoothed revenue requirement and X factors excludes the effects of adjustments for under or over recovery of revenue and any other pass through costs. These adjustments will be accounted for as part of the annual price approval process, and subject to the form of control as discussed in attachment 9.

Table 1-8 presents the ACCC's final decision on State Water's smoothed revenue requirement and the X factors to be applied to each of the ACCC regulated valleys.

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<sup>14</sup> WCIR, rule 29(2)(b)(ii).

<sup>15</sup> *Water Act (2007)*, Schedule 2, Part 2, s.2); and Schedule 2, Part 3, s.3.

<sup>16</sup> NSWIC, *Submission to Australian Competition and Consumer Commission Draft Decision on State Water Pricing Application 2014–15 - 2016–17*, April 2014, p.12

<sup>17</sup> IPART, *Review of bulk water charges for State Water Corporation*, June 2010, pp.10–11.

<sup>18</sup> IPART, *Review of bulk water charges for State Water Corporation*, June 2010, p. 11.

**Table 1-8 ACCC's final decision - State Water annual revenue requirement (smoothed) to be recovered from bulk water charges for 2014–17 (\$million, nominal)**

Valley		2014–15	2015–16	2016–17
<b>Border</b>	Smoothed revenue	1.5	1.6	1.6
	X factors		-0.51%	-0.51%
<b>Gwydir</b>	Smoothed revenue	5.0	5.2	5.4
	X factors		-1.40%	-1.40%
<b>Namoi</b>	Smoothed revenue	5.3	5.4	5.6
	X factors		-0.67%	-0.67%
<b>Peel</b>	Smoothed revenue	1.3	1.4	1.4
	X factors		-0.31%	-0.31%
<b>Lachlan</b>	Smoothed revenue	7.0	7.3	7.6
	X factors		-2.02%	-2.02%
<b>Macquarie</b>	Smoothed revenue	6.7	7.0	7.3
	X factors		-1.88%	-1.88%
<b>Murray</b>	Smoothed revenue	6.2	6.3	6.3
	X factors		1.76%	1.76%
<b>Murrumbidgee</b>	Smoothed revenue	10.2	10.5	10.7
	X factors		0.31%	0.31%
<b>Lowbidgee</b>	Smoothed revenue	0.5	0.6	0.6
	X factors		-5.61%	-5.61%
<b>Fish River</b>	Smoothed revenue	9.7	10.0	10.4
	X factors		-1.10%	-1.10%

Source: ACCC analysis.

Note: A negative X factor represents a real price increase.

### 1.4.3 Sensitivity analysis

The ACCC conducted sensitivity analysis to measure the effect of adopting State Water's proposed building block inputs compared to the ACCC's final decision on total revenue. The scenarios considered include:

- the WACC parameters
- capital expenditure
- operating and maintenance expenditure.

The sensitivity analyses below present the effect of State Water's proposal inputs relative to the ACCC's final decision on the user share of the total revenue requirement, used to determined regulated charges.

### Weighted average cost of capital

The ACCC's final decision on the rate of return is 6.92 per cent. State Water proposed a rate of return of 8.96 per cent. The ACCC's final decision does not accept State Water's proposed WACC parameters for the risk free rate, equity beta, and debt risk premium. The ACCC's final decision has updated the estimate of the risk free rate based on the averaging period as close as practical to this final decision. If the ACCC were to adopt State Water's proposed WACC parameters, forecast total revenue would be \$42.1 million (nominal) or 16.3 per cent higher.

Table 1-9 presents the difference in total revenue when adopting State Water's WACC parameters

**Table 1-9 Difference in State Water's unsmoothed revenue between ACCC's final decision and State Water's proposed WACC parameters**

	ACCC final decision WACC (per cent)	State Water proposal WACC (per cent)	Change in revenue (\$m, nominal)	Change in revenue (per cent)
<b>Total</b>	6.92	8.95 <sup>19</sup>	42.1	16.3

Source: ACCC analysis.

### Forecast capital expenditure

The ACCC's final decision approves a capex allowance of \$134.8 million (nominal) for the 2014–17 regulatory period. This differs from State Water's proposed capex allowance of \$212.0 million (nominal). The ACCC's final decision reflects reductions in expenditure and changes to the timing of certain expenditures. If the ACCC was to adopt State Water's proposed capex allowance, forecast total revenue requirement would be \$12.0 million (\$, nominal) or 4.6 per cent higher.

Table 1-10 presents the difference in total revenue when adopting State Water's proposed capex forecast for 2014–17.

<sup>19</sup> State Water's proposed WACC parameters result in a WACC of 8.95 per cent. Therefore, State Water's revenue modelling applies a WACC of 8.95 per cent, and not 8.96 per cent as per State Water's pricing application.

**Table 1-10 Difference in State Water's total unsmoothed revenue between ACCC's final decision and State Water's proposed forecast capex**

	ACCC final decision capex (\$m, nominal)	State Water proposal capex (\$m, nominal)	Change in revenue (\$m, nominal)	Change in revenue (per cent)
Border	0.3	1.0	0.2	2.7
Gwydir	8.8	23.0	2.3	6.5
Namoi	34.1	60.5	3.9	9.2
Peel	38.8	22.0	-1.5	-12.0
Lachlan	23.9	33.9	1.6	4.7
Macquarie	11.0	34.2	3.2	10.5
Murray	2.4	5.8	0.7	3.7
Murrumbidgee	3.9	6.7	0.6	1.3
Lowbidgee	1.9	1.9	0.0	1.3
Fish River	13.3	22.9	0.6	2.0
<b>Total</b>	<b>138.5</b>	<b>212.0</b>	<b>11.6</b>	<b>4.5</b>

Source: ACCC analysis.

### Forecast operating expenditure

The ACCC's final decision approves an opex allowance of \$122.4 million (nominal) for the 2014–17 regulatory period. This differs from State Water's proposed opex allowance of \$133.9 million (nominal). If the ACCC was to adopt State Water's proposed opex allowance, forecast total revenue requirement would be \$11.5 million (\$, nominal), or 4.4 per cent higher.

Table 1-11 presents the difference in total revenue when adopting State Water's proposed opex forecast for 2014–17.

**Table 1-11 Difference in State Water's total revenue between ACCC's final decision and State Water's proposed forecast opex**

	ACCC final decision opex (\$m, nominal)	State Water proposal opex (\$m, nominal)	Change in revenue (\$m, nominal)	Change in revenue (per cent)
<b>Border</b>	4.5	5.1	0.5	9.9
<b>Gwydir</b>	12.8	13.4	0.7	1.9
<b>Namoi</b>	15.1	15.4	0.4	0.9
<b>Peel</b>	3.9	5.4	1.2	9.1
<b>Lachlan</b>	16.9	19.1	2.2	6.3
<b>Macquarie</b>	17.2	19.7	2.5	8.3
<b>Murray</b>	11.0	13.5	2.6	13.7
<b>Murrumbidgee</b>	23.7	25.5	1.8	3.9
<b>Lowbidgee</b>	1.7	2.1	0.4	25.2
<b>Fish River</b>	15.7	14.6	-1.1	-3.5
<b>Total</b>	<b>122.5</b>	<b>133.9</b>	<b>11.2</b>	<b>4.3</b>

Source: ACCC analysis.



## 2 Operating expenditure

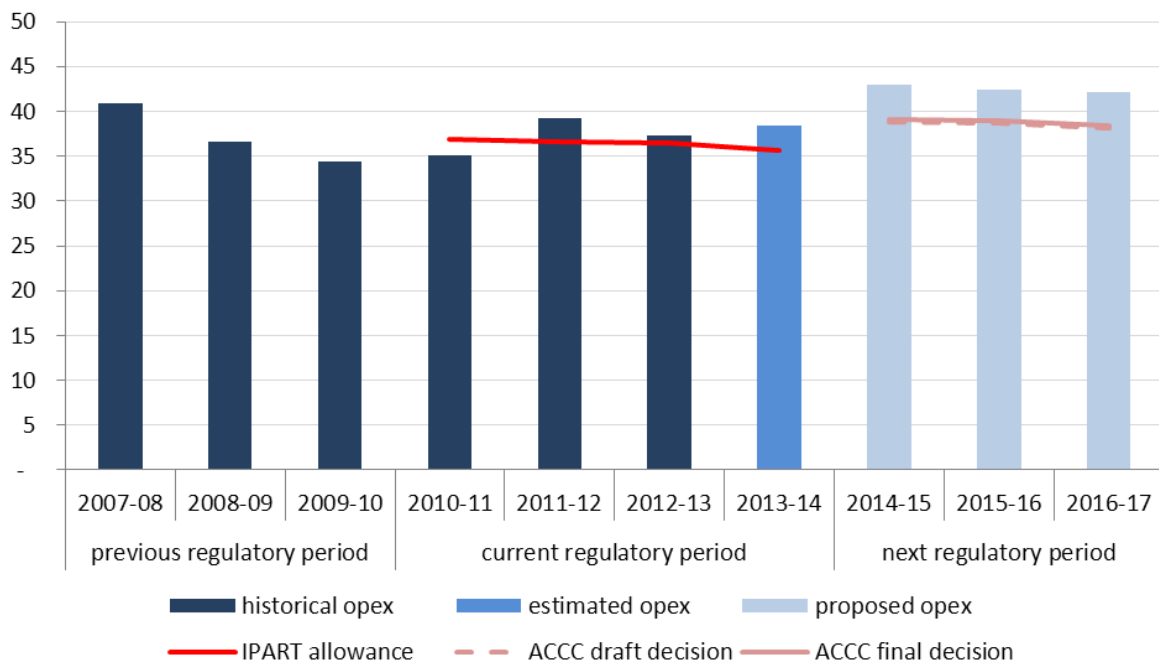
Operating expenditure (opex) is the operating, maintenance and other non-capital costs that are incurred by State Water in providing water storage and delivery services. Opex is an important component of the building block model which we use to assess the total revenue State Water needs to provide water storage and delivery services.

Opex is not added to State Water’s regulatory asset base. State Water recovers its opex from users through charges levied in the same year in which the opex is incurred. State Water proposes to levy bulk water charges, metering charges, and charges for miscellaneous or ancillary services. State Water forecasts incurring opex in the 2014–17 regulatory period in providing services related to each of these charges. This attachment assesses State Water’s forecast opex incurred in providing bulk water services for which it levies bulk water charges. The assessment of other forecast opex is in attachment 10 (Metering charges).

The ACCC’s draft decision<sup>20</sup> also contains information and analysis supporting this final decision.

State Water forecasts bulk water services opex in the Murray-Darling Basin of \$127.5 million (real \$2013–14) in aggregate over the 2014–17 period. Based on the cost sharing arrangements outlined in the Final Decision, State Water’s forecast opex has a user share of \$117.6 million (real \$2013–14) in aggregate over the 2014–17 period. Figure 2-1 outlines State Water’s forecast opex.

**Figure 2-1 Opex for bulk water charges (\$millions, real \$2013–14)<sup>21</sup>**



### 2.1 Final decision

The ACCC does not consider State Water’s forecast of opex to be prudent and efficient. Accordingly, the final decision does not approve State Water’s forecast opex. The ACCC’s determination and

<sup>20</sup> See Attachment 2 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.  
<sup>21</sup> 2013–14 is based on a budget estimate provided by State Water

reasoning are summarised below and set out in section 2.4. The ACCC's draft decision<sup>22</sup> also contains information and analysis relevant to this final decision.

The ACCC considers that:

- State Water's proposed step increases in opex for changes in regulatory obligations are too high. The ACCC considers that a number of obligations do not represent a material change, and that in some areas a lower cost solution to the changed obligation 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.
- State Water's proposed discretionary projects are generally prudent as they are endorsed by customers, but some could be achieved at a lower cost.
- State Water's forecast changes in input prices are not realistic.
- Past performance indicates that State Water is likely to achieve a larger efficiency gain than it has proposed.

The ACCC considers that \$116.49 million (real \$2013–14) is a more prudent and efficient aggregate forecast opex for the regulatory period. This represents a forecast opex that is 9 per cent lower than State Water's proposed opex. Figure 2-1 outlines the ACCC's final decision on opex. The ACCC's final decision on opex for each valley in the Murray-Darling Basin is shown in Table 2-1.

**Table 2-1 Opex – final decision – by valley (\$millions, real \$2013–14)**

	State Water proposal			ACCC final decision		
	2014–15	2015–16	2016–17	2014–15	2015–16	2016–17
<b>Total</b>	<b>43.02</b>	<b>42.38</b>	<b>42.11</b>	<b>39.13</b>	<b>38.91</b>	<b>38.43</b>
Border valley	1.65	1.63	1.53	1.45	1.45	1.41
Fish River valley	4.69	4.61	4.59	4.93	5.01	4.96
Gwydir valley	4.36	4.24	4.2	4.08	4.05	4.04
Lachlan valley	6.24	6.16	5.8	5.40	5.40	5.32
Lowbidgee valley	0.77	0.65	0.6	0.53	0.53	0.53
Macquarie valley	6.13	6.16	6.5	5.49	5.45	5.42
Murray valley	4.51	4.11	4.27	3.58	3.45	3.43
Murrumbidgee valley	8.12	8.04	8.11	7.62	7.51	7.39
Namoi valley	5.01	4.89	4.85	4.81	4.80	4.73
Peel valley	1.54	1.89	1.66	1.25	1.25	1.22

Source: State Water Corporation; ACCC analysis.

<sup>22</sup> See Attachment 2 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

Based on the cost sharing arrangements outlined in the Final Decision, the ACCC's forecast of prudent and efficient opex has a user share of \$107.33 million (real \$2013–14) in aggregate over the 2014–17 period. The user and government share of forecast opex for each valley is shown in Table 2-2.

**Table 2-2 Opex – final decision – user and government shares (\$millions, real \$2013–14)**

	User share			Government share		
	2014–15	2015–16	2016–17	2014–15	2015–16	2016–17
<b>Total</b>	<b>36.12</b>	<b>35.83</b>	<b>35.38</b>	<b>3.01</b>	<b>3.08</b>	<b>3.05</b>
Border valley	1.31	1.31	1.26	0.15	0.14	0.14
Fish River valley	4.93	5.01	4.96	-	-	-
Gwydir valley	3.67	3.65	3.64	0.41	0.40	0.40
Lachlan valley	4.91	4.88	4.83	0.49	0.52	0.49
Lowbidgee valley	0.53	0.53	0.53	-	-	-
Macquarie valley	5.08	5.05	5.01	0.41	0.41	0.41
Murray valley	3.41	3.29	3.27	0.16	0.16	0.16
Murrumbidgee valley	7.00	6.89	6.74	0.62	0.62	0.65
Namoi valley	4.19	4.15	4.10	0.62	0.65	0.62
Peel valley	1.09	1.08	1.04	0.16	0.17	0.17

Source: State Water Corporation; ACCC analysis.

The ACCC applied the assessment approach outlined in section 2.3 below to assess the prudence and efficiency of State Water's forecast opex and to determine an appropriate substitute forecast. The ACCC's reasons for not accepting State Water's forecast opex are outlined in further detail in section 2.4 below.

## 2.2 Submissions

The ACCC received 42 submissions in response to the draft decision, including from State Water. Seven of these submissions specifically addressed State Water's forecast opex.<sup>23</sup>

The NSW Farmers' Association was generally supportive of the ACCC's draft decision and the ACCC's forecast costs.

Lachlan Valley Water supported the ACCC's draft decision on step changes for staff vacancy rates, crop statistics, and water quality monitoring. Lachlan Valley Water also queried the treatment of non-paying customers.

Murray Irrigation Ltd supported the ACCC's draft decision determining an opex allowance below State Water's forecast, submitting that "State Water's pricing application represented neither prudent nor

<sup>23</sup> The seven stakeholders are Gwydir Valley Irrigators' Association, Lachlan Valley Water, Murray Irrigation Ltd, NSW Farmers' Association, NSW Irrigators' Council, Peel Valley Working Group, and State Water.

efficient costs for a 'business as usual' scenario". Murray Irrigation Ltd also questioned whether debt raising costs are applicable to a monopoly enterprise solely owned by Government.

The Gwydir Valley Irrigators' Association (GVIA) supported the ACCC's forecast of efficient opex being below State Water's proposed opex. The GVIA supported the ACCC's draft decision on step changes for environmental management system certification, Basin Plan implementation, and collection of crop statistics.<sup>24</sup> The GVIA queried whether high water deliveries in 2012–13 resulted in higher-than-normal operating costs in that year, and whether greater analysis of the efficiency of base opex could be undertaken. The GVIA also submitted that a higher, aspirational target of ongoing efficiency gains could be set.<sup>25</sup>

The NSW Irrigators' Council generally supported the ACCC's draft decision, but raised issues about base opex, recovery of regulatory costs, and efficient costs for cold water pollution and routine maintenance.<sup>26</sup>

Peel Valley Working Group queried the efficiency of the costs attributed to the Peel valley, particularly environmental planning, water quality monitoring, dam safety, corrective maintenance, and insurance costs.<sup>27</sup>

Numerous stakeholders submitted that the ACCC should investigate cost efficiencies expected to result from State Water's merger with the Sydney Catchment Authority.<sup>28</sup>

State Water submitted that the ACCC should accept the original forecast opex from State Water's pricing application.<sup>29</sup> State Water's submission in response to the draft decision outlined a number of issues of particular concern to State Water. These issues are considered in section 2.4.

## 2.3 Assessment approach

The ACCC must not approve State Water's proposed charges unless satisfied that:<sup>30</sup>

- the total forecast revenue for the 2014–17 period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services in that period; and
- the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient costs of providing infrastructure services that is not met from other revenue.

If the ACCC does not approve State Water's charges, it must determine alternate charges that would satisfy the efficiency and prudence criteria. The ACCC must also have regard to the Basin water charging objectives and principles when approving or determining regulated charges.<sup>31</sup>

The ACCC has developed its own forecast of prudent and efficient opex for the 2014–17 period and compared this forecast to State Water's proposed opex. The ACCC's approach is to approve State Water's proposed opex unless it materially differs from the ACCC's forecast of prudent and efficient opex, and if necessary, determine opex based on the ACCC's forecast.

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<sup>24</sup> GVIA submission, p. 6.

<sup>25</sup> GVIA submission, pp. 10–11.

<sup>26</sup> NSWIC submission, pp. 13–15.

<sup>27</sup> PVWG submission, pp. 13–17.

<sup>28</sup> NSW Irrigators' Council, Lachlan Valley Water, NSW Farmers' Association, Murray Irrigation Ltd, Gwydir Valley Irrigators' Association.

<sup>29</sup> State Water, email to ACCC, 29 April 2014.

<sup>30</sup> Rule 29(2) of the WCIR.

<sup>31</sup> Rule 29(4) of the WCIR.

The ACCC's forecast is primarily focussed on the level of total bulk water opex for each valley.<sup>32</sup> Conducting an assessment at the total opex level allows for greater consideration of the contingencies and trade-offs between various opex categories, as well as the deliverability of the opex program as a whole.

The ACCC's forecast of State Water's prudent and efficient opex for the 2014–17 period is centred on the base-and-step forecasting method, which involves:

- Establishing a base opex amount that represents the opex amount that State Water has demonstrated is sufficient to fulfil its current obligations given its current operating environment, adjusted appropriately where State Water's demonstrated opex is considered to be above efficient levels.
- Estimating the step changes to the base opex that are required for State Water to respond to material changes in relevant circumstances that are realistically expected to occur over the forecast period, including:
  - Costs of addressing changed regulatory obligations
  - Costs of non-recurrent activities that are not captured in the base opex and represent a material deviation from base opex
  - A rate of change in opex to reflect:
    - Changes in input costs over time
    - Ongoing efficiency gains.

The ACCC must assess the efficiency of State Water's forecast opex. A simple description of efficiency may be 'producing more with less'.<sup>33</sup> This statement infers comparisons, such as producing more outputs or using less inputs (or both) than the business has in the past or than other businesses (all other things equal). Considerations of efficiency therefore require comparative analysis.

The ACCC considers that the forecast opex derived from its base-and-step method is a reasonable estimate of prudent and efficient costs. The ACCC considers that the base-and-step method derives prudent forecasts because it focuses on comparative analysis and the use of actual cost data.

Wherever possible and appropriate, the ACCC estimates base opex and step change amounts by comparing State Water's proposals to its costs incurred in the past or to other similar infrastructure operators when undertaking similar activities. Base opex is determined by State Water's past performance and the amount of opex that State Water has revealed as sufficient to meet its obligations. The revealed cost is then benchmarked against State Water's peers.<sup>34</sup>

Comparative analysis that utilises actual or 'realised' data provides an objective, transparent, and repeatable method of assessing efficiency. Comparisons to benchmarked alternatives may be used in situations where the ACCC assesses details of individual step changes, for which reliably comparable

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<sup>32</sup> That said, a review of opex at the individual category level was undertaken for the purpose of determining efficient user and government share of opex.

<sup>33</sup> This description best applies to productive efficiency and dynamic efficiency. Allocative efficiency is best addressed through pricing structures and choice of pricing model (e.g. building block model verses others), rather than the opex assessment.

<sup>34</sup> See section 2.9.1 of the ACCC's draft decision.

actual or 'realised' data may not be available due to the specificity of the project. In these instances the comparative analysis draws on industry expertise.

The ACCC considered submissions from State Water and other stakeholders for step changes to base opex.

Amounts of opex proposed by State Water that represent a step change from base opex but are without supporting justification have not been added to base opex in the ACCC's forecast.

The ACCC's assessment of base opex and step changes is outlined in section 2.4.

## 2.4 Reasons for decision

The ACCC does not consider State Water's forecast of opex to be prudent and efficient. The ACCC has applied a base and step approach as outlined in section 2.3. The outcome of the ACCC's application of this approach is shown in Table 2-3. The ACCC's consideration of each element of the base and step approach—base opex, rate of change, and step changes—is contained in the sections below.

**Table 2-3 Opex - final decision - cost components (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
<b>State Water's proposal</b>	<b>43.02</b>	<b>42.38</b>	<b>42.11</b>	<b>127.51</b>
ACCC initial base opex	37.28	37.28	37.28	111.83
Adjustment - new Lowbidgee charges	0.53	0.53	0.53	1.60
Adjustment - new gauging station charges	-	-	-	-
Adjustment - radio tower lease costs	-0.22	-0.22	-0.22	-0.65
<b>ACCC adjusted base opex</b>	<b>37.29</b>	<b>37.29</b>	<b>37.29</b>	<b>111.86</b>
Rate of change – Fish River output growth	0.13	0.23	0.23	0.59
Rate of change – insurance	0.13	0.13	0.13	0.40
Rate of change – ongoing efficiency gains	(0.33)	(0.39)	(0.39)	(1.11)
Step change – customer requested projects	0.50	0.50	0.27	1.27
Step change – hydrometric monitoring	0.22	0.22	0.22	0.67
Step change – IT costs	0.18	0.18	0.18	0.53
Step change – drinking water plan	0.17	0.17	0.17	0.50
Step change – EMS	0.16	0.16	0.16	0.48
Step change – cold water pollution	-	0.13	0.07	0.20
Step change – routine maintenance	(0.02)	0.10	0.09	0.17
Step change – regulatory costs	0.16	-	-	0.16
Step change – basin plan implementation	-	0.02	0.08	0.10
Step change – fish passages	0.03	0.03	0.03	0.08
Step change – Fish River metering	0.02	0.02	0.02	0.05
Step change – pipeline replacement savings	-	-	(0.05)	(0.05)
Step change – reduced manual meter reads	(0.18)	(0.56)	(0.76)	(1.50)
Step change – debt raising costs	0.37	0.38	0.39	1.15
<b>ACCC final decision</b>	<b>39.13</b>	<b>38.91</b>	<b>38.43</b>	<b>116.47</b>
Difference from proposal	<b>(3.89)</b>	<b>(3.47)</b>	<b>(3.68)</b>	<b>(11.04)</b>

Source: State Water Corporation; ACCC analysis.

### 2.4.1 Base opex

The ACCC's base and step approach as applied in the draft decision involved establishing a base opex amount for bulk water charges by:

- Using actual costs incurred by State Water in 2012–13 as initial base opex
- adjusting the initial base opex to address accounting errors
- adjusting the initial base opex so that it reflects the scope of bulk water services expected to be provided in the next regulatory period (that is, to include the new Lowbidgee valley and exclude services transferred from the bulk water charge to a new environmental gauging station charge).
- examining the efficiency of the adjusted base opex by reviewing historical trends, benchmarking against other water service providers, and the engineering review of State Water's operating and maintenance practices conducted by Deloitte for the ACCC.

The ACCC's approach establishes an initial base opex amount that represents the opex that State Water has demonstrated through past performance is sufficient:

- to provide the services that it proposes to offer in the next regulatory period;
- given its current regulatory obligations; and
- given its current operating environment for those services.

The approach then provides for adjustment to the initial base opex where State Water's actually-incurred opex is considered to be above efficient levels.<sup>35</sup>

The NSW Irrigators' Council submitted that the base opex should be based on a more extensive dataset and timeframe.<sup>36</sup> However, the NSW Irrigators' Council did not propose an alternative method for establishing base opex.

The ACCC considers that using State Water's actual historical costs as the initial base opex may reflect the prudent and efficient opex because it is based on costs that State Water has demonstrated to be achievable. The ACCC considers that using 2012–13 costs may reflect the prudent and efficient opex because it reflects actual expenditure given State Water's current obligations and operating environment (future changes to these can be addressed through step changes).

Expanding the dataset used to establish base opex weakens the link between the base opex and State Water's current obligations and operating environment, which are presumed to—for the most part—continue to apply in the future. For this reason, it is only done when there is a clear case that State Water's actually-incurred opex was above efficient levels.<sup>37</sup>

The Gwydir Valley Irrigators' Association (GVIA) submitted:

The GVIA are also concerned at the ACCC's willingness to accept 'past' performance of operating expenditure. There is no evidence of the ACCC assessing the prudence and efficiency of these costs incurred in 12/13 to determine if they are appropriate but rather appear to accept the allowable amounts set by NSW IPART.

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<sup>35</sup> See sections 2.3 and 2.9.1 of the attachments to the ACCC draft decision.

<sup>36</sup> NSWIC submission, p. 13.

<sup>37</sup> For the ACCC's review of the efficiency of State Water's current costs, see section 2.9.1 of the attachments to the ACCC's draft decision.

The ACCC notes that its base opex is determined by State Water's actual costs incurred, rather than the forecast opex allowances determined by IPART at the previous price review. In addition, the ACCC reviewed the efficiency of State Water's actual opex by benchmarking State Water against other Australian water utilities, and examining State Water's current engineering practices.<sup>38</sup>

In response to the draft decision State Water submitted:<sup>39</sup>

State Water is concerned that the ACCC's base-and-step method is too prescriptive in its application and does not properly take into account changes in State Water's operating environment or expectations on State Water moving forward...

Unless State Water operates in a steady state environment, base year OPEX is unlikely to reflect State Water's operating environment moving forward. Bulk water providers are subject to numerous changes to their operating environment, including regulatory, environmental, safety standards and expectations.

The ACCC's adjustments to base opex are only to rectify accounting errors, to reflect the services to be provided in the future, or to address inefficiency in State Water's current costs. However, step changes and a rate of change to base opex are subsequently applied to ensure the ACCC's opex forecast reflects State Water's operating environment 'moving forward'. In its draft decision, the ACCC reviewed on a case-by-case basis all 34 discrete step changes proposed by State Water, and applied 16 step changes to base opex in determining efficient forecast opex.

In response to the draft decision State Water submitted:<sup>40</sup>

State Water submits that the ACCC should focus on whether State Water's proposed forecasts OPEX are prudent and efficient for the 2014-17 regulatory period. That is, the ACCC needs to undertake forward looking analysis and assess the required expenditure for 2014-17. In using base year OPEX, the ACCC needs to consider whether the costs incorporated in base year OPEX are likely to reflect future costs. If not, the ACCC should consider further adjustments to base year OPEX or proposed OPEX projects on a case-by-case basis if deemed appropriate in the circumstances...

The base and step approach is a forward-looking analysis of efficient forecast costs. The forward-looking nature of the approach should not be judged on the base opex component alone as step changes and a rate of change to base opex are important forward-looking components. Nonetheless, the ACCC considers that the base opex is a robust initial estimate of future costs. The ACCC notes that its determined base opex represents 96 per cent of its final decision opex allowance and 88 per cent of State Water's proposed opex allowance. A significant proportion of total opex is therefore not driven by changes in State Water's operating environment.

Further, State Water submitted that:<sup>41</sup>

The ACCC appears to have only considered exclusions from base year OPEX without any regard to the inclusion (or consideration) of efficient costs that did not arise in base year OPEX (for example increases in Routine Maintenance costs due to the increase in 2, 5 and 10 yearly jobs that fall within the upcoming regulatory period)...

State Water is confident that the ACCC has not properly identified and considered 'lumpy' OPEX activities and projects in its Draft Decision.

The ACCC does not agree that it only considered exclusions from base year opex. The ACCC adjusted base opex upwards to include Lowbidgee opex that was previously excluded from regulated bulk water opex. The ACCC also considered both step increases and step decreases to State Water's

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<sup>38</sup> See section 2.9.1 of the attachments to the ACCC draft decision.

<sup>39</sup> State Water submission, pp. 22–23.

<sup>40</sup> State Water submission, pp. 22–23.

<sup>41</sup> State Water submission, pp. 23–24.



base opex to account for efficient differences between current costs and future costs (in addition to adjusting base opex to ensure it accurately reflects State Water's current costs). Only three of the 16 efficient step changes determined by the ACCC were step decreases to base opex.

### **Peel valley cost benchmarking**

In response to the ACCC's draft decision the Peel Valley Working Group (PVWG) submitted that particular costs in the Peel valley are disproportionately high when compared to the Murray valley.<sup>42</sup> The PVWG highlighted costs of environmental planning and protection, hydrometric monitoring, water quality monitoring, corrective maintenance, dam safety compliance, and insurance.

The ACCC considers that corrective maintenance, dam safety compliance, and insurance costs are likely to be driven by the number, size, and value of water service infrastructure in the valley. Water quality monitoring and environmental planning & protection costs are likely to be driven by requirements for the operation of water service infrastructure, such as cold water pollution. The asset base in each valley should reasonably reflect the size and value of the relevant infrastructure. Therefore, the ACCC considers that it is instructive to compare costs across valleys on a cost per million dollars of RAB value. This is shown in Table 2-4.

**Table 2-4 Opex - base opex per million \$ of RAB value (\$2013–14)**

Opex category	Peel valley	Other valleys <sup>43</sup>		
		Average	Minimum	Maximum
Environmental planning & protection	864	2,243	915	5,084
Hydrometric monitoring	6,324	6,099	238	12,334
Water quality monitoring	767	706	305	1,747
Corrective maintenance	2,407	3,783	278	8,347
Dam safety compliance	6,400	5,178	2,054	9,352
Direct insurances	1,807	2,322	1,160	4,219

Source: State Water, ACCC analysis.

State Water's base year costs in the Peel valley compare well against costs in the other valleys when considered as a cost per million dollars of RAB value. The ACCC understands that the amount of water entitlements available in the Peel valley is significantly lower than other valleys. The Peel valley has about 5 per cent of State Water's total MDBRAB, but only 0.6 per cent of the total water entitlements serviced by State Water in the MDB. While the ACCC is concerned about the efficiency of State Water's proposed costs more generally, costs per ML of water entitlement in the Peel valley appear to compare poorly to other valleys due more to low entitlements than high costs.

The PVWG noted that State Water incurs hydrometric monitoring costs in the Peel valley but not in the Murray valley.<sup>44</sup> This is because hydrometric monitoring in the Murray valley is predominately

<sup>42</sup> PVWG submission, pp. 13–16.

<sup>43</sup> These other valleys excludes the Border valley because its RAB value is significantly lower than other valleys, resulting in it being the maximum on each category and distorting the average.

<sup>44</sup> PVWG submission, p. 14.

undertaken by the Murray-Darling Basin Authority.<sup>45</sup> The MDBA also undertakes water quality monitoring activities in the Murray valley.

The ACCC therefore considers that, other than the gauging station adjustment (discussed below), the base opex determined in its draft decision for the Peel valley remains the best estimate of efficient base opex.

### **Non-paying customers**

State Water's pricing application stated that it services non-paying customers that receive water but do not hold a water access licence.<sup>46</sup> The ACCC understands that the non-paying customers mentioned by State Water refer to individuals that have a basic landholder right to take and use water under the *Water Management Act 2000* (NSW).<sup>47</sup>

The ACCC did not make any adjustment to base opex in the draft decision to address costs of servicing these customers. In response to the draft decision Lachlan Valley Water submitted that the ACCC should identify the costs of servicing non-paying customers and remove these costs from base opex.<sup>48</sup>

State Water currently imposes bulk water charges only on holders of water access licences. Consistent with its regulatory obligations, State Water releases more water from its storages than is ordered by holders of water access licences. This additional water includes water released under water sharing plans as well as water for holders of basic landholder rights. The beneficiaries of State Water's water storage and release services also extend further than holders of water access licences, and include recreational users.

In past price reviews IPART determined charges for State Water on an 'impactor pays' basis.<sup>49</sup> The 'impactor pays' approach seeks to allocate costs to different individuals or groups in proportion to the contribution that each individual or group makes to creating the costs (or the need to incur the costs).

The ACCC considers that the impactor pays approach is reasonable and accepts the government and user cost shares that resulted from IPART's application of the impactor pays approach.<sup>50</sup> Under this approach, it is prudent and efficient for State Water to recover the user share of its infrastructure costs from holders of water access licences and not from holders of basic landholder rights. The availability of water under these licences is directly dependent on the operation of dams and other water service infrastructure. On the other hand, basic landholder rights to take water are generally not dependent on the use of water service infrastructure to augment water availability.<sup>51</sup> In addition, customers with a water access licence are easily identified, are metered, hold water allocation accounts with State Water, and make water orders to State Water. It is not clear that basic landholder rights create a need for State Water to incur costs beyond those costs already allocated to the NSW government's share of its costs. The ACCC considers that State Water's cost recovery arrangements for holders of basic landholder rights are prudent and efficient.

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<sup>45</sup> <http://www.mdba.gov.au/what-we-do/managing-rivers>, accessed on 24 May 2014.

<sup>46</sup> State Water pricing application, June 2013, p. 17.

<sup>47</sup> See Part 1 (Basic Landholder Rights) of Chapter 3 (Water Management Implementation) of the *Water Management Act 2000* (NSW).

<sup>48</sup> LVW submission, p. 3.

<sup>49</sup> IPART, final report, June 2010, p. 10.

<sup>50</sup> See section 1.4.1 of the attachments to the ACCC's draft decision.

<sup>51</sup> See section 52 of the *Water Management Act 2000* (NSW) and relevant water sharing plans (for example, section 18 of the *Water Sharing Plan for the Lachlan Regulated River Water Source 2003* provides that "the water supply system shall be managed so that it would be capable of maintaining supply to those exercising domestic and stock rights through a repeat of the worst period of low inflows to this water source").

### ***Adjustment for new gauging station charges***

In the draft decision the ACCC understood that the full cost of identified environmental gauging stations were to be recovered through State Water's proposed new environmental gauging station charge. Accordingly, the costs associated with these gauging stations that were incurred in the base year were removed from bulk water opex and transferred to the new charge.

In response to the draft decision, State Water submitted that the environmental gauging station charge is designed to recover only the incremental costs of upgrading the identified gauging stations. State Water submitted that it proposes the current cost of hydrometric monitoring at the identified gauging stations should continue to be recovered from all users through the bulk water charge.<sup>52</sup>

The ACCC accepts State Water's proposal for the gauging station charge to recover only incremental upgrade costs. Accordingly, the ACCC's final decision does not include a downwards adjustment to base opex for the transfer of current hydrometric monitoring costs at the identified gauging stations.

## **2.4.2 Rate of change in opex**

Operating costs may increase if a business is required to deliver more services. State Water proposed two opex increases relating to output growth: additional fish passage monitoring and increased Fish River variable costs. In the draft decision, the ACCC accepted State Water's proposed additional fish passage monitoring costs. In the draft decision, the ACCC did not accept State Water's proposal for Fish River variable costs but determined that a lower increase in opex is more efficient. This was on the basis that a more gradual increase in water usage in Fish River is a more realistic expectation of future demand.<sup>53</sup>

No submissions specifically addressed these issues. The ACCC's final decision on opex changes for output growth is to uphold its draft decision.

State Water proposed increases in opex due to increases in wages, the price of energy, the price of chlorine, and insurance premiums. State Water also proposed ongoing productivity gains that entirely offset its forecast step increase in opex due to wage growth. However, State Water also forecast that it would incur additional redundancy costs in achieving the proposed productivity gains.<sup>54</sup>

In the draft decision the ACCC accepted State Water's proposed opex increase for insurance premiums but did not accept the proposed opex increases to account for energy and chlorine prices.<sup>55</sup> No submissions specifically addressed State Water's proposed opex increases for increased energy prices, chlorine prices, and insurance premiums. The ACCC's final decision on opex changes for these matters is to uphold its draft decision.

In the draft decision the ACCC did not accept State Water's proposed net opex increase to account for wages growth, productivity gains, and redundancy costs.<sup>56</sup> State Water's submission in response to the draft decision specifically addressed forecast wages growth and ongoing efficiency gains. A

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<sup>52</sup> State Water submission, p. 28.

<sup>53</sup> See section 2.7 of the attachments to the ACCC's draft decision.

<sup>54</sup> State Water application, pp. 43, 45, 52–53, 65.

<sup>55</sup> See sections 2.8.2 and 2.8.3 of the attachments to the ACCC's draft decision.

<sup>56</sup> See section 2.9.2 of the attachments to the ACCC's draft decision.

number of other stakeholders also commented on expected efficiency gains in their submissions.<sup>57</sup> The ACCC's consideration of these matters is outlined below.

### Wage growth and ongoing efficiency gains

State Water forecast a net increase in opex to account for wages growth, productivity gains, and redundancy costs, as shown in Table 2-5. The ACCC did not accept this increase in the draft decision on the basis that:<sup>58</sup>

- A more realistic expectation of future wages growth is lower than State Water's forecast.
- An allowance for redundancy costs is already provided through the base opex.
- A more realistic expectation of productivity gains is higher than State Water's forecast, and should be sufficient to offset wages growth.

The ACCC's draft decision is shown in Table 2-5.

**Table 2-5 Opex - rate of change - wage growth, redundancy, and efficiency gains (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.180	0.191	0.206	0.578
ACCC draft decision	(0.326)	(0.389)	(0.386)	(1.101)
ACCC final decision	(0.326)	(0.392)	(0.390)	(1.108)

Source: State Water, ACCC analysis.

In response to the draft decision, State Water submitted:<sup>59</sup>

the ACCC have not approved a cost escalator for wage growth. The ACCC does not allow for any wage increase in their decision on the basis that there is a corresponding productivity gain that has not been accounted for in the assumed ongoing efficiencies. The ACCC needs to provide evidence of the claimed corresponding productivity gain.

The ACCC's draft decision outlined the following reasons for the ACCC's forecast of ongoing efficiency gains that outweigh wages growth and redundancy costs:

- State Water forecast that it could achieve an efficiency gain equating to 1.6 per cent of controllable opex per year. This proposed efficiency gain is offset by State Water's forecast wage growth, and the ACCC considers State Water's forecast wage growth is too high.
- State Water's historical opex trend from 2007–08 to 2012–13 suggests an average efficiency gain on controllable opex of 0.8 per cent per year, despite wage growth during that period.
- A continuing efficiency target was applied by IPART in its 2010 pricing determination for State Water (in addition to a 1.2 per cent per year catch-up efficiency target) and State Water has not

<sup>57</sup> NSW Irrigators' Council, Lachlan Valley Water, NSW Farmers' Association, Murray Irrigation Ltd, Gwydir Valley Irrigators' Association.

<sup>58</sup> See sections 2.8.1 and 2.9.2 of the attachments to the ACCC draft decision.

<sup>59</sup> Frontier Economics, *Analysis of aspects of ACCC draft decision on State Water application: a report prepared for State Water*, attachment to State Water submission, pp. 50–51.

materially exceeded the IPART allowance for the first three years of the current regulatory period.<sup>60</sup>

As no new information was provided in submissions on the draft decision, the ACCC considers that these reasons remain valid, and its final decision is to uphold its draft decision of a one per cent per year efficiency gain on controllable opex.

In response to the draft decision the Gwydir Valley Irrigators' Association (GVIA) submitted that a 1.5 per cent per year efficiency target should be applied. GVIA submitted that the efficiency target should not be determined at achievable levels but set to encourage innovation within State Water.<sup>61</sup> The ACCC must ensure that the total forecast revenue for the 2014–17 period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services in that period.<sup>62</sup> Therefore, the ACCC cannot build unachievable efficiency targets into charges such that forecast costs are unlikely to be met by forecast revenue.

The ACCC's final decision, re-calculated to account for revisions in other areas of the final decision, is shown in Table 2-5.

### **Merger with Sydney Catchment Authority**

Numerous stakeholders<sup>63</sup> submitted that State Water is likely to achieve ongoing operating efficiencies from its pending merger with the Sydney Catchment Authority and that the ACCC should revise its forecast of efficient opex accordingly.<sup>64</sup> The NSW Irrigators' Council also submitted that the merged entity will likely require a new operating licence, hence the future environmental and other obligations of State Water are somewhat uncertain.<sup>65</sup> The ACCC did not consider this issue in its draft decision because the NSW Minister for Primary Industries announced the decision to merge State Water with the Sydney Catchment Authority one day before the ACCC released its draft decision.

The ACCC considers that the timing and scope of any efficiencies derived from the merger are too uncertain to be appropriately forecast. The NSW Minister for Primary Industries did not announce a timetable for the merger, but did suggest that the transition could take 18 months.<sup>66</sup> It is also reasonable to expect that it could take some time post-merger for any operating efficiencies to be realised.

Given the three-year length of the 2014–17 regulatory period, the ACCC is of the view that it would be more appropriate to consider the operating efficiencies resulting from the merger at the 2017–21 price review.

### **2.4.3 Step changes to opex**

Separate from a rate of change in forecast opex, step changes to forecast opex generally fall into three categories:

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<sup>60</sup> IPART, *Review of bulk water prices for State Water Corporation from 1 July 2010 to 30 June 2014: Final Report*, June 2010, page 74.

<sup>61</sup> GVIA submission, p. 11.

<sup>62</sup> Rule 29(2) of the WCIR.

<sup>63</sup> NSW Irrigators' Council, Lachlan Valley Water, NSW Farmers' Association, Murray Irrigation Ltd, Gwydir Valley Irrigators' Association.

<sup>64</sup> See: NSW Minister for Primary Industries, *New World Class Water Provider For New South Wales*, Media Release, 4 March 2014.

<sup>65</sup> NSWIC submission, p. 14.

<sup>66</sup> NSW Minister for Primary Industries, *New World Class Water Provider For New South Wales*, Media Release, 4 March 2014.

- Regulatory obligations
- Non-recurrent expenditure
- Discretionary expenditure

The following sections outline the ACCC's final decision on each category of step change.

### **Regulatory obligations**

State Water forecast a number of step changes to forecast opex to address changed regulatory obligations. See section 2.4 of the attachments to the ACCC's draft decision.

The ACCC considers it prudent and efficient for a business to comply with all relevant regulatory obligations. Therefore, a change in a regulatory obligation may require a step change in opex. The ACCC generally considers an increase in opex to meet an existing regulatory requirement would be an efficiency loss, as it would represent a higher cost to meet the same requirement. Consequently a step change would not be required.

In the draft decision the ACCC accepted State Water's proposed step increase in opex to develop a drinking water quality monitoring plan. The ACCC also accepted a step increase in forecast opex for hydrometric monitoring, environmental management system certification, and regulatory costs; but determined that a smaller opex increase for these matters would be more efficient than State Water's proposal. The ACCC did not accept State Water's proposed step increases in opex for crop statistics collection and Basin Plan implementation.

State Water's submission in response to the draft decision specifically addressed:

- Environmental management system certification
- Flood manual updates
- Basin Plan implementation.

The ACCC's analysis of State Water's submission on these matters is below.

No specific submissions about other proposed regulatory obligation-driven opex step changes were received in response to the draft decision. The ACCC's final decision for these matters is to uphold its draft decision.

#### ***Environmental management system***

State Water forecast a step increase in opex to develop, implement and certify an Environmental Management System (EMS).<sup>67</sup> The ACCC did not accept this step change in the draft decision on the basis that the certification could be delayed until 2017–18 instead of 2015–16 as forecast by State Water.<sup>68</sup> Accordingly, the ACCC determined a lower step change amount, as shown in Table 2-6.

In response to the draft decision, State Water submitted that the ACCC incorrectly reduced the step change amount for 2016–17 and that this reduction creates a risk for achieving certification in 2017–

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<sup>67</sup> State Water application, p. 49.

<sup>68</sup> See section 2.4.2 of the ACCC draft decision.

18.<sup>69</sup> The ACCC considers that further adjustments should be made to account for the deferral of EMS certification to 2017–18. This is discussed further below. The ACCC's final decision is shown in Table 2-6.

**Table 2-6 Opex - step change - EMS certification (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.160	0.272	0.139	0.571
ACCC draft decision	0.160	0.202	0.068	0.430
ACCC final decision	0.160	0.160	0.160	0.480

Source: State Water, ACCC analysis.

The NSW Irrigators' Council submitted that State Water's environmental obligations may change as its operating licence is changed following the merger with the Sydney Catchment Authority. The ACCC acknowledges there may be some uncertainty around State Water's future regulatory obligations. However, without reasonable certainty on the content and timing of any replacement licence, the ACCC considers that it must make a decision based on the obligations currently applicable to State Water.

State Water forecast set up costs, certification costs, and annual compliance check costs associated with EMS implementation. These costs are shown in Table 2-7. The ACCC's draft decision deferred external (outsourced) EMS certification costs to 2017–18, and deferred external compliance check costs to begin in 2018–19. Since certification will be deferred to 2017–18, there is no need to check compliance of performance against the certified EMS until 2018–19. This is the basis for the draft decision's reduction in the originally-proposed step change amount for 2016–17.

State Water submitted that internal costs will also be incurred in undertaking certification and annual compliance checks. However, the ACCC did not defer these costs in the draft decision. These costs should be deferred, and the ACCC has rectified this in its final decision.

Further, the timing of State Water's internal and external set up costs should also be deferred by one year because of the delay in certification. These costs were not deferred in the draft decision, and the ACCC has rectified this in its final decision (see Table 2-7).

Overall, the ACCC's revisions have resulted in an increase in the determined step change amount for EMS certification.

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<sup>69</sup> State Water submission, pp. 32–33.

**Table 2-7 Opex - cost structure for EMS certification (\$millions, real \$2013–14)**

State Water's proposal		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Set up	Internal costs	0.086	0.086	0.086	-	-	-
	External costs	0.098	0.098	0.098	-	-	-
Certification	Internal costs	-	-	0.024	-	-	-
	External costs	-	-	0.082	-	-	-
Annual compliance checks	Internal costs	-	-	-	0.077	0.077	0.077
	External costs	-	-	-	0.082	0.082	0.082
Total		0.184	0.184	0.290	0.159	0.159	0.159
ACCC forecast – draft decision		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Set up	Internal costs	0.086	0.086	0.086	-	-	-
	External costs	0.098	0.098	0.098	-	-	-
Certification	Internal costs	-	-	0.024	-	-	-
	External costs	-	-	-	-	0.082	-
Annual compliance checks	Internal costs	-	-	-	0.077	0.077	0.077
	External costs	-	-	-	-	-	0.082
Total		0.184	0.184	0.208	0.077	0.159	0.159
ACCC forecast – final decision		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Set up	Internal costs	-	0.086	0.086	0.086	-	-
	External costs	-	0.098	0.098	0.098	-	-
Certification	Internal costs	-	-	-	-	0.024	-
	External costs	-	-	-	-	0.082	-
Annual compliance checks	Internal costs	-	-	-	-	-	0.077
	External costs	-	-	-	-	-	0.082
Total		-	0.184	0.184	0.184	0.106	0.159

Notes: Shows total NSW state-wide costs. Some of these costs will be allocated to valleys outside the MDB.  
 Source: State Water, ACCC analysis.

**Flood manuals**

State Water forecast a step increase above base opex to update its operation and maintenance manuals, including its flood manuals and a sustainability management plan. The ACCC did not accept this step change in the draft decision on the basis that reviewing and updating internal processes and



manuals is a part of normal business operations. The ACCC therefore considered that these costs are included in base opex and no step change was required as shown in Table 2-8.<sup>70</sup>

In response to the draft decision, State Water submitted that a step change for updating flood manuals is necessary because:

Post the Queensland Flood Commission Inquiry, the dam operations faculty now operates in a climate where the community expects the dam owner must ensure that they have conforming flood operations manuals and appropriate notification procedures.

The ACCC considers that the reasoning in its draft decision remains valid. There has been no change in State Water's regulatory obligation, and no step change is required. The ACCC's final decision is shown in Table 2-8.

**Table 2-8 Opex - step change - updating manuals and plans (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.538	0.505	0.505	1.549
ACCC draft decision	-	-	-	-
ACCC final decision	-	-	-	-

Source: State Water, ACCC analysis.

State Water has an obligation under its operating licence<sup>71</sup> to follow NSW Dam Safety Committee guidelines. If community expectations post the Brisbane floods are for changes to State Water's flood manuals, the ACCC expects these expectations to be reflected in the NSW dam safety committee guidelines.

The Brisbane floods occurred in December 2010–January 2011, with Brisbane River water levels peaking overnight on 12th–13th January 2011. The Queensland Flood Commission of Inquiry released its final report on 16 March 2012. The current NSW dam safety committee guidance sheets DSC2F (operations and maintenance for dams) and DSC2G (emergency management of dams) were last updated in June 2010 and December 2010 respectively.<sup>72</sup> Therefore, the NSW Dam Safety Committee has not revised its guidance sheets and State Water's regulatory obligations since the Brisbane floods.

The ACCC's final decision is to not accept State Water's proposed step change for flood manual updates.

### **Basin Plan implementation**

State Water forecast a step increase to opex for implementation of the Murray-Darling Basin Plan.<sup>73</sup> The ACCC did not accept this step change in the draft decision on the basis that the Basin Plan has been in place since 2011–12 and its implementation by State Water has been progressing in stages

<sup>70</sup> See section 2.5.13 of the ACCC draft decision.

<sup>71</sup> See clause 3.1.

<sup>72</sup> NSW Dam Safety Committee, general guidance sheets, [http://www.damsafety.nsw.gov.au/DSC/Publications/gen\\_infosheets.shtm](http://www.damsafety.nsw.gov.au/DSC/Publications/gen_infosheets.shtm), accessed on 17 May 2014.

<sup>73</sup> State Water application, p. 47.

since that time. The ACCC considered that historical opex includes implementation expenditure and did not accept a step change is required, as shown in Table 2-9.<sup>74</sup>

In response to the draft decision State Water submitted that a step increase in opex may still be appropriate if the costs of Basin Plan implementation increase over time. State Water also submitted that it hasn't incurred any implementation costs to date. The ACCC is satisfied that a step increase is necessary for compliance with these regulatory obligations since no allowance for these costs is included in the base opex. On this basis the ACCC accepts State Water's proposed step increase in opex, as shown in Table 2-9.

**Table 2-9 Opex - step change - Basin Plan implementation (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	-	0.015	0.083	0.098
ACCC draft decision	-	-	-	-
ACCC final decision	-	0.015	0.083	0.098

Source: State Water, ACCC analysis.

In response to the draft decision, Murray Irrigation Ltd submitted:<sup>75</sup>

Murray Irrigation maintains the position that as a Commonwealth program, implementation costs outside of historical base opex should be borne by the Commonwealth.

The ACCC notes that it cannot compel the Australian government to bear the cost of Basin Plan implementation and can only determine whether or not it is prudent and efficient for State Water to incur the cost and recover the cost through regulated charges. To the extent that the Basin Plan creates regulatory obligations for State Water, the ACCC considers that it is prudent for State Water to recover efficient compliance costs through regulated charges.

### **Non-recurrent expenditure**

State Water proposed a number of step changes to address non-recurrent expenditure. See section 2.5 of the attachments to the ACCC's draft decision.

Some non-recurrent expenditure may be required over the forecast period that was not included in actual opex in the base year. Similarly, non-recurrent expenditure in the base year will not be required over the forecast period if the associated activity does not take place again. Consequently, if a particular activity was not undertaken in the base year, this is not sufficient evidence to demonstrate a step change is required in the forecast period. The ACCC adopts a symmetrical approach, whereby a proposed step change to compensate for forecast non-recurrent activity is balanced against the amount of non-recurrent activity factored into the base year.

The ACCC considers there could be reasons why a significant increase in non-recurrent expenditure is required. In some cases an infrastructure operator may have relatively limited discretion in whether or not to undertake this expenditure. For example, the need to undertake some maintenance activities, or the required scope of some maintenance activities, may vary from time to time to a

<sup>74</sup> See section 2.4.5 of the ACCC's draft decision.

<sup>75</sup> MIL submission, p. 3.

material extent. As a result, base year opex may be insufficient to cover the costs of the new program of expenditure. In this case a step increase in opex may be required.

In the draft decision the ACCC accepted a step increase in forecast opex is prudent and efficient to account for routine maintenance, cold water pollution investigations, IT refurbishment, and debt raising costs.<sup>76</sup> However, the ACCC did not accept that the amount of opex proposed by State Water was efficient, and determined a lower amount for these step changes. The ACCC did not accept the remainder of State Water's proposed step changes for non-recurrent expenditure.

State Water's submission in response to the draft decision specifically addressed:

- Routine maintenance
- Flood manuals
- Flood-related overtime
- Dam safety investigations

Murray Irrigation Ltd.'s submission in response to the draft decision queried the ACCC's determination on debt raising costs.

The ACCC's analysis of these matters is provided below.

No specific submissions about other proposed non-recurrent opex step changes were received in response to the draft decision. The ACCC's final decision for these matters is to uphold its draft decision.

### ***Routine maintenance***

State Water submitted that a step increase is needed to undertake a number of non-annual routine maintenance tasks that are not reflected in the base opex. State Water submitted that a number of maintenance tasks have been deferred in the past due to flooding events. Table 2-10 shows State Water's proposed step increase. The ACCC's draft decision did not accept State Water's proposal on the basis that State Water's normal operations are likely to include a number of deferred tasks. However, the ACCC accepted that a significantly higher number of ten-yearly maintenance tasks will fall due in the 2014-17 regulatory period than occurred in the base year. The ACCC's draft decision was to determine a step increase for these ten-yearly tasks.<sup>77</sup>

In response to the draft decision, State Water submitted that the age and condition of its infrastructure is driving the need for an increase in opex for routine maintenance.<sup>78</sup> Conversely, the NSW Irrigators' Council submitted that routine maintenance should by its nature be reflected in the base opex.<sup>79</sup>

Following the draft decision the ACCC further examined State Water's forecast routine maintenance tasks and costings. The ACCC's final decision remains that State Water's forecast is not prudent and efficient. The ACCC has revised its forecast of efficient routine maintenance opex, as discussed below. The ACCC's final decision is to determine a step increase in opex as shown in Table 2-10.

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<sup>76</sup> See sections 2.5.1, 2.5.9, 2.6.1, and 2.5.14 respectively of the attachments to the ACCC draft decision.

<sup>77</sup> See section 2.5.1 of the attachments to the ACCC draft decision.

<sup>78</sup> State Water submission, pp. 30–31.

<sup>79</sup> NSWIC submission, pp. 14–15.

**Table 2-10 Opex - step change - routine maintenance (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.699	0.857	1.466	3.023
ACCC draft decision	0.096	0.166	0.231	0.492
ACCC final decision	(0.019)	0.101	0.090	0.173

Source: State Water, ACCC analysis.

The ACCC accepts that the analysis of aggregate total Murray-Darling Basin maintenance volumes in the draft decision may have placed less weight on asset condition issues in particular assets. Following its draft decision the ACCC examined State Water's forecast routine maintenance tasks and costings in greater detail across all Murray-Darling Basin valleys. Having examined this information the ACCC considers that State Water's routine maintenance data does not support State Water's forecast routine maintenance opex, for the following issues:

- The prudence and efficiency of State Water's forecast volumes of maintenance tasks could not be verified against historical maintenance records. State Water submitted that it does not have reliable data prior to 2010–11.
- State Water did not provide any historical unit costs for different maintenance tasks, and only provided forecast unit costs for maintenance tasks for Lostock dam. The efficiency of State Water's unit costs for maintenance tasks could not be verified outside of Lostock dam.
- State Water's proposed opex and movements away from base opex do not appear to be explained by State Water's forecast maintenance volumes and unit cost forecasts for Lostock dam.

For these reasons, the ACCC's final decision is to not accept State Water's proposed step increase in opex. The ACCC's final decision is to determine a substitute step change in opex for each valley based on the information available. The ACCC determined its substitute step change based on State Water's:

- base (2012–13) opex
- forecast maintenance volumes, and
- forecast average unit cost in Lostock for different maintenance categories (two-yearly, three-yearly, five-yearly, and ten-yearly tasks).

The ACCC's final decision is shown in Table 2-10.

### **Corrective maintenance**

In its pricing application State Water submitted that a step increase in opex would be required due to an increased likelihood of floods in the Macquarie valley. State Water submitted that flood risks are higher because dam levels are much higher when compared to the commencement of the 2010–14 regulatory period.<sup>80</sup> State Water did not specifically quantify the proposed step increase, instead inferring that it would be required as part of its general opex allowance.

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<sup>80</sup> Deloitte report, p. 38.

In the draft decision the ACCC did not approve State Water’s forecast increase in flood-related corrective maintenance opex. This was on the basis that managing storage levels and flood risks represents normal operations for a water infrastructure operator and therefore an efficient opex allowance is already provided in the base opex.<sup>81</sup>

In response to the draft decision State Water submitted that a step increase in corrective maintenance is required for:<sup>82</sup>

- an asbestos audit
- new tasks resulting from logging heritage assets and fishways into the new facilities maintenance management system
- remedial tasks resulting from an occupational health and safety hazards log, and
- meeting environmental obligations.

The ACCC considers that individual tasks resulting from audits, hazard logs, and improved asset condition monitoring represents normal operations for an infrastructure operator such as State Water. Some assets with poor condition will likely be identified from time to time, and although individual assets maintained may vary from year to year, the costs of addressing the condition of assets is likely to be reflected by the base opex. Therefore, the ACCC’s final decision is to not approve a step increase in corrective maintenance.

### ***Cold water pollution investigations***

State Water forecast a step increase in opex for investigations into cold water pollution at Keepit dam, Wyangala dam, and Blowering dam.<sup>83</sup> State Water’s proposed step increase is shown in Table 2-11. In the draft decision, the ACCC accepted the need to undertake the proposed investigations but did not consider the cost to be prudent and efficient. The ACCC determined the step increase shown in Table 2-11 based on State Water’s revealed historical costs.<sup>84</sup>

The ACCC’s final decision is to refine its draft decision to include a more accurate estimate of the unit cost of cold water pollution investigations.<sup>85</sup> The ACCC’s final decision is shown in Table 2-11.

**Table 2-11 Opex - step change - cold water pollution investigations (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	-	0.350	0.175	0.525
ACCC draft decision	-	0.140	0.070	0.210
ACCC final decision	-	0.132	0.066	0.198

Source: State Water, ACCC analysis.

In response to the draft decision the NSW Irrigators' Council submitted that cold water pollution obligations currently exist in State Water's operating licence and water supply works approvals and as

<sup>81</sup> See section 2.5.11 of the attachments to the ACCC draft decision.

<sup>82</sup> State Water submission, p. 32.

<sup>83</sup> State Water, Response to Information Request 30.7, November 2013, p. 1.

<sup>84</sup> See section 2.5.9 of the attachments to the ACCC draft decision.

<sup>85</sup> By no longer rounding the historical cost figure to the nearest thousand dollars.

such should be reflected in base opex.<sup>86</sup> As noted in its draft decision, the ACCC considers that although the obligations have not changed, the obligations do not result in the consistent undertaking of investigations each year, and therefore annual forecast opex must be assessed on a case-by-case basis. In this case the ACCC maintains the view in its draft decision that it is prudent and efficient for State Water to undertake cold water pollution investigations at Blowering, Keepit, and Wyangala in the 2014-17 regulatory period, given:

- State Water's cold water pollution obligations set out in its operating licence and water supply works approvals, and
- the forecast costs are based on the costs incurred at the Burrendong pilot program run by State Water in the current period.

The NSW Irrigators' Council also submitted that the ACCC should apply the revealed cost benchmark investigation cost of \$66,000 (real \$2013–14) per investigation, instead of the \$70,000 (real \$2013–14) unit cost determined in the draft decision.<sup>87</sup> The ACCC agrees and is applying the un-rounded revealed cost in its final decision.

The ACCC's final decision is to determine a step increase in opex for the proposed cold water investigations at Blowering, Keepit, and Wyangala based on a cost of \$66,000 per investigation.

### ***Flood-related overtime***

State Water submitted that a step increase is necessary because expenditure in the base year (2012–13) was abnormally low by about \$200,000, due to no flood-related overtime taking place that year.<sup>88</sup> The ACCC did not accept this step change in the draft decision on the basis that opex associated with overtime expenses is part of the normal ebb and flow of operations of a business like State Water. The ACCC therefore considered that these costs are included in base opex and no step change was required, as shown in Table 2-12.<sup>89</sup>

In response to the ACCC's draft decision State Water submitted that the ACCC should review its decision. State Water submitted that the flood-related overtime incurred in the base year was abnormally low and that a step increase in opex is necessary to recover the ordinary level of flood-related overtime expected to occur in the next regulatory period.<sup>90</sup>

The ACCC understands that uncontrollable events such as flooding can occur inconsistently and that such inconsistency should be addressed when establishing an efficient base opex and step changes.

However, the ACCC notes that State Water forecast zero flood operations opex for the next regulatory period.<sup>91</sup> The ACCC does not consider that a step change in opex for increased flood-related overtime should be provided when zero flood operations opex is forecast by State Water. Therefore, the ACCC's final decision is to not accept State Water's proposed step change, as shown in Table 2-12.

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<sup>86</sup> NSWIC submission, p. 15.

<sup>87</sup> NSWIC submission, p. 15.

<sup>88</sup> State Water, *Response to information request 5.9 and 5.10*, June 2013, p. 2.

<sup>89</sup> See section 2.5.12 of the attachments to the ACCC draft decision.

<sup>90</sup> Frontier Economics, *Analysis of aspects of ACCC draft decision on State Water application*, attachment to State Water submission on ACCC draft decision, page 48.

<sup>91</sup> State Water, *Regulatory information template*, attachment to State Water pricing application.

**Table 2-12 Opex - step change - flood-related overtime (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.200	0.200	0.200	0.600
ACCC draft decision	-	-	-	-
ACCC final decision	-	-	-	-

Source: State Water, ACCC analysis.

### ***Dam safety investigations***

State Water forecast a step increase in opex to support dam safety compliance activities.<sup>92</sup> Table 2-13 shows State Water's forecast step increase. The ACCC did not accept this step change in the draft decision on the basis that managing dam safety, including undertaking investigations, is part of State Water's normal business operations. The ACCC therefore considered that these costs are included in base opex and no step change was required, as shown in Table 2-13.<sup>93</sup>

In response to the draft decision State Water submitted that its proposed dam safety investigations are risk reduction investigations that will have the long-term benefit of postponing capital expenditure. State Water submitted that it has not undertaken this type of investigation before, and that associated costs would not be reflected in the base opex.<sup>94</sup>

The ACCC considers that the reasoning in its draft decision remains valid and that no step change is required. The ACCC's final decision is shown in Table 2-13.

**Table 2-13 Opex - step change - dam safety investigations (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.339	0.433	0.131	0.904
ACCC draft decision	-	-	-	-
ACCC final decision	-	-	-	-

Source: State Water, ACCC analysis.

The ACCC considers that though some types of investigations may not occur from year to year, other forms of dam safety management are likely to occur, and the base opex should remain an appropriate forecast of future opex requirements.

State Water acknowledged that it reallocates resources to different dam safety management activities as required, stating:<sup>95</sup>

[REDACTED - CONFIDENTIAL].

The ACCC notes that while it did not accept a step change for dam safety investigations, it also did not remove the costs associated with the non-ongoing PRA project from base opex in its draft decision.

<sup>92</sup> State Water application, p. 58.

<sup>93</sup> See section 2.5.2 of the attachments to the ACCC's draft decision.

<sup>94</sup> State Water, submission on draft decision, p. 28.

<sup>95</sup> State Water, response 30.8 to ACCC information request, p. 2.

The ACCC considers that managing dam safety is part of State Water's normal business operations. State Water's regulatory obligations for dam safety have not changed since the base year. Accordingly, the base opex should remain an appropriate forecast of efficient opex for dam safety activities. The ACCC's final decision is to not accept State Water's proposed step change.

### **Debt raising costs**

State Water forecast a step increase in opex for debt raising costs. Debt raising costs are transaction costs incurred each time a business raises or refinances debt. The ACCC's draft decision determined a higher amount based on its determined asset base values and forecast capex.<sup>96</sup> The ACCC's final decision on debt raising costs reflects the ACCC's final decision on State Water's asset base and forecast capex, and is shown in Table 2-14.

**Table 2-14 Opex - step change - debt raising costs (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.417	0.438	0.442	1.297
ACCC draft decision	0.413	0.456	0.492	1.361
ACCC final decision	0.369	0.384	0.393	1.147

Source: State Water, ACCC analysis.

Murray Irrigation Ltd submitted that State Water's efficient forecast opex should not include a debt-raising cost allowance because it can borrow more easily from the NSW government.<sup>97</sup>

The ACCC's approach, in accordance with the rules<sup>98</sup> and the ACCC's pricing principles<sup>99</sup>, is to assess State Water's forecast costs, including a rate of return on investment, based on that required by a benchmark efficient firm. The return on equity provided to State Water is on the basis of a benchmark efficient firm, rather than State Water's actual returns. Correspondingly, the cost of debt and debt raising costs are estimated based on a benchmark efficient firm.

### **Water delivery costs**

In response to the draft decision the Gwydir Valley Irrigators' Association submitted that the high volume of water extractions in 2012–13 may mean that the base opex for water delivery is higher than should be realistically expected from 2014–15 to 2016–17.<sup>100</sup>

In the draft decision the ACCC determined a step increase in opex for forecast increases in water delivered in the Fish River valley,<sup>101</sup> but did not approve or determine any step changes of this type in other valleys. The Fish River water supply scheme is different from State Water's other valleys because it is a fully piped and pumped scheme. The Fish River valley therefore incurs additional pumping and water treatment costs that are directly influenced by the volume of water pumped and treated.<sup>102</sup>

<sup>96</sup> See section 2.5.14 of the attachments to the ACCC draft decision.

<sup>97</sup> MIL submission, p. 3.

<sup>98</sup> See rule 29(2) of the *Water Charge (Infrastructure) Rules 2010*.

<sup>99</sup> ACCC, *Pricing Principles for price approvals or determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011, p. 43.

<sup>100</sup> GVIA submission, p. 10.

<sup>101</sup> See section 2.7.2 of the attachments to the ACCC draft decision.

<sup>102</sup> See: Deloitte, pp. 18–19.

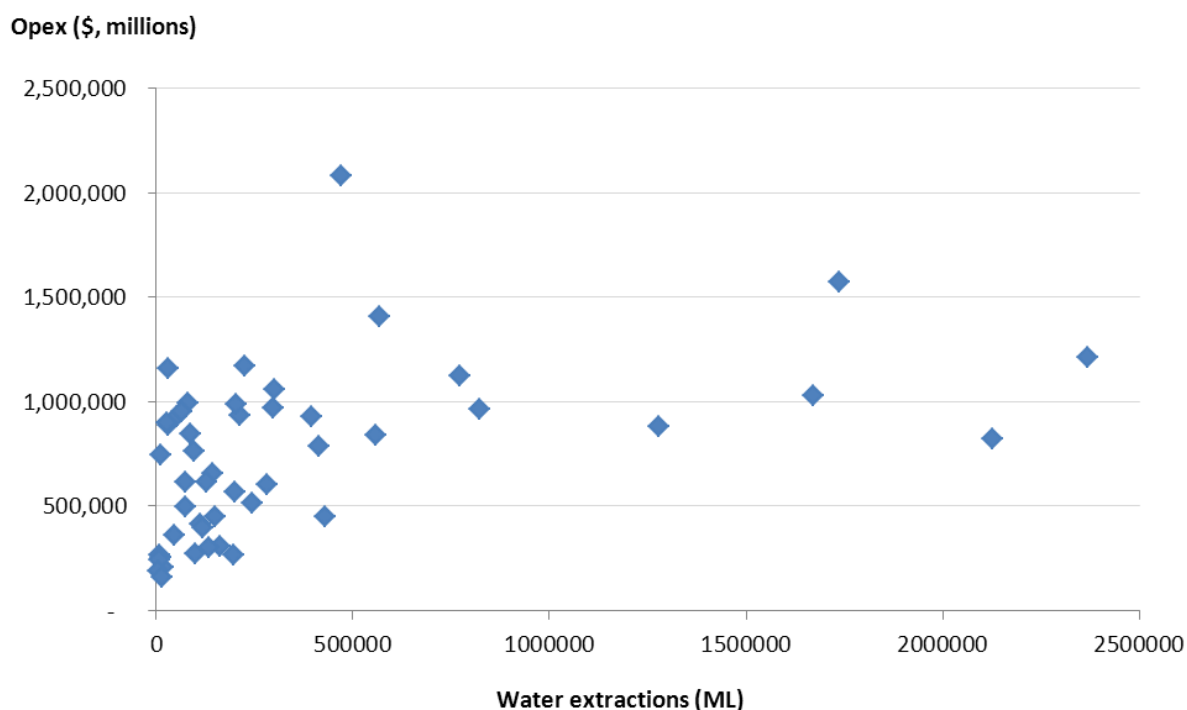


The ACCC's final decision is to not determine a step change to opex to account for variations in water extractions outside of the Fish River valley.

State Water conducted an internal review in 2012 of its operating costs in order to understand its proportions of fixed and variable costs.<sup>103</sup> This review found that its water delivery costs outside the Fish River valley are predominately fixed and do not vary significantly with the volume of water extractions.

The ACCC examined State Water's historical opex for water delivery and other operations from 2007–08 to 2012–13 for valleys outside of the Fish River. No systematic relationship between water delivery opex and the volume of water extractions was found, as shown in Figure 2-2. The ACCC's final decision is to not determine a step change for avoided water delivery costs.

**Figure 2-2 Relationship between water delivery opex and water extractions (2007–08 to 2012–13)**



### Discretionary expenditure

State Water proposed a number of step changes for discretionary projects that are not driven by changes to regulatory obligations or by fluctuations in non-recurrent expenditure. See sections 2.6 and 2.4.4 of the attachments to the ACCC's draft decision.

The ACCC would not typically consider an incremental increase above base year opex is required for discretionary expenditure. For instance, an infrastructure operator might propose step changes above base year opex for projects or programs it considers will increase productivity. However, if a new program of expenditure delivers productivity savings those cost savings should also be factored into

<sup>103</sup> See: Deloitte, pp. 18–19.

the forecast of total opex. Adding a step change above base year opex will not produce an efficient forecast if the cost savings resulting from the step change are not taken into account.

In some circumstances the benefits of a discretionary project may be improved services for customers. Such projects are likely to be supported by customers if the customer benefits outweigh the costs but may result in an increase in opex if there are not commensurate cost savings.

In the draft decision the ACCC accepted step changes for:

- Customer-requested investigations<sup>104</sup>
- Customer-requested higher frequency metering in Fish River<sup>105</sup>
- Savings from reduced manual meter reads due to the NSW metering scheme.<sup>106</sup>

No submissions were received on these specific matters in response to the draft decision. The ACCC's final decision for these matters is to uphold its draft decision.

In the draft decision, the ACCC did not accept State Water's proposed step increase in opex for additional meter data analysis and expansion in hydrometric monitoring services. The ACCC's analysis of State Water's submission in response to the draft decision on these matters is below.

### ***Hydrometric monitoring***

State Water forecast a step increase in opex for the cost of hydrometric monitoring services obtained from the NSW Office of Water (NOW).<sup>107</sup> State Water's forecast is shown in Table 2-15.

The ACCC did not accept that part of this step change that was due to a discretionary expansion in the services obtained from NOW, and determined a lower step increase to opex as shown in Table 2-15. This was on the basis that an expansion in the services covered by the agreement was not backed by a detailed business case and broad customer support.<sup>108</sup>

In response to the draft decision State Water submitted that the expanded services are necessary for its computer-aided river management (CARM) project, which has been endorsed by Murrumbidgee valley customers.<sup>109</sup> The ACCC has reviewed the Murrumbidgee component of the CARM project and accepts State Water's proposed step change on the basis that the Murrumbidgee CARM project does have general customer support among Murrumbidgee customers. The ACCC notes that no step increase in opex for the roll out of CARM to other valleys is provided on the basis that customer support for this project in other valleys is not evident at this time. The ACCC's final decision is shown in Table 2-15.

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<sup>104</sup> See section 2.6.4 of the attachments to the ACCC draft decision.

<sup>105</sup> See section 2.6.5 of the attachments to the ACCC draft decision.

<sup>106</sup> See section 2.6.2 of the attachments to the ACCC draft decision.

<sup>107</sup> State Water application, p. 45.

<sup>108</sup> See section 2.4.4 of the attachments to the ACCC's draft decision.

<sup>109</sup> State Water, submission on ACCC draft decision, page 29.

**Table 2-15 Opex - step change - hydrometric monitoring (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.223	0.223	0.223	0.669
ACCC draft decision	0.100	0.100	0.100	0.299
ACCC final decision	0.223	0.223	0.223	0.669

Source: State Water, ACCC analysis.

State Water submitted that a new hydrometric monitoring agreement with NOW requires an expanded scope of services to include:<sup>110</sup>

- Upper Murrumbidgee rainfall and level sites (costing [REDACTED - CONFIDENTIAL] per year)
- Doppler equipment at Murrumbidgee sites (costing [REDACTED - CONFIDENTIAL] per year).

State Water submitted that this equipment is required for the CARM project in the Murrumbidgee valley, and that the CARM project has received endorsement from the Murrumbidgee customer service committee (CSC).

The roll-out of CARM in the Murrumbidgee valley is a pilot program that began in May 2011 and is currently funded by Water For Rivers.<sup>111</sup> However, State Water proposes that the new hydrometric sites are to be funded through customer charges. It was not clear whether or not CSC endorsement of the Murrumbidgee CARM pilot was conditional on the basis of the program being funded by Water For Rivers. The ACCC consulted with customers in the Murrumbidgee valley, who have confirmed their endorsement for funding the continuation of the CARM pilot through customer charges.<sup>112</sup> Further, the additional hydrometric monitoring services will assist in assessing the impact of the pilot program and estimation of potential benefits of any future roll out of CARM state-wide. On this basis, the ACCC's final decision is to accept the proposed step change for additional hydrometric monitoring services in the Murrumbidgee valley.

State Water's pricing application proposed the roll-out of the CARM project to the rest of the state. The ACCC's final decision does not include a capex allowance for the state-wide CARM project on the basis that:<sup>113</sup>

- There is no detailed business case to support the benefits that are expected to arise from this expenditure.
- User groups outside the Murrumbidgee have expressed clear opposition to funding CARMS without further information.

On this basis the ACCC's final decision does not include opex for the roll out of CARM to valleys other than the Murrumbidgee.

<sup>110</sup> State Water Corporation, *Response to information request number 5.16 from the Australian Competition and Consumer Commission*, June 2013, p. 2.

<sup>111</sup> State Water, *CARM project: About CARM*, <http://www.carmproject.com.au>, accessed on 18 May 2014.

<sup>112</sup> Telephone discussions with Coleambally Irrigation, Murrumbidgee Irrigation, Murrumbidgee Private Irrigators Inc., and Murrumbidgee Valley Food & Fibre Association.

<sup>113</sup> ACCC draft decision, pp. 127–128.

### **Analysis of data from NSW metering scheme**

State Water forecast a step increase in opex for additional analysis of data retrieved from telemetered meters installed under the NSW metering scheme.<sup>114</sup> State Water's forecast is shown in Table 2-16. The ACCC did not accept this step change in the draft decision on the basis that:<sup>115</sup>

- the NSW metering scheme has already commenced hence the costs of operating two data systems (manual read and remote read) concurrently should already be reflected in the base opex
- State Water's metering service charges already includes a cost component for audit and reporting activities such as collecting, processing and reporting compliance information; and
- Any additional data analysis should provide off-setting cost savings for it to be prudent and efficient.

In response to the draft decision State Water submitted that the ACCC should review its draft decision, but did not provide any new information to support the prudence and efficiency of the proposed step increase in opex.

In the absence of additional information the ACCC considers that its draft decision remains valid. The ACCC's final decision is to not accept State Water's proposed step change, as shown in Table 2-16.

**Table 2-16 Opex - step change - meter data analysis (\$millions, real \$2013–14)**

	2014-15	2015-16	2016-17	Total
State Water proposal	0.335	0.324	0.327	0.985
ACCC draft decision	-	-	-	-
ACCC final decision	-	-	-	-

Source: State Water, ACCC analysis.

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<sup>114</sup> State Water, Response to information request number 20.1 from the Australian Competition and Consumer Commission, October 2013, p. 2.

<sup>115</sup> See section 2.6.3 of the attachments to the ACCC's draft decision.

## 3 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 (return of capital) building blocks for establishing total revenue.

### 3.1 Final decision

The ACCC has determined a total opening RAB as at 1 July 2014 of \$657.3 million (nominal) for State Water's ACCC regulated valleys. The user share of the opening RAB as at 1 July 2014 is \$219.3 million (nominal).

The ACCC's determination for the opening RAB as at 1 July 2014 includes an updated estimate for 2013–14 capex. With that exception, the ACCC has maintained its determination on inputs to the RAB roll forward from the ACCC's draft decision.

The ACCC's draft decision<sup>116</sup> also contains information and analysis supporting this final decision.

Table 3-1 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 end of the 2010–14 regulatory period.

**Table 3-1 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					-1.9
Return on difference					-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 are 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

<sup>116</sup> See Attachment 3 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

- 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 3-2 sets out the projected roll forward of State Water's RAB during the 2014–17 regulatory period.

**Table 3-2 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
<b>Closing value (Govt + user)</b>	<b>701.5</b>	<b>736.0</b>	<b>786.6</b>
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.

These allowances reflect State Water's original pricing application as no revised models were submitted by State Water after the draft decision.

Table 3-3 and Table 3-4 respectively show the breakdown of each valley's opening and closing RABs for the 2014–17 regulatory period. The breakdown by user and government share is also shown. For comparative purposes, State Water's application in relation to each of these valleys is also presented.

**Table 3-3 Summary of State Water's application and ACCC's final decision on opening RAB at 1 July 2014 (\$millions, nominal)**

Valley	State Water application			Final Decision		
	User share	Govt share	Total RAB	User share	Govt share	Total RAB
Border Rivers	3.7	0.5	<b>4.2</b>	3.1	0.5	<b>3.6</b>
Fish River	70.5	0.0	<b>70.5</b>	70.4	0.0	<b>70.4</b>
Gwydir	22.0	97.0	<b>119.0</b>	19.6	99.3	<b>118.9</b>
Lachlan	30.1	62.5	<b>92.6</b>	28.1	49.9	<b>78.0</b>
Lowbidgee	–	–	–	–	–	–
Macquarie	28.1	54.5	<b>82.7</b>	23.9	41.6	<b>65.5</b>
Murray	27.1	12.8	<b>39.9</b>	24.4	12.5	<b>37.0</b>
Murrumbidgee	43.0	81.8	<b>124.8</b>	30.6	76.3	<b>106.9</b>
Namoi	21.6	135.3	<b>156.9</b>	15.4	122.3	<b>137.7</b>
Peel	3.7	31.8	<b>35.5</b>	3.8	35.5	<b>39.3</b>
<b>Total</b>	<b>249.9</b>	<b>476.2</b>	<b>726.1</b>	<b>219.3</b>	<b>438.1</b>	<b>657.3</b>

Source: State Water's proposed roll forward models, post-tax revenue models and ACCC analysis.

**Table 3-4 Summary of State Water’s application and ACCC’s final decision on closing RAB at 30 June 2017 (\$millions, nominal)**

Valley	State Water application			Final Decision		
	User share	Govt share	Total RAB	User share	Govt share	Total RAB
Border Rivers	4.8	0.5	5.4	3.4	0.5	4.0
Fish River	96.0	0.0	96.0	84.6	0.0	84.6
Gwydir	36.7	109.5	146.2	25.6	105.0	130.7
Lachlan	51.6	79.0	130.6	38.1	65.2	103.3
Lowbidgee	2.0	0.0	2.0	1.9	0.0	1.9
Macquarie	45.7	75.2	120.9	32.1	46.0	78.0
Murray	32.0	15.0	47.0	25.8	13.9	39.6
Murrumbidgee	50.8	84.0	134.8	34.1	76.5	110.6
Namoi	27.2	197.3	224.5	18.1	157.1	175.3
Peel	4.9	45.8	50.7	4.4	54.3	58.7
<b>Total</b>	<b>351.6</b>	<b>606.4</b>	<b>958.0</b>	<b>268.2</b>	<b>518.5</b>	<b>786.6</b>

Source: State Water’s proposed roll forward models, post-tax revenue models and ACCC analysis.

## 3.2 Submissions

The ACCC received submissions from NSWIC, Namoi Water and Lachlan Valley Water raising concerns with setting the opening RAB as at 1 July 2014 based on forecast capex for 2013–14. These submissions recommended the ACCC review State Water’s progress in delivering its capex during 2013–14 to determine whether the estimated capex would be achieved.

State Water did not provide any updated estimates for 2013–14 capex in its submission to the ACCC’s draft decision.

## 3.3 Assessment approach

The ACCC did not change its assessment approach for State Water’s RAB roll forward from its draft decision. Section 3.3 of attachments to the draft decision details that approach.<sup>117</sup>

## 3.4 Reasons for decision

The ACCC maintains its determination in the draft decision on the opening RAB at 1 July 2010 of \$434.6 million (nominal). This represents an increase of \$57.8 million (nominal) or 15.3 per cent greater than State Water’s proposal.

The ACCC approves total net capex for 2010–14 of \$196.8 million (nominal) for the purpose of rolling forward State Water’s RAB to 1 July 2014. The ACCC initially had concerns that actual capex included in State Water’s proposed RFM differed from that submitted as part of IPART’s annual information return (AIR). The ACCC has reviewed in detail the reconciliation between the sources and is satisfied that the actual capex provided by State Water for 2009–13 is correct.<sup>118</sup>

<sup>117</sup> See Attachment 3 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

<sup>118</sup> This includes the actual capex for 2009–10 (final year of the 2006–10 regulatory period) to true-up for the 2009–10 estimate used at the last price determination by IPART.

In sections 3.2.1 and 3.4.4 of the draft decision,<sup>119</sup> the ACCC noted its expectation that State Water would provide an updated estimate of 2013–14 capex for consideration in the final decision. The estimate used in the draft decision was a substantial increase from actual capex in 2012–13 and did not appear to be based on any actual expenditure incurred for 2013–14. In its submission to the draft decision, State Water did not provide any year to date actual capex or an updated estimate for 2013–14 that were of sufficient detail to be used for the final decision. The ACCC requested an update from State Water in response to a number of concerns from stakeholders regarding the estimate used in the draft decision. State Water responded stating it had no further information on this issue.<sup>120</sup>

Given concerns about State Water’s ability to deliver on this estimate and in the absence of an updated estimate reflecting actual expenditure, the ACCC advised State Water of its proposed averaging approach to determining an estimate for 2013–14 capex. State Water responded with no further comment on the issue.<sup>121</sup> Using this approach, the ACCC determined an estimate for 2013–14 net capex of \$38.6 million (nominal).<sup>122</sup> Where there is a difference between the estimate and actual capex in 2013-14, this and any cumulative return on the difference will be accounted for in the true-up adjustment of the RAB roll forward at the 2017–21 determination as was the case for the 2009–10 capex in this determination.

Table 3-5 shows the ACCC’s final decision on total net capex for 2010–14 included in the RAB roll-forward.

**Table 3-5 ACCC’s final decision on total net capex for RAB roll forward by regulated valleys during the 2010–14 regulatory period (\$million, nominal)**

	2010–11	2011–12	2012–13	2013–14	Total
Border	0.2	0.1	0.4	0.3	<b>1.0</b>
Fish River	2.7	6.1	0.6	0.7	<b>10.2</b>
Gwydir	7.4	23.4	10.9	6.0	<b>47.7</b>
Lachlan	5.5	3.5	8.9	10.9	<b>28.8</b>
Macquarie	9.3	1.3	2.5	2.6	<b>15.8</b>
Murray	5.1	4.9	2.6	1.5	<b>14.0</b>
Murrumbidgee	10.4	1.6	-1.0	0.3	<b>11.3</b>
Namoi	28.2	11.9	3.0	4.7	<b>47.9</b>
Peel	7.6	0.6	0.3	11.6	<b>20.1</b>
<b>Total ACCC regulated valleys</b>	<b>76.4</b>	<b>53.4</b>	<b>28.3</b>	<b>38.6</b>	<b>196.8</b>

Source: State Water’s proposed roll forward models and ACCC analysis.

Notes: Net capex figures are based on gross capex less capital contributions.

The ACCC maintains its approach as set out in section 3.4.3 of the draft decision<sup>123</sup> to use a forecast depreciation approach for the roll forward of the RAB to 1 July 2014. Consistent with the draft decision, the ACCC also maintains its approach that the forecast depreciation allowance for the 2014–17 regulatory period (adjusted only for actual inflation) should be used to roll forward State Water’s RAB for that period (to 30 June 2017) at the 2017–21 price review.

<sup>119</sup> See Attachment 3 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

<sup>120</sup> State Water, *Response to ACCC information request 3PD*, received 14 May 2014.

<sup>121</sup> State Water, *Response to follow-up email to ACCC information request 3PD*, received 22 May 2014.

<sup>122</sup> This estimate is calculated based on the average of actual gross capex in 2012–13 (\$45.6 million) and the approved forecast capex for 2014–15 (\$54.3 million, excl. Lowbidgee), less the average of capital contributions over the same period (\$13.3 million).

<sup>123</sup> See attachment 3 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.



The ACCC's final decision is to approve an opening RAB of \$657.3 million (nominal) as at 1 July 2014. The user share of the opening RAB as at 1 July 2014 is \$219.3 million (nominal). Table 3-1 shows the ACCC's final decision on components of the roll forward of State Water's RAB from 2009-10 through to the end of the 2010-14 regulatory period.. Table 3-3 shows the breakdown of the opening RAB as at 1 July 2014 by valley.

The ACCC's decision is to approve a total projected closing RAB of \$788.6 million (nominal) as at 30 June 2017. The user share of the projected closing RAB at 30 June 2017 is \$268.2 million (nominal). The ACCC's determination on the closing RAB at 30 June 2017 reflects its final decisions on the:

- opening RAB as at 1 July 2014 of \$657.3 million (nominal), as discussed above
- forecast net capex allowance for 2014-17 of \$119.7 million (nominal), as discussed further in attachment 4.
- depreciation allowance for 2014-17 of -\$9.6 million (nominal), as discussed in attachment 6.

The roll forward of State Water's projected RAB over the 2014-17 regulatory period is shown in Table 3-2. A breakdown of the projected closing RAB as at 30 June 2017 by valley is presented in Table 3-4.

## 4 Capital expenditure

Capital expenditure (capex) is incurred when a business spends money either to buy fixed assets or to add to the value of an existing fixed asset. Capex is an important component of the building block model which the ACCC uses to assess the total revenue State Water needs to provide water infrastructure services.

Under the Water Charge (Infrastructure) Rules (WCIR), the ACCC cannot approve the regulated charges set out in a pricing application unless it is satisfied that the total forecast revenue used to calculate those charges for each year of the regulatory period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services.<sup>124</sup> Therefore the ACCC has assessed whether State Water's proposed capital expenditures are prudent and efficient costs for providing infrastructure services in the 2014–17 regulatory period.

This attachment outlines the ACCC's final decision on State Water's proposed capex for 2014–17. The ACCC's draft decision<sup>125</sup> also contains information and analysis supporting this final decision.

### 4.1 Final decision

The ACCC does not approve State Water's total capex forecast of \$204.1 million (gross, real \$2013–14) in its pricing application for the 2014–17 regulatory period.<sup>126</sup> <sup>127</sup> This is because it is not satisfied that State Water's proposal reflects the prudent and efficient costs of providing infrastructure services in that regulatory period. The ACCC considers that a total capex allowance of \$132.0 million (gross, real \$2013–14) reflects the prudent and efficient costs of providing infrastructure services in accordance with rule 29 of the WCIR. The ACCC also considers that \$20.6 million (real \$2013–14) reflects the expected upfront capital contributions State Water will receive. Therefore, the ACCC proposes to include \$111.4 million (net, real \$2013–14) as the capex input when determining the revenue allowed under rule 29(3) of the WCIR.

Figure 4-1 below shows the ACCC's final decision and State Water's proposed capex for the 2014–17 regulatory period, and comparisons with the current period 2010–14.

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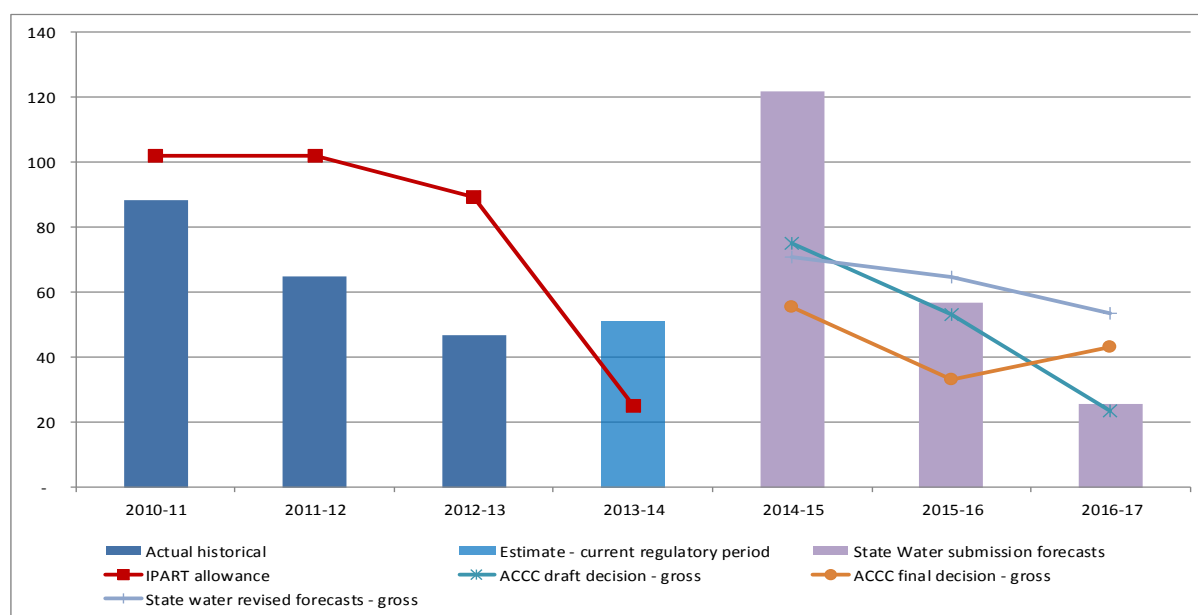
<sup>124</sup> *Water Charge (Infrastructure) Rules 2010*, r. 29.

<sup>125</sup> ACCC, *Draft decision on State Water Pricing Application: 2014–15 – 2016–17, Attachments*, March 2014, attachment 4.

<sup>126</sup> State Water, *Regulatory Information Template 2014–17*, table 3.3. Note that this template shows details just for the valleys regulated by the ACCC, whereas expenditures shown in State Water's formal pricing application cover all valleys including those regulated by IPART.

<sup>127</sup> Gross capex refers to capex from all funding sources, whereas net capex is capex after deduction of external capital contributions. Real capex is valued at the constant price level of 2013–14.

**Figure 4-1 Gross capital expenditure – all valleys – ACCC final decision (\$ million, real \$2013–14)**



Source: ACCC analysis.

### 4.1.1 Summary of reasons

The following is a summary of the ACCC’s final decision. Details are set out in section 4.4 of this attachment.

#### **Updated capex program**

State Water has materially changed its capex program since it provided its pricing application to the ACCC on 30 July 2013. State Water did not inform the ACCC about the material changes in its capex program in its submission in response to the ACCC’s draft decision. State Water provided limited information on the changes in its program in the course of subsequent information requests following the ACCC’s draft decision. Whilst State Water provided detailed information on its updated 2014-15 budget, State Water has not provided similar levels of detail for proposed 2015-16 and 2016-17 capex. The ACCC has adopted State Water’s 2014-15 budget to the degree it considers appropriate. Due to the lack of sufficiently detailed information, the ACCC has generally maintained its draft decision for 2015-16 and 2016-17 capex. The ACCC has incorporated updated information into its approved forecasts for 2015-16 and 2016-17 where it considered it had sufficient information to justify a change in position.

#### **Labour and overheads**

The ACCC’s final decision is to accept State Water’s approach to forecasting the costs of its capitalised internal labour and overheads.

Additional information provided by State Water indicated that the ACCC’s draft decision overestimated the amount of internal labour embedded in State Water’s forecasts. Having taken this additional information into account, the ACCC no longer considers that State Water has embedded \$32.9 million of labour and overheads in its capex proposal. The ACCC accepts that State Water’s approach on labour and overheads reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period. The ACCC’s adjustment applied to all areas of its draft

decision, and so the removal of this adjustment impacts on forecasts approved by the ACCC for all capex categories.

### **Contingencies**

The ACCC's final decision is to not accept State Water's proposed 10 per cent contingency allowance on Environmental Planning and Protection expenditure. However, the ACCC accepts a 10 per cent contingency on top of State Water's dam safety compliance expenditure. This decision maintains the position set out by the ACCC in section 4.5.2 of its draft decision.<sup>128</sup>

### **Dam safety and compliance**

The ACCC's final decision is to not accept State Water's proposed \$100.1 million (gross, real \$2013–14) in dam safety compliance expenditure. The ACCC generally maintains the positions it set out in section 4.5.3 of its draft decision. However, additional information provided by State Water has shown that [REDACTED - CONFIDENTIAL].<sup>129</sup> Further, State Water has stated that [REDACTED - CONFIDENTIAL].<sup>130</sup> Finally, the [REDACTED - CONFIDENTIAL].<sup>131</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 \$86.0 million (real \$2013–14).

### **Environmental planning and protection**

The ACCC's final decision is to not accept State Water's proposed \$57.3 million (real \$2013–14) in Environmental Planning and Protection (EPP) expenditure. Additional information provided by State Water has indicated that [REDACTED - CONFIDENTIAL].<sup>132</sup> The ACCC has approved a third of State Water's initial proposed amount as the capex allowance in the last year of the regulatory period. The ACCC considers this is the best forecast available in the circumstances. The ACCC's final decision is to approve capex on environmental planning and protection of \$19.1 million (real \$2013–14).

### **Renewal and replacement**

The ACCC does not accept State Water's proposal for \$19.9 million in expenditure on its renewals and replacement program. The ACCC generally maintains the positions it set out in section 4.5.5 of its draft decision. 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. The ACCC's final decision is to approve capex on renewal and replacement of \$18.1 million (real \$2013–14).

### **Water delivery and other operations**

The ACCC does not accept State Water's proposal for \$17.7 million in expenditure on its Water delivery and other operations program. The ACCC maintains the positions it set out in section 4.5.3 of

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<sup>128</sup> See attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>129</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>130</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>131</sup> State Water, email to ACCC, 16 May 2014.

<sup>132</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

its draft decision.<sup>133</sup> The ACCC's final decision is to approve capex on water delivery and operations of \$1.2 million (real \$2013–14).

State Water's submission in response to the ACCC's draft decision included an additional capex project (the Gunidgera Creek Capacity project).<sup>134</sup> State Water was not able to confirm endorsement for the project by the Namoi Peel CSC as a discretionary project in time to include it with State Water's pricing application. However, it was subsequently endorsed by the CSC. The ACCC has examined this project and considers that it is prudent and efficient.

### **Corporate systems**

The ACCC's final decision is to not accept State Water's proposed capex of \$9.2 million (real \$2013–14) for corporate systems. The ACCC notes that State Water provided no further written comments on this aspect of the ACCC's draft decision.<sup>135</sup> The ACCC generally maintains the positions it set out in section 4.5.7 of its draft decision. 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).

## **4.1.2 Summary of approved expenditure**

The tables below show State Water's approved capital expenditure broken down by activities and valleys.

**Table 4-1** compares State Water's proposal and the ACCC's final decision, disaggregated by the broad activity categories used by State Water.

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<sup>133</sup> See Attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>134</sup> State Water, *Response to ACCC draft decision on State Water pricing application 2014-15 – 2016-17*, 17 April 2014, p.33-34.

<sup>135</sup> State Water Response, 17 April 2014.

**Table 4-1 Capital expenditure – State Water’s proposed and ACCC final decision, by activity (\$ ‘000, gross, 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		
<b>Dam safety compliance - Pre 1997 Construction</b>	100,067	83,945	8,799	77,224	86,024	-14%	2%
<b>Renewal &amp; replacement</b>	19,921	15,507	16,747	1,373	18,121	-9%	17%
<b>Corporate systems</b>	9,155	6,639	7,605	-	7,605	-17%	15%
<b>Environmental planning and protection</b>	57,254	45,355	9,546	9,546	19,092	-67%	-58%
<b>Water delivery and other operations</b>	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>
<b>Capital contributions</b>	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.

Table 4-2 compares State Water’s proposal and the ACCC’s final decision on a valley by valley basis.

**Table 4-2 Capital expenditure – State Water’s proposed and ACCC final decision, by valley (\$ ‘000, gross, real \$2013–14)**

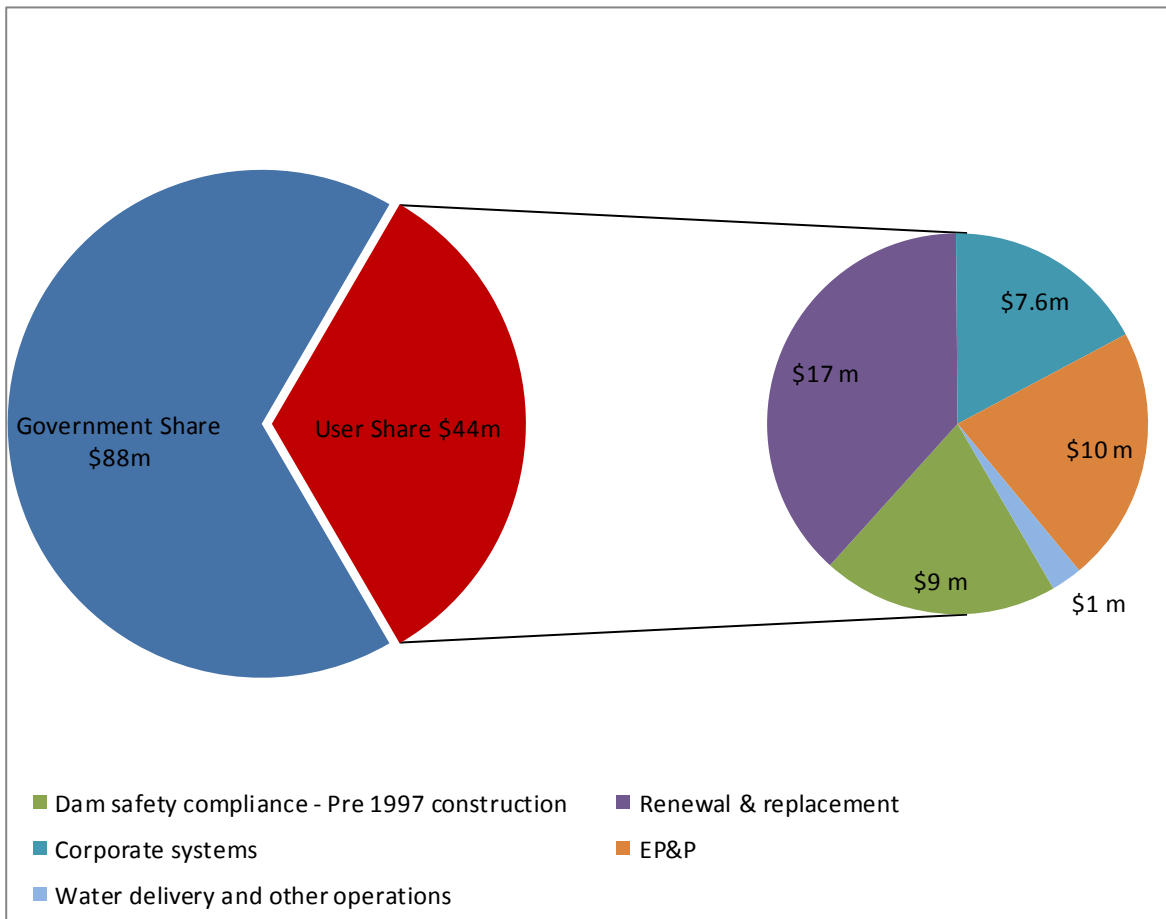
	State Water proposal	ACCC draft decision	ACCC final decision			Difference between proposal & final (%)	Difference between draft & final (%)
			User share	Government share	Total		
<b>Border Rivers</b>	963	287	327	5	332	-66%	15%
<b>Gwydir</b>	22,317	16,703	5,247	3,028	8,276	-63%	-50%
<b>Namoi</b>	58,373	49,697	2,467	29,801	32,268	-45%	-35%
<b>Peel</b>	21,460	18,346	547	37,069	37,616	75%	105%
<b>Lachlan</b>	32,648	24,716	9,143	13,713	22,856	-30%	-8%
<b>Macquarie</b>	33,196	23,348	7,216	3,194	10,410	-69%	-55%
<b>Murray</b>	5,546	2,399	1,159	1,111	2,270	-59%	-5%
<b>Murrumbidgee</b>	6,347	3,125	3,470	222	3,692	-42%	18%
<b>Lowbidgee</b>	1,820	1,560	1,790	-	1,790	-2%	15%
<b>Fish River</b>	21,447	11,616	12,485	-	12,485	-42%	7%
<b>Total</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>

Source: ACCC analysis.

## Government and user shares

The ACCC has been advised that the NSW Government has agreed to pay a share of State Water's efficient costs calculated on the basis of the same cost sharing ratios as determined by IPART in 2010.<sup>136</sup> Applying those cost sharing ratios, the ACCC's final decision is that the Government's share of the gross capex is \$88.1 million and users' share of capex is \$43.9 million.

**Figure 4-2 Capital expenditure – ACCC final decision – Split between government and user share (gross, real \$2013–14)**



Source: ACCC analysis.

## 4.2 Submissions

The ACCC received multiple submissions in response to the draft decision. The ACCC's consideration of submissions is discussed below.

### 4.2.1 State Water Submission

State Water's submission did not accept any aspect of the ACCC's draft decision on the capex allowance. State Water stated that:<sup>137</sup>

<sup>136</sup> Hon Katrina Hodgkinson, MP, NSW Minister for Primary Industries, letter to Rod Sims, Chairman ACCC, 21 November 2012.

<sup>137</sup> State Water, Response, 17 April 2014, p.7; State Water, email to ACCC, 29 April 2014.

State Water requests that the ACCC reconsider the rejection of State Water's proposed CAPEX projects and its assumptions around capitalised labour as per specific comments set out in other parts of this submission.

Although State Water did not accept any aspect of the ACCC's draft decision, State Water's submission only provided additional information on the capitalised labour and overheads aspects of the ACCC's draft decision. State Water considered that the ACCC's position on labour and overheads was incorrect. This issue and other aspects of State Water's submission are discussed in section 4.4.2 below.

Following a request from the ACCC, State Water provided an updated budget, which contained a subset of State Water's proposed capex in 2014-15.<sup>138</sup> State Water provided this information to demonstrate that the level of labour and overheads in its forecasts is reasonable. However, this updated 2014-15 budget also indicated that State Water's budgeted capital expenditure had materially changed from State Water's pricing application. State Water had not previously advised the ACCC of these changes in its capital expenditure program and did not provide additional information to the ACCC about these changes in its submission of 17 April 2014.<sup>139</sup>

State Water also submitted that an additional capital expenditure program (the Gunidgera Creek Capacity project) should be added to its capex allowance.<sup>140</sup> This is considered in section 4.4.7 below on Water delivery.

### Information provided separately to State Water's submission

The ACCC requested that State Water explain the reduction in expected expenditure in 2014-15 shown in State Water's updated budget.<sup>141</sup> The ACCC also requested revised capex forecasts for 2015-16 and 2016-17. The ACCC noted in correspondence with State Water that its submission only commented on labour and overheads. The ACCC provided State Water a further opportunity to provide additional information on the ACCC's draft decision.<sup>142</sup>

State Water provided updated capital expenditure budgets for 2014-15 to 2016-17. These updated forecasts are set out in Table 4-3 and Figure 4-3. The updated budget was materially different from State Water's initial proposal. Further, the ACCC notes that whilst the updated budget for 2014-15 was detailed, the updated budgets for 2015-16 and 2016-17 were high level and did not contain information on individual projects.

**Table 4-3 Comparison of gross capex (\$'000, real \$2013–14)**

	2014-15	2015-16	2016-17	Total Capex
<b>State Water - Initial Proposal</b>	121,745	56,727	25,646	204,117
<b>State Water - Revised budget</b>	70,754	64,621	53,772	189,147
<b>Difference Initial proposal to revised budget</b>	-50,991	7,894	28,126	-14,970

Source: State Water submissions.

<sup>138</sup> State Water, *Additional information following ACCC's draft decision*, presented 10 April 2014; State Water spreadsheet – '14-15 submission data.xls'.

<sup>139</sup> State Water, Response, 17 April 2014.

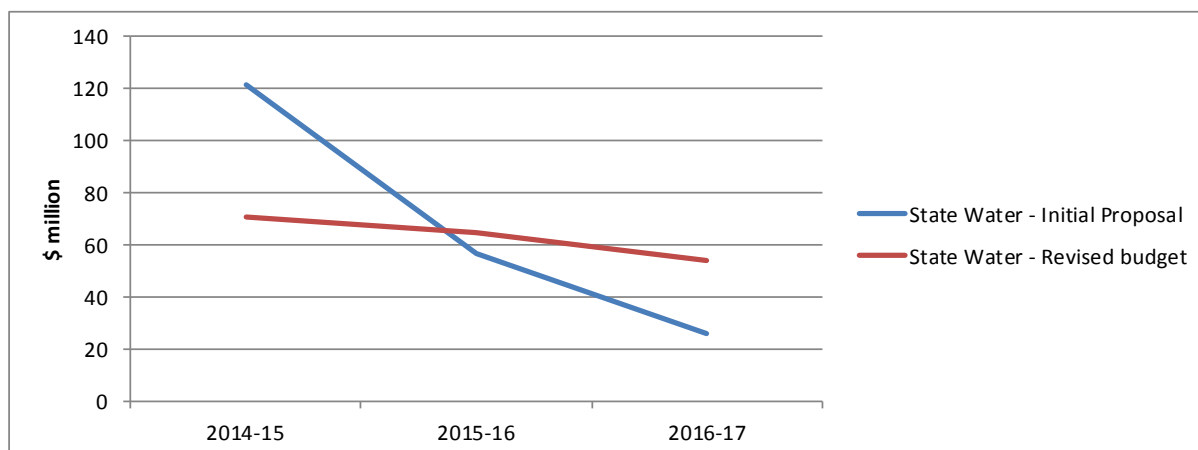
<sup>140</sup> State Water, Response, 17 April 2014, p.33.

<sup>141</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>142</sup> ACCC, email to State Water, 23 May 2014.



**Figure 4-3 Comparison of net capex (\$ million, real \$2013–14)**



Source: State Water submissions.

In response to the ACCC's information request State Water stated:<sup>143</sup>

State Water has provided detailed information on its Capex proposed program in its original submission. Furthermore, additional information was provided in response to series of questions during this period of determination process. With the exception of the information below, State Water does not have any additional information to what has already been provided in regards to the aspects of the draft decision on Capex.

The additional information provided by State Water indicated material changes to the following areas of State Water's proposal:<sup>144</sup>

- Dam safety compliance
- Environmental planning and protection
- Renewals and replacement
- Water delivery

This additional information is outlined in detail in the relevant sections below.

#### ***Further information request***

The updated budget provided by State Water was presented at a category level and did not provide details at a project level for 2015-16 and 2016-17. Therefore, the ACCC was unable to determine the amount State Water intended to expend on each project or even what projects State Water intends to undertake. Additionally, the ACCC could not use this information to determine capex allocations by valley, user and government share or asset type. The ACCC again requested that State Water provide complete project by project budget for 2014-15, 2015-16 and 2016-17.<sup>145</sup> State Water did not provide the information the ACCC requested.

<sup>143</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>144</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>145</sup> ACCC, email to State Water, Friday 23 May 2014.

## 4.2.2 Other submissions

The ACCC also received a submission from the Tamworth Regional Council, which was relevant to the ACCC's capex assessment.

Tamworth Regional Council submitted that:

Council's contribution to the Construction and Augmentation of Chaffey Dam is not recognised

- Council contributed ¼ of the budgeted cost of the initial construction of Chaffey Dam yet Council receives no financial recognition of this contribution in ongoing water charges;
- Council is again contributing to the cost of the augmentation of Chaffey Dam to a larger storage. Once again where is the financial recognition of this contribution in ongoing charges?<sup>146</sup>

## 4.3 Assessment approach

The ACCC has undertaken a detailed assessment of State Water's forecast capex with a view to determining whether it reflects the prudent and efficient costs of providing infrastructure services in the 2014–17 regulatory period. The ACCC considers that this also ensures that the basin water charging objectives and principles<sup>147</sup> are also met insofar as they relate to State Water's capex.

Details of the ACCC's assessment approach and criteria for approving or not approving State Water's proposed capex are set out in Section 4.4 of the ACCC's draft decision.<sup>148</sup>

## 4.4 Reasons for decision

The ACCC applied its assessment approach and concluded that State Water's forecast capex for 2014–17 is not prudent and efficient. The ACCC has identified components of State Water's proposed capex which do not reflect the prudent and efficient costs of providing the necessary infrastructure services. The ACCC's reasons are set out below.

The ACCC considers that gross capex of \$132.0 million (real \$2013–14) for the 2014–17 regulatory period reflects the prudent and efficient costs of providing infrastructure services.

The following sets out the ACCC's assessment of the capex proposed by State Water.

### 4.4.1 Updated capex program

The ACCC has information showing that State Water has materially changed its capex program since it provided its pricing application on 30 July 2013.<sup>149</sup> However, State Water did not inform the ACCC of the material changes in its capex program in its written submission in response to the ACCC's draft decision.<sup>150</sup> The ACCC noticed apparent discrepancies in the additional information provided with State Water's submission and State Water confirmed the changes to its capex program in subsequent responses to information requests.<sup>151</sup> Whilst State Water has provided detailed information on its updated 2014-15 budget, State Water has not provided similar levels of detail for 2015-16 and 2016-17.

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<sup>146</sup> Tamworth Regional Council, *Response to ACCC's Draft Decision on State Water Pricing Application 2014-15 to 2016-17*, 8 April 2014.

<sup>147</sup> Schedule 2 of *the Water Act 2007* (Cwth)

<sup>148</sup> See attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>149</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>150</sup> State Water, *Response*, 17 April 2014.

<sup>151</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

Due to the lack of information provided by State Water, the ACCC has adopted the following process to reach its final decision on State Water's capex for the 2014-17 period:

- The ACCC has used the updated budget for 2014-15 provided by State Water as the basis of the ACCC's final decision for 2014-15. Where the ACCC considers any aspects of the 2014-15 budget do not reflect the prudent and efficient cost of providing the necessary infrastructure services, the ACCC has adjusted the 2014-15 budget to the extent necessary.
- The ACCC has used the ACCC's draft decision for 2015-16 and 2016-17 capex as the basis of the ACCC's final decision on capex for these years. Where State Water has provided additional information on the timing or costs of specific projects, the ACCC has considered that information and adjusted its draft decision where it considers it appropriate.
- The ACCC did not consider it could use the updated budget forecasts for 2015-16 and 2016-17 as the basis of its final decision.<sup>152</sup> State Water has not provided sufficient updated information for 2015-16 and 2016-17 to satisfy the ACCC about the:
  - composition of these budget forecasts
  - appropriate allocation to the government or user shares
  - appropriate allocation to each regulated valley
  - appropriate allocation to each asset class.

The ACCC requested more detail about State Water's revised budgets for 2015-16 and 2016-17.<sup>153</sup> State Water did not provide the requested information.

#### 4.4.2 Capitalised labour and overheads

The ACCC's final decision is to accept State Water's approach to forecasting the costs of its capitalised internal labour and overheads.

In its draft decision the ACCC reduced State Water's capex allowance by \$22.3 million (gross, real \$2013–14), to remove overheads which it considered to be higher than the prudent and efficient amount. In making its draft decision the ACCC noted that State Water had not disaggregated all of its cost forecasts to allow the ACCC to properly examine the labour and overhead costs.<sup>154</sup> Therefore, for its draft decision the ACCC applied an extrapolation method to estimate the amount of capitalised labour and overheads in State Water's capex proposal. The ACCC noted that its preference was to make its final decision on the basis of more complete information. It advised that if State Water provided additional information the ACCC would examine that information and incorporate it into its final decision.

Additional information provided by State Water indicated that the ACCC's extrapolation method overestimated the amount of internal labour embedded in State Water's forecasts. Having taken this additional information into account, the ACCC no longer considers that State Water has embedded \$32.9m of labour and overheads in its capex proposal. The ACCC accepts that State Water's approach to labour and overheads reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

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<sup>152</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>153</sup> ACCC information request 2PD of 2 May 2014, and email to State Water of 23 May 2014.

<sup>154</sup> ACCC, *Draft decision on State Water pricing application 2014–17*, p.94.

**Table 4-4 Capitalised labour and overheads — ACCC draft and final decision, by activity (\$ '000, gross, real \$2013–14)**

	Draft Decision adjustment	Final Decision adjustment	Difference between draft and final
Dam safety compliance - Pre 1997 construction	-12,017	0	12,017
Renewal & replacement	-2,170	0	2,170
Corporate systems	-926	0	926
EP&P - fish passage works	-7,119	0	7,119
Water delivery and other operations	-49	0	49
<b>Total</b>	<b>-22,281</b>	<b>0</b>	<b>22,281</b>

Source: ACCC analysis.

\*Note: This reflects the ACCC's assessment of the capitalised labour and overheads embedded in State Water's proposal. It overstates the amount of labour and overheads included in the ACCC's final decision because the decision did not accept all the capex originally proposed by State Water.

**Table 4-5 Capitalised labour and overheads — ACCC draft and final decision on labour and overheads (\$ '000, gross, real \$2013–14)**

	Draft Decision adjustment	Final Decision adjustment to State Water proposal	Difference between draft and final
Border Rivers	-40	0	40
Gwydir	-2,711	0	2,711
Namoi	-7,017	0	7,017
Peel	-2,567	0	2,567
Lachlan	-3,833	0	3,833
Macquarie	-3,660	0	3,660
Murray	-859	0	859
Murrumbidgee	-437	0	437
Lowbidgee	-218	0	218
Fish River	-939	0	939
<b>Total</b>	<b>-22,281</b>	<b>0</b>	<b>22,281</b>

Source: ACCC analysis.

Note: This is the ACCC's assessment of the capitalised labour and overheads embedded in State Water's proposal.

## State Water submission

State Water's submission stated that the ACCC had incorrectly reduced capex budgets significantly.<sup>155</sup> State Water requested that the ACCC amend this error and reinstate the cuts made to the program.

State Water stated that:<sup>156</sup>

The ACCC have used data from an example provided by State Water to incorrectly infer that State Water proposes to capitalise more than \$32 million in labour costs across the three years of the determination. State Water considers ACCC's view to be a factual error and therefore subsequent adjustments applied by ACCC to the capital program are in error.

State Water provided a detailed budget breakdown for 2014-15, which showed the proportion of labour and overheads in each project for 2014-15. In response to the ACCC's questions, State Water submitted that some of the costs the ACCC had identified as being costs internal to State Water were costs incurred by contractors. State Water stated that:

The ACCC has correctly identified the project components which principally represent a labour cost to the project (noting that construction also includes an additional indeterminate labour component where people are necessarily employed by the contractor to drive equipment, pour concrete and supervise work). However, as State Water does not maintain a standing design or construction capability, the majority of the identified works are contracted out to specialist firms by appropriate market testing processes. This means that the internal labour component incurred by projects is largely limited to contract preparation, administration and project management and technical input where State Water has such skills. This internal component is a much smaller proportion of the total project cost, though a significant proportion in the initial phases while contracts are being prepared.<sup>157</sup>

## ACCC's consideration and conclusion

In its draft decision the ACCC identified a number of costs which appeared to be borne internally by State Water. These costs appeared higher than historically incurred by State Water and higher than the prudent and efficient level. These apparently high internal costs occurred in a subset of State Water's proposal. State Water did not provide sufficient information regarding the remaining projects for the ACCC to identify the internal components. On the basis of the apparent high costs in this subset of programs, the ACCC inferred that these costs were likely to appear in the remainder of State Water's capex program.

On the basis of additional information provided by State Water, the ACCC accepts that some of the costs that the ACCC identified as internal to State Water may be borne by external parties. Taking this into account, the ACCC considers that the amount of internal labour and overheads in State Water's forecasts appears to be consistent with levels historically incurred by State Water. On this basis the ACCC no longer considers the proposed labour and overheads costs in State Water's capex program are higher than the prudent and efficient level.

### 4.4.3 Contingencies

The ACCC's final decision is not to accept State Water's approach to forecasting the contingencies required in its cost forecasts. The ACCC considers that \$5.9 million (real \$2013–14) reflects the prudent and efficient costs of contingencies for State Water's capex program in the 2014–17 regulatory period. The ACCC notes that State Water provided no further comments in regards to this

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<sup>155</sup> State Water, Response, 17 April 2014, p.27

<sup>156</sup> State Water, Response, 17 April 2014, p.27

<sup>157</sup> State Water, *Response to information request 4PD*, received 22 May 2014.

aspect of the ACCC's draft decision. The ACCC's final decision is to maintain its draft decision in regard to contingencies. The reasons are set out in section 4.5.2 of the ACCC's draft decision.<sup>158</sup>

Because the ACCC accepts State Water's approach of applying a 10 per cent contingency to the Dam Safety and Compliance Program, it has revised the total amount of contingencies approved to reflect its final decision on State Water's Dam Safety and Compliance program.<sup>159</sup>

**Table 4-6 Project contingencies - State Water's proposed and ACCC final decision, by activity (\$ '000, gross, real \$2013–14)**

	ACCC decision - User Share	ACCC decision - Government Share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
Dam safety compliance - pre 1997 construction*	800	5,144	5,944	8,320	-2,376	-28.6%
Renewal & replacement	-	-	-	-	-	-
Corporate systems	-	-	-	-	-	-
EP&P - fish passage works	-	-	-	4,780	-4,780	-100.0%
Water delivery and other operations	-	-	-	-	-	-
<b>Total</b>	<b>800</b>	<b>5,144</b>	<b>5,944</b>	<b>13,100</b>	<b>-7,156</b>	<b>-54.6%</b>

Source: ACCC analysis.

\*Note: Where the ACCC has not approved aspects of the dam safety program this has resulted in lower contingencies being approved.

**Table 4-7 Project contingencies —State Water's proposed and ACCC final decision by valley (\$ '000, gross, real \$2013–14)**

	ACCC decision - User Share	ACCC decision - Government Share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
Border Rivers	-	-	-	-	-	-
Gwydir	-	-	-	1,532	-1,532	-100.0%
Namoi	-	2,647	2,647	4,950	-2,303	-46.5%
Peel	-	1,490	1,490	1,139	352	30.9%
Lachlan	-	800	800	2,198	-1,398	-63.6%
Macquarie	-	130	130	1,889	-1,759	-93.1%
Murray	-	76	76	205	-129	-62.9%
Murrumbidgee	-	-	-	-	-	-
Lowbidgee	-	-	-	-	-	-
Fish River	800	-	800	1,187	-387	-32.6%
<b>Total</b>	<b>800</b>	<b>5,144</b>	<b>5,944</b>	<b>13,100</b>	<b>-7,156</b>	<b>-54.6%</b>

Source: ACCC analysis.

<sup>158</sup> See attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>159</sup> The ACCC notes that State Water's response to information request 2PD showed that it had removed contingencies for the dam safety expenditure from its updated 2014-15 budget. State Water was not requested to do so by the ACCC.

#### 4.4.4 Dam safety compliance – Pre-1997 construction

The ACCC's final decision is to not accept State Water's proposed \$100.1 million (gross, real \$2013–14) in dam safety compliance expenditure. The ACCC considers that \$86.0 million reflects the prudent and efficient costs of providing infrastructure services in the 2014–17 regulatory period.

The ACCC's draft decision approved \$83.9 million in capex in dam safety compliance expenditure. In general, the ACCC considers the assessments it made in the draft decision also apply in this final decision. The reasons are set out in section 4.5.3 of the ACCC's draft decision.<sup>160</sup>

However, additional information provided by State Water has shown that [REDACTED - CONFIDENTIAL].<sup>161</sup> Further, State Water has advised the ACCC that [REDACTED - CONFIDENTIAL].<sup>162</sup> Finally, the [REDACTED - CONFIDENTIAL].<sup>163</sup> The ACCC has considered the additional information provided by State Water and has incorporated the revised expenditure forecast in this final decision.

The ACCC's final decision on Dam Safety capex is set out in Table 4-8.

**Table 4-8 Dam safety capital expenditure — State Water's proposed and ACCC final decision (\$ '000, gross, real \$2013–14)**

	ACCC decision - User Share	ACCC decision - Government Share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
<b>Border Rivers</b>	-	-	-	-	-	
<b>Gwydir</b>	-	-	-	-	-	
<b>Namoi</b>	-	29,120	29,120	51,570	-22,450	-43.5%
<b>Peel</b>	-	37,035	37,035	20,376	16,660	81.8%
<b>Lachlan</b>	-	8,801	8,801	926	7,875	850.8%
<b>Macquarie</b>	-	1,430	1,430	13,242	-11,812	-89.2%
<b>Murray</b>	-	838	838	835	3	0.4%
<b>Murrumbidgee</b>	-	-	-	-	-	
<b>Lowbidgee</b>	-	-	-	-	-	
<b>Fish River</b>	8,799	-	8,799	13,119	-4,319	-32.9%
<b>Total</b>	<b>8,799</b>	<b>77,224</b>	<b>86,024</b>	<b>100,067</b>	<b>-14,043</b>	<b>-14.0%</b>

Source: ACCC analysis.

<sup>160</sup> See attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>161</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>162</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>163</sup> State Water, email to ACCC, 16 May 2014.

## State Water Submission

State Water's written submission provided no additional information on State Water's planned dam safety compliance expenditure. However, the revised 2014-15 budget provided by State Water indicated that significant amounts of expenditure in 2014-15 had either been delayed or revised downwards. The ACCC requested additional information from State Water on its revised capex program. In response State Water stated:<sup>164</sup>

[REDACTED - CONFIDENTIAL].

## ACCC's consideration and conclusion

The ACCC has examined the additional information provided by State Water and as discussed below we accept that the above changes reflect the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

### ***Burrendong Dam***

The ACCC accepts that State Water has [REDACTED - CONFIDENTIAL].<sup>165</sup> The ACCC considers the revised forecast of expenditure reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

### ***Keepit Upgrade Phase 1***

The ACCC accepts that State Water has had to re-phase its dam safety compliance expenditure. However, in regard to the Keepit Upgrade Phase 1, State Water has not provided updated information about the total cost of the project or information regarding the expected expenditure on this project in 2015-16 and 2016-17. Having not received any evidence to the contrary, the ACCC considers the total cost of the project is unchanged from its draft decision and accepts State Water's forecast of the total expenditure in 2014-15 and 2017-18. The ACCC has therefore allocated the remainder of the project costs equally to 2015-16 and 2016-17.

State Water had multiple opportunities to provide updated detailed budgets for 2015-16 and 2016-17 but did not provide this information to the ACCC.<sup>166</sup> The ACCC considers that in the absence of detailed information the conclusions it has reached are reasonable and reflect the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

### ***Wyangala Dam Phase 0***

The ACCC accepts that State Water has had to re-phase its dam safety compliance expenditure for Wyangala Dam. The ACCC considers the revised forecast of expenditure reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

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<sup>164</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>165</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

<sup>166</sup> ACCC email to State Water, 17 April 2014; ACCC information request 2PD of 2 May 2014; ACCC email to State Water, 23 May 2014 (follow-up to request 2PD).



## **Chaffey Dam**

State Water advised the ACCC that [REDACTED - CONFIDENTIAL].<sup>167</sup> The ACCC notes that the augmentation component is being funded by agreement with external parties. One of these external parties is the Tamworth Regional Council, which submitted that:<sup>168</sup>

Council's contribution to the Construction and Augmentation of Chaffey Dam is not recognised

Council contributed ¼ of the budgeted cost of the initial construction of Chaffey Dam yet Council receives no financial recognition of this contribution in ongoing water charges;

The ACCC considers that the terms of agreement between State Water and the Tamworth Regional Council for the Chaffey Dam augmentation are a matter for those parties. The ACCC notes that because the capital cost of the Chaffey Dam augmentation is being met by external parties, the cost of the augmentation is not added to the RAB. Consequently, customers in the Peel Valley, including Tamworth Regional Council, will receive the benefits of the augmentation with no ongoing increase in tariffs due to the capital cost of the augmentation.

The ACCC accepts that the revised forecast of expenditure reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

### **4.4.5 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. The ACCC considers that \$19.1 million reflects the prudent and efficient expenditure.

The ACCC's draft decision approved \$45.3 million in capex in EPP expenditure. Additional information provided by State Water indicated that its proposed expenditure on fish passage programs has been delayed. The ACCC has considered the additional information provided by State Water and considers that it is necessary to adjust its decision to reflect the changes in expected expenditure.

There are a number of smaller projects included in the EPP category. The ACCC received no additional information on these projects. The ACCC's final decision is to maintain its draft decision in regard to these projects. The reasons are set out in section 4.5.4 of the ACCC's draft decision.

The ACCC's final decision is set out in Table 4-9.

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<sup>167</sup> State Water, email to ACCC, 16 May 2014.

<sup>168</sup> Tamworth Regional Council, Response, p 6.

**Table 4-9 EPP capital expenditure — State Water’s proposed and ACCC final decision (\$ ‘000, gross, real \$2013-14)**

	ACCC decision - User share	ACCC decision - Government share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
<b>Border Rivers</b>	-	-	-	-	-	-
<b>Gwydir</b>	2,848	2,848	5,697	18,382	-12,685	-69%
<b>Namoi</b>	667	667	1,333	4,353	-3,020	-69%
<b>Peel</b>	-	-	-	-	-	-
<b>Lachlan</b>	4,558	4,558	9,116	24,916	-15,800	-63%
<b>Macquarie</b>	1,223	1,223	2,445	7,970	-5,525	-69%
<b>Murray</b>	250	250	500	1,632	-1,132	-69%
<b>Murrumbidgee</b>	-	-	-	-	-	-
<b>Lowbidgee</b>	-	-	-	-	-	-
<b>Fish River</b>	-	-	-	-	-	-
<b>Total</b>	<b>9,546</b>	<b>9,546</b>	<b>19,092</b>	<b>57,254</b>	<b>-38,162</b>	<b>-67%</b>

Source: ACCC analysis.

### State Water Submission

State Water's written submission provided no additional information on State Water's planned EPP expenditure. However, the [REDACTED - CONFIDENTIAL]. The ACCC requested additional information from State Water with regard to its revised EPP program. In response State Water stated:<sup>169</sup>

[REDACTED - CONFIDENTIAL].

### ACCC’s consideration and conclusion

The ACCC has examined the additional information provided by State Water and considers that the capex allowance it approved for EPP in the draft decision no longer reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

State Water has indicated it [REDACTED - CONFIDENTIAL].

The ACCC notes that State Water provided [REDACTED - CONFIDENTIAL].

On the basis of the information provided by State Water and noting the [REDACTED - CONFIDENTIAL], the ACCC considers the prudent and efficient amount of fish passage expenditure in 2016-17 is \$16.5 million. The ACCC has exercised its judgement to arrive at this value and has done so by calculating the average annual capex on fish passages proposed in State Water's initial

<sup>169</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

submission.<sup>170</sup> The ACCC considers this is a reasonable approach and has smoothed any variations between years that existed in State Water's original proposal. The ACCC has allocated to each valley a proportion of this \$16.5 million, corresponding to the size of each valley's fish passage projects as a proportion of the total fish passage program.

The ACCC's draft decision approved a number of smaller projects in the EPP category, including the Lake Brewster urgent works program. The ACCC received no additional information on these projects. The ACCC's final decision is to maintain its draft decision in regard to these projects. The reasons are set out in section 4.5.4 of the ACCC's draft decision.

The ACCC considers that \$19.1 million reflects the prudent and efficient expenditure on EPP in the 2014-17 regulatory control period.

#### 4.4.6 Renewals & replacement

The ACCC does not accept State Water's proposal for \$19.9 million (real \$2013–14) in expenditure on its renewals and replacement program. The ACCC considers that \$18.1 million in expenditure reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period.

The ACCC's draft decision approved \$15.5 million in capex in renewals and replacement expenditure. In general, the ACCC considers the assessments it made in the draft decision also apply in this final decision. This includes the re-categorisation of Rydal dam works (\$2.2 million) as dam safety rather than renewals. The reasons are set out in section 4.5.2 of the ACCC's draft decision.<sup>171</sup>

Additional information provided by State Water has shown that State Water intends to re-phase its expenditure on renewal and replacement. The ACCC has incorporated this additional information into its final decision.

The ACCC's decision on renewals and replacement capex is set out in Table 4-10.

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<sup>170</sup> The proposed amount was approved by the ACCC in its draft decision except insofar as internal labour and overheads were reduced in the draft decision.

<sup>171</sup> See attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

**Table 4-10 Renewals and replacement capital expenditure — State Water’s proposed and ACCC final decision (\$ ‘000, gross, real \$2013–14)**

	ACCC decision - User Share	ACCC decision - Government Share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
<b>Border Rivers</b>	41	5	45	43	2	5%
<b>Gwydir</b>	1,622	180	1,802	1,791	10	1%
<b>Namoi</b>	127	14	142	130	12	9%
<b>Peel</b>	303	34	337	335	2	1%
<b>Lachlan</b>	3,190	354	3,545	3,434	111	3%
<b>Macquarie</b>	4,868	541	5,409	5,367	42	1%
<b>Murray</b>	209	23	232	228	4	2%
<b>Murrumbidgee</b>	2,000	222	2,222	2,090	132	6%
<b>Lowbidgee</b>	1,684	-	1,684	1,670	14	1%
<b>Fish River</b>	2,703	-	2,703	4,832	-2,128	-44%
<b>Total</b>	<b>16,747</b>	<b>1,373</b>	<b>18,121</b>	<b>19,921</b>	<b>-1,800</b>	<b>-9%</b>

Source: State Water submission; ACCC analysis.

### State Water Submission

State Water's written submission provided no additional information on State Water's planned renewals and replacement expenditure. However, the revised 2014-15 budget provided by State Water indicated that significant amounts of expenditure in 2014-15 had either been delayed or revised downwards. The ACCC requested additional information from State Water in regard to its revised renewals and replacement program. In response State Water stated:<sup>172</sup>

[REDACTED - CONFIDENTIAL].

### ACCC’s consideration

The ACCC has examined the additional information provided by State Water and accepts that re-phasing State Water's expenditure reflects the prudent and efficient cost of providing infrastructure services in the 2014–17 regulatory period. Whilst State Water's updated 2014-15 budget provides a detailed forecast of renewal and replacement expenditure, State Water did not provide this level of detail for 2015-16 or 2016-17. Consequently the ACCC has reached conclusions about the re-phased expenditure in these years, using the limited information available to it. The ACCC has re-phased the capex reductions in 2014-15, by taking the amount deferred from 2014-15 and adding it to capex in 2015-16.

<sup>172</sup> State Water, *Response to information request 2PD*, received 22 May 2014.

#### 4.4.7 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 considers that \$1.2 million in expenditure reflects the prudent and efficient cost of this program in the 2014–17 regulatory period.

The ACCC's draft decision approved \$0.4 million in capex in Water delivery and other operations expenditure. The ACCC did not accept the CARMS and Crooked Creek projects as prudent and efficient. In general, the ACCC considers the assessments it made in the draft decision also apply in this final decision. The reasons are set out in section 4.5.6 of the ACCC's draft decision.<sup>173</sup>

State Water's submission included an additional capex project (the Gunidgera Creek Capacity project). State Water did not have the Namoi Peel CSC approve the project as a discretionary project in time to include with State Water's pricing submission. However, it was subsequently endorsed by the CSC. The ACCC has examined this project and considers that it is prudent and efficient.

The ACCC's decision on Water delivery and other operations capex is set out in Table 4-11.

**Table 4-11 Water delivery and other operations capital expenditure — State Water's proposed and ACCC final decision (\$ '000, gross, \$2013–14)**

	ACCC decision - User share	ACCC decision - Government share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
Border Rivers	-	-	-	574	-574	-100%
Gwydir	-	-	-	1,224	-1,224	-100%
Namoi	753	-	753	1,264	-511	-40%
Peel	-	-	-	385	-385	-100%
Lachlan	340	-	340	2,097	-1,757	-84%
Macquarie	60	-	60	5,268	-5,208	-99%
Murray	-	-	-	1,935	-1,935	-100%
Murrumbidgee	-	-	-	2,463	-2,463	-100%
Lowbidgee	-	-	-	-	-	-
Fish River	-	-	-	2,510	-2,510	-100%
<b>Total</b>	<b>1,153</b>	<b>-</b>	<b>1,153</b>	<b>17,720</b>	<b>-16,567</b>	<b>-93%</b>

Source: ACCC analysis.

#### State Water submission

State Water's submission in response to the ACCC's draft decision included an additional capex project (the Gunidgera Creek Capacity project).<sup>174</sup> State Water did not confirm endorsement for the

<sup>173</sup> See Attachment 4 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>174</sup> State Water, Submission, 17 April 2014, p.33.

project by the Namoi Peel CSC as a discretionary project in time to include it with State Water's pricing application. However, it was subsequently endorsed by the CSC. State Water's submission stated that:

The objective of this project is to increase the height of Gunidgera Weir pool by 500mm to increase the discharge from 1230ML per day to approximately 1670ML. This will ensure that peak summer irrigation demands can be met, rather than implementing channel restriction roster system along the Pian Creek. Indicative cost is \$753K capital for approximately 440ML per day increase. This increased height has also been considered during the initial design work for Gunidgera Weir Fish Lock and it is envisaged that the two projects will be completed together to minimise costs.

Namoi Peel CSC strongly supports the Gunidgera Creek Capacity increase project. Additionally, Namoi Water are also supportive of the inclusion of this project as an additional discretionary project and are happy to provide additional written advice of such. Namoi Water also highlighted the support for this project in their response to State Water's submission.

In State Water's updated 2014-15 budget, State Water also included two additional projects.<sup>175</sup>

- inclusion of Yanco Creek Water for Rivers funded investigation project (\$3.3M increase)
- expected carryover of \$1.1M of Water for Rivers Funding for completion of existing Murrumbidgee Computer Operated River project, which does not form part of the RAB.

The ACCC understands that these two additional capex projects are entirely externally funded and so has not considered these further.

### Stakeholder submissions

In response to State Water's pricing application Namoi Water expressed disappointment that the Gunidgera Creek Capacity project wasn't included in State Water's capex program.<sup>176</sup> Namoi Water supported increasing the capacity of Gunidgera Weir pool and stated:<sup>177</sup>

Namoi Water and the Namoi Peel CSC support the following projects inclusion in this year's pricing determination.

Project Name: Increasing Channel Flow Capacity at Gunidgera / Pain creeks

Project Description: Increase the storage height of Gunidgera Weir by up to 500mm to increase the discharge from 1230ML per day to approximately 1670ML per day.

Benefits: Being able to deliver peak summer irrigation demand, rather than implementing channel capacity restriction roster system. This issue was particularly difficult to manage and require considerable staff time to manage this year. Indicative Cost: \$753K Capital for approximately 440ML per day increase

### ACCC's consideration

The ACCC notes the support for the Gunidgera Creek Capacity project by key stakeholders. The ACCC has examined the additional information provided by State Water and accepts that the project is prudent and efficient.

#### 4.4.8 Corporate systems

The ACCC's final decision is not to accept State Water's proposed capex of \$9.2 million (real \$2013–14) for corporate systems. The ACCC considers that expenditure of \$7.6 million is prudent and efficient in the 2014–17 regulatory period.

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<sup>175</sup> State Water, Email to ACCC, 26 May 2014. '14-15 submission data.xls'.

<sup>176</sup> Namoi Water, Submission, p.2.

<sup>177</sup> Namoi Water, Submission, p.2.

The ACCC's draft decision approved \$6.6 million (real \$2013–14) in capex in corporate systems expenditure. The ACCC notes that State Water provided no further comments in regards to this aspect of the ACCC's draft decision.

The ACCC's decision on corporate systems capex is set out in Table 4-11.

**Table 4-12 Corporate systems capital expenditure — State Water's proposed and ACCC final decision (\$ '000, gross, \$2013–14)**

	ACCC decision - User share	ACCC decision - Government share	ACCC decision - Total	State Water proposal	Difference between proposal and final	Percentage difference
<b>Border Rivers</b>	286	-	286	345	-59	-17%
<b>Gwydir</b>	777	-	777	921	-143	-16%
<b>Namoi</b>	920	-	920	1,056	-136	-13%
<b>Peel</b>	244	-	244	365	-121	-33%
<b>Lachlan</b>	1,055	-	1,055	1,275	-220	-17%
<b>Macquarie</b>	1,065	-	1,065	1,349	-284	-21%
<b>Murray</b>	700	-	700	915	-215	-23%
<b>Murrumbidgee</b>	1,470	-	1,470	1,795	-325	-18%
<b>Lowbidgee</b>	106	-	106	150	-44	-29%
<b>Fish River</b>	982	-	982	986	-4	0%
<b>Total</b>	<b>7,605</b>	<b>-</b>	<b>7,605</b>	<b>9,155</b>	<b>-1,550</b>	<b>-17%</b>

Source: ACCC analysis

### ACCC's consideration

State Water's submission provided no additional detail on its Corporate systems capex. However, as discussed in section 1.4.1, State Water did provide updated budget forecasts for 2014-17. This information was disaggregated at a project level only for 2014-15 and the ACCC has incorporated this updated information into its forecast for 2014-15. However, as noted in section 4.4.1, the information provided for 2015-16 and 2016-17 was not sufficiently detailed for the ACCC to examine the composition of those forecasts. Because the ACCC cannot examine the basis of the forecasts in the later years, the ACCC considers its draft decision best reflects the prudent and efficient expenditure in the 2014–17 regulatory period.

#### 4.4.9 Asset class allocation

The ACCC's decision on the expenditure in each asset class for inclusion in the PTRM is set out below.

**Table 4-13 ACCC draft decision on capital expenditure by asset class (\$'000, gross, \$2013–14)**

	2014–15	2015–16	2016–17	Total
<b>Dams</b>	49,283	22,887	31,004	103,174
<b>Storage reservoirs</b>	2,925	6,991	8,477	18,393
<b>IT systems</b>	2,983	2,532	2,090	7,605
<b>Plant &amp; machinery</b>	150	37	38	225
<b>Pipelines</b>	97	800	1,700	2,597
<b>Total</b>	<b>55,438</b>	<b>33,247</b>	<b>43,309</b>	<b>131,994</b>

Source: ACCC analysis.



## 5 Rate of return

The rate of return is an input to the ACCC's building block approach, which it uses to determine total revenue for each regulatory year of the regulatory period. The rate of return is to be commensurate with the commercial risk associated with State Water's regulated activities such that it recovers its efficient costs.<sup>178</sup>

The ACCC has calculated State Water's cost of capital building block by multiplying the rate of return with the value of State Water's capital base. Consistent with State Water's pricing application, the rate of return we adopt is the nominal 'vanilla' weighted average cost of capital (WACC) specification.<sup>179</sup> This is also consistent with the pricing principles under the *Water Charge (Infrastructure) Rules 2010* (the pricing principles).

This attachment provides detailed reasons for the ACCC's decision on the rate of return.

### 5.1 Final decision

The ACCC has not approved a rate of return of 8.96 per cent, as set out in State Water's pricing application. Consistent with our draft decision, we have applied a rate of return consistent with the methodology set out in the pricing principles.

For the period 1 July 2014 to 30 June 2017, the ACCC will apply a rate of return of 6.92 per cent to State Water. As indicated in our draft decision, and consistent with the pricing principles, we have updated the risk free rate and debt risk premium (DRP) in our draft decision.<sup>180</sup> We updated these parameters using an averaging period of 40 business days commencing as close a practically possible to the start of the regulatory period. Specifically, we used market data from 26 March 2014 to 23 May 2014. We consider a rate of return of 6.92 per cent to be commensurate with the commercial risks associated with State Water's regulated activities such that it recovers its efficient costs.

As the ACCC applies the pricing principles for setting the rate of return, it 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. We define 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>178</sup> ACCC, *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011, p. 26. (ACCC, *Pricing principles under the WCIR*, July 2011).

<sup>179</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>180</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 pricing principles for several parameters. The ACCC has not agreed with these proposed departures, which include:

- Adopting a 10 year historical average risk free rate in estimating the return on equity.<sup>181</sup> Rather, we have 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, we have 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>182</sup>
- Using a DRP based on a 10 year historical average. Rather, we have estimated a prevailing 10 year forward looking DRP.

Table 5-1 sets out the rate of return parameters determined by the ACCC. For the period 1 July 2014 to 30 June 2017, we will apply 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 our draft decision, State Water recommended we reconsider the risk free rate, MRP and equity beta.<sup>183</sup> State Water was not explicit on the values it considered we should apply to these parameters. Stakeholder submissions have supported applying a lower rate of return than 8.96 per cent.<sup>184</sup>

**Table 5-1 State Water's rate of return (nominal) — ACCC's final decision<sup>185</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) We have 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 our draft decision, where we applied an indicative averaging period from 16 December 2013 to 15 January 2014.

<sup>181</sup> Specifically, the 10 year period ending 22 March 2013.

<sup>182</sup> ACCC, *Pricing principles under the WCIR*, July 2011, pp. 34–38.

<sup>183</sup> State Water Corporation, *Response to the ACCC draft decision on State Water pricing application*, April 2014, p. 6.

<sup>184</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>185</sup> This draft decision does not address gamma because State Water did not propose a tax building block. Typically, we 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.

## 5.2 Legislative framework

The ACCC's draft decision outlined the legislative framework under which it applies the rate of return to State Water.<sup>186</sup> We repeat this framework here. We also establish that applying the pricing principles is consistent with the legislative framework.

The *Water Charge (Infrastructure) Rules 2010* (WCIR) provide for price approvals or determinations for State Water. State Water is a Part 6 operator under the WCIR.<sup>187</sup>

Rule 25 requires Part 6 operators to propose regulated charges for approval or determination by the ACCC (or by an accredited State regulator).<sup>188</sup> This application must include information listed in Schedule 1 to the WCIR, including details on the rate of return.<sup>189</sup>

The ACCC is to consider the part six operator's application and other submissions in accordance with the test in rule 29, which specifies the following:<sup>190</sup>

(1) The Regulator, after considering submissions received before the date specified in the notice published under paragraph 28 (b), must, subject to subrule (2), approve, or determine, the regulated charges set out in the application under this Division.

(2) The Regulator must not approve the regulated charges set out in an application under this Division unless the Regulator is satisfied:

(a) that the determination of the applicant's regulatory asset base used to calculate those charges (where relevant) is in accordance with Schedule 2; and

(b) that:

(i) the applicant's total forecast revenue (from all sources) for the regulatory period is reasonably likely to meet the prudent and efficient costs of providing infrastructure services in that regulatory period; and

(ii) the forecast revenue from regulated charges is reasonably likely to meet that part of the prudent and efficient costs of providing infrastructure services that is not met from other revenue.

(3) If the Regulator is not satisfied as to the matters referred to in subrule (2), the Regulator must determine the regulated charges on the basis of the applicant's regulatory asset base determined in accordance with Schedule 2 (where relevant) and so as to be satisfied as to the matters referred to in paragraph (2)(b).

(4) In approving or determining regulated charges under this rule, the Regulator must have regard to whether the regulated charges would contribute to achieving the Basin water charging objectives and principles set out in Schedule 2 of the Act.

Under rule 29, the application refers to State Water's pricing application. The submissions referred to under rule 29 (1) include State Water's submission to the ACCC's draft decision. Therefore, the primary test is that the ACCC must be satisfied the applicant's total forecast revenue set out in the pricing application is likely to meet the prudent and efficient costs of providing infrastructure services in that regulatory period.

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<sup>186</sup> ACCC, *Draft decision on State Water pricing application 2014–15 to 2016–17: Attachments*, 5 March 2014, pp. 145–146. (ACCC, *Draft decision on State Water (attachments)*, March 2014).

<sup>187</sup> Part 6 of the WCIR applies to an infrastructure operator that is not a member owned operator if it provides services in relation to at least 250GL of water access entitlements. See WCIR 23(1).

<sup>188</sup> The Essential Service Commission of Victoria (ESC) is an accredited State regulator. The ESC regulates Goulburn–Murray Water and Lower Murray Water under the WCIR.

<sup>189</sup> WCIR, Schedule 1: Information to be included in an application under Division 2 of Part 6 (r. 25).

<sup>190</sup> WCIR, rule 29.

The WCIR do not include any specific requirements for determining the rate of return for part six operators. Instead, the WCIR include requirements for determining the total forecast revenue. Under the building block approach, the return on capital building block is a component of total forecast revenue. Further, the return on capital building block is calculated by multiplying State Water's regulatory asset base with the rate of return. Accordingly, the WCIR requirements applicable to determining the total forecast revenue are also relevant for determining the rate of return.

The ACCC considers that the rate of return approach outlined in the pricing principles is likely to contribute to the meeting of prudent and efficient costs of providing infrastructure services in the regulatory period. Section 5.4 provides detailed reasons for why we consider the approach set out in the pricing principles produces a reasonable estimate of the rate of return which contributes to a prudent and efficient forecast of costs.

We must also have regard to whether the regulated charges would contribute to achieving the Basin Water Charging Objectives and the Basin Water Charging Principles.<sup>191</sup> The Basin Water Charging Objectives include, 'to facilitate the efficient functioning of water markets (including inter-jurisdictional water markets, and in both rural and urban settings)'.<sup>192</sup> Also, the Basin Water Charging Principles specify that, 'pricing policies should ensure consistency across sectors and jurisdictions where entitlements are able to be traded'.<sup>193</sup> We consider that these aspects of the Basin Water Charging Objectives and the Basin Water Charging Principles are best met through the consistent application of the pricing principles across the Murray Darling Basin (MDB), where there are multiple regulators. See 5.4.1 below for further reasoning on why we apply the pricing principles for setting State Water's rate of return.

### 5.3 Process behind the final decision

The following process took place for the ACCC to come to this final decision:

- State Water submitted its pricing application. State Water proposed to depart from the pricing principles by adopting:<sup>194</sup>
  - An equity beta of 0.9, instead of an equity beta of 0.7. State Water submitted a consultant report by SFG to support its proposed equity beta (the SFG report).<sup>195</sup>
  - A historical risk free rate averaged over 10 years, instead of a prevailing risk free rate averaged over 10–40 business days.
  - A historical DRP averaged over 10 years, instead of a prevailing DRP averaged over 10–40 business days.
- The ACCC published its draft decision, proposing to apply the pricing principles in full.<sup>196</sup>
- State Water lodged its submission to the ACCC's draft decision. State Water' submission did not propose any specific parameter values. However, its submission recommended we reconsider the equity beta, MRP and risk free rate set out in our draft decision. State Water submitted a

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<sup>191</sup> See the *Water Act 2007*, Schedule 2 Parts 2 and 3 for the Water charging objectives and Water charging principles respectively.

<sup>192</sup> *Water Act 2007*, Schedule 2, Part 2 (c).

<sup>193</sup> *Water Act 2007*, Schedule 2, Part 2, cl. 3(7)

<sup>194</sup> State Water, *Pricing application to the ACCC*, June 2013, p. 99

<sup>195</sup> SFG, *Report to State Water*, April 2013.

<sup>196</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 146–148.

consultant report by Frontier Economics to support its submission (the Frontier report).<sup>197</sup> The Frontier report supported the SFG report on the equity beta. The Frontier report also supported State Water's position on the relationship between the MRP and risk free rate. We do not consider State Water's submission clear on whether State Water has changed its position from its pricing application.<sup>198</sup> For example, in its pricing application, State Water noted the difficulties with using DGMs. However, the Frontier report appeared to be supportive of using DGM estimates.

- The ACCC has come to a final decision on State Water's pricing application. In assessing State Water's pricing application, we give consideration to State Water's submission on our draft decision.

## 5.4 Reasons for decision

In forming its final decision, the ACCC considered an extensive range of material on the rate of return. This has included:

- The pricing principles, which set out our methodology for conducting price approvals and determinations provided for in the *Water Charge Infrastructure Rules 2010 (WCIR)*. This has formed the basis for our approach to estimating the rate of return, including the values or methods for setting most parameters. As set out in 5.4.1, we consider there are important benefits in applying the pricing principles to State Water.<sup>199</sup>
- State Water's pricing application, including the SFG report.
- Submissions from stakeholders to State Water's pricing application and the ACCC's draft decision. This includes State Water's submission to the ACCC's draft decision, including the Frontier report.
- The Australian Energy Regulator's (AER's) 2009 WACC guideline and 2013 rate of return guideline.
- Recent regulatory decisions on the rate of return, including related expert advice. In particular, decisions and expert advice under the Victorian gas access arrangement review (VicGAAR).<sup>200</sup>

### 5.4.1 Pricing principles

In its draft decision, the ACCC set out its reasons for determining State Water's rate of return consistently with the pricing principles.<sup>201</sup> We have maintained this position. That is, we consider there are benefits to promoting regulatory certainty and consistency across the MDB. Further, we consider the pricing principles produce a rate of return that is consistent with the legislative framework. For these reasons, we consider it appropriate to determine State Water's rate of return consistently with the pricing principles.

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<sup>197</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014.

<sup>198</sup> State Water Corporation, *Response to the ACCC draft decision on State Water pricing application*, April 2014, p. 6. (State Water, *Response to the ACCC's draft decision*, April 2014).

<sup>199</sup> The pricing principles set out our methodology for conducting the price approvals or determinations provided for in the *Water Charge Infrastructure Rules 2010 (WCIR)*.

<sup>200</sup> This primarily relates to the AER's analysis of the prevailing 10 year forward looking risk free rate and its relationship with the MRP.

<sup>201</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 146–148.

We also note that, while State Water submitted we re-consider particular parameters in our draft decision, it did not respond to our reasons for maintaining consistency with the pricing principles.<sup>202</sup>

The ACCC considers the pricing principles are consistent with the legislative framework (see section 5.2). Particularly, we consider the rate of return approach outlined in the pricing principles is likely to contribute to the meeting of prudent and efficient costs of providing infrastructure services in the regulatory period.<sup>203</sup> Section 5.4.2 sets out why we consider the pricing principles meet this legislative requirement.

The ACCC considers that, in the economic regulation of water operators across the MDB, there is an important balance to strike between, on the one hand:

- providing certainty to stakeholders. We have previously stated:<sup>204</sup>
  - ...price methodology guidelines can promote regulatory certainty for regulated operators by communicating the way in which the regulator will apply the rules. This in turn will assist operators in complying with the rules and hence, will minimise compliance costs for stakeholders
- achieving consistency across the MDB where there are multiple regulators. Aspects of the Basin Water Charging Objectives and the Basin Water Charging Principles are best met through the consistent application of the pricing principles across the MDB.<sup>205</sup> For instance, the *Water Act 2007* states 'pricing policies should ensure consistency across sectors and jurisdictions where entitlements are able to be traded'.<sup>206</sup> Further, the explanatory statement for the WCIR states:<sup>207</sup>
  - Each of the Basin jurisdictions currently has different arrangements in place for regulating fees and charges levied by operators on water users. Inconsistent pricing policies across interconnected markets can create trade distortions with ramifications for the economically efficient use of, and investment in, water infrastructure.

And, on the other hand:

- the need to reflect changes in market conditions. We have stated that several parameters used to calculate the rate of return are influenced by market conditions which can change over time.<sup>208</sup>
- the benefit of reflecting new regulatory approaches.

To balance these objectives, the ACCC has applied the following regulatory approach:

- publish the pricing principles. This promotes regulatory certainty in that it is a public statement of our intended approach to regulating water operators.
- require state regulators in the MDB to apply the pricing principles without amendment as a condition of accreditation. As noted in the draft decision, the WCIR include provisions for the accreditation of other State regulators. These provisions were drafted so the ACCC could require State regulators to implement the pricing principles as a condition of accreditation. Therefore, the ACCC published the pricing principles so that pricing approvals and determinations would be implemented consistently throughout the MDB where there are multiple regulators. In February 2012, the ACCC accredited the Essential Services Commission of Victoria (ESC) as a state

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<sup>202</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 6.

<sup>203</sup> See WCIR, rule 29.

<sup>204</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 6.

<sup>205</sup> In particular, *Water Act 2007*, Schedule 2, Part 2 (c); *Water Act 2007*, Schedule 2, Part 2, cl. 3(7).

<sup>206</sup> *Water Act 2007*, Schedule 2, Part 3, principle (d).

<sup>207</sup> *Explanatory Statement: Water Act 2007– Water Charge (Infrastructure) Rules 2010*, p. 3.

<sup>208</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 10.

regulator with the authority to make water charge approvals and determinations under the WCIR. The accreditation arrangements were subject to the condition that the ESC applies the pricing principles for approvals of determinations under the WCIR.<sup>209</sup> Accordingly, if we were to depart from the pricing principles for State Water, this would create an inconsistency between the ESC's and our regulatory approaches. This would go against promoting the consistent application of the pricing principles across the MDB. This is particularly because the pricing principles, in their current state, already outline a reasonable approach to estimating a rate of return that will contribute to determining regulated charges that will meet the prudent and efficient costs of providing infrastructure services.

- review the pricing principles periodically in consultation with regulated water operators and State regulators. We have stated that:<sup>210</sup>

It is likely that the [pricing] principles will require revision from time to time to reflect changes in market conditions or new regulatory approaches. For this reason, the ACCC will retain the discretion to amend the pricing principles if necessary. In making any substantive changes to the [pricing] principles, the ACCC will seek the views of stakeholders, including regulated businesses and relevant state regulators.

State Water has proposed the ACCC depart from the pricing principles in estimating the rate of return. However, we consider the pricing principles, in their current state, outline an approach to setting the rate of return that contributes to determining regulated charges that should meet the prudent and efficient costs of providing infrastructure services. Section 5.4.2 sets out our reasoning for this position. Section 5.5 specifically outlines why we do not agree with State Water's proposed departures to the pricing principles. Given the reasons outlined in these sections, we consider that even if the approach outlined in the pricing principles could be improved upon, any potential improvement would be marginal. This is such that any marginal benefits of departing from the pricing principles would be unlikely to outweigh the marginal costs of applying inconsistent pricing policies across the MDB. Further, departing from the pricing principles at this stage would require doing so without adequate stakeholder consultation. The ACCC recognises that stakeholder consultation is essential to sound regulatory practice. Therefore, we consider that any departure from our current methodology would be best dealt with in a comprehensive review of all the pricing principles. Given we are scheduled to conduct a full review of all pricing principles after 1 July 2014; this would be a good opportunity to consider whether the pricing principles should be amended.<sup>211</sup>

## 5.4.2 Reasonableness of the pricing principles

The ACCC considers the rate of return approach outlined in the pricing principles will likely contribute to the meeting of prudent and efficient costs of providing infrastructure services in the 1 July 2014 to 30 June 2017 regulatory period. Our reasoning for this is set out in the following paragraphs.

### **Risk free rate**

- The risk free rate measures the return an investor would expect from an asset with no default risk.
- We consider the pricing principles set out a reasonable approach for setting the risk free rate that contributes to determining regulated charges that meets the prudent and efficient costs of providing infrastructure services. That is, we consider a prevailing risk free rate is most accurately

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<sup>209</sup> ACCC, *Final decision on application by ESC for accreditation*, February 2012, p. 8.

<sup>210</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 6.

<sup>211</sup> ACCC, *Pricing principles under the WCIR*, June 2011, pp. 6, 11, 77.

measured using CGS yields, averaged over a period of 10–40 business days commencing as close as practically possible to the start of the regulatory period.<sup>212</sup>

- The ACCC has not departed from its reasoning set out in the draft decision. This reasoning included:
  - At any point in time, the prevailing risk free rate is the benchmark that the expected return on a risky investment must exceed (by a magnitude equal to the risk premium for the risky investment).<sup>213</sup>
  - Prevailing yields on 10 year CGS reflect the risk free rate over the appropriate forward looking investment horizon. The appropriate investment horizon is 10 years.<sup>214</sup>
  - Yields on CGS are market determined—that is, prevailing yields on CGS reflect the return that investors are willing to receive in current market conditions on an investment that is almost default risk free. As such, the current yields on CGS reflect what would be expected of a well-functioning risk free rate proxy in current demand and supply conditions.<sup>215</sup> In fact, in the Telstra matter, the Tribunal stated, 'it is not unusual for yields to move from time to time in order to reflect prevailing market conditions and the expectations about the prospect for prices into the future'.<sup>216</sup>
  - This approach promotes the regulatory objective, consistent with the building block model, that the present value of a service provider's expected revenue should match the present value of a service provider's expected expenditure (plus or minus any efficiency rewards or penalties). Associate Professor Lally advised this to the AER during the VicGAAR.<sup>217</sup>
  - The use of prevailing yields on CGS is consistent with the use of the Sharpe–Lintner CAPM. In the ActewAGL matter, both the expert for the AER (Associate Professor Lally) and the expert for the service provider (Greg Houston) agreed on this point.<sup>218</sup>

## Market risk premium

The MRP is the expected return over the risk free rate that investors require to invest in a well-diversified portfolio of risky assets. It represents the risk premium that investors can expect to earn for bearing only non-diversifiable (systematic) risk. The MRP is common to all assets in the economy and not specific to an individual asset or business.

- The ACCC considers a MRP of 6.0 per cent in estimating a cost of capital that will contribute to a determination of revenue that is reasonably likely to meet the prudent and efficient costs of providing the infrastructure services, based on historical excess returns and survey estimates.

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<sup>212</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 31.

<sup>213</sup> McKenzie, M. and Partington, G., Supplementary report on the market risk premium, 22 February 2012, p. 11. (McKenzie and Partington, Supplementary report on the MRP, February 2012).

<sup>214</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 31; AER, Final decision: Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters, 1 May 2009, p. xiii. (AER, Final Decision: WACC Review, May 2009).

<sup>215</sup> The Treasury and AOFM advice indicates that the movement in the Australian yield curve reflects a range of factors, including the changed stance of monetary policy and global financial market instability. See Australian Treasury and Australian Office of Financial Management, *The Commonwealth Government Securities Market*, July 2012. (Treasury and AOFM, Letter regarding the CGS Market, July 2012).

<sup>216</sup> Australian Competition Tribunal, *Telstra Corporation Limited ABN 33 051 775 556 [2010] ACompT 1*, 10 May 2010, paragraph 417.

<sup>217</sup> Lally, M., *The risk free rate and the present value principle*, 22 August 2012, p. 3.

<sup>218</sup> Federal Court of Australia, *ActewAGL Distribution v The Australian Energy Regulator [2011] FCA 639*, 8 June 2011, paragraph 148.



Table 5-2 shows that historical excess returns indicate 6.0 per cent is a reasonable estimate of the MRP.

**Table 5-2 Historical excess return estimates (%)**

Sampling period	Arithmetic mean	Geometric mean
1883–2012	6.3	4.8
1937–2012	5.9	3.9
1958–2012	6.4	3.8
1980–2012	6.3	3.6
1988–2012	5.7	3.6

Source: AER, *Explanatory statement rate of return guideline (appendices)*, December 2013, p. 82. The AER sources data from NERA Economic Consulting, *The market risk premium, analysis in response to the AER's draft rate of return guideline: A report for the Energy Networks Association*, 11 October 2013; J. Handley, *An estimate of the historical equity risk premium for the period 1883 to 2011*, April 2012.

Note: These estimates assume that theta, the utilisation rate of imputation credits, is 0.7. While the pricing principles do not specify what the value of theta should be, the AER applies a theta of 0.7. State Water proposes a gamma of 0.25, which would suggest that theta is less than 0.7. Since estimated historical excess returns increase with theta, the values in this table may be overstated. However, we consider this overstatement would be immaterial.

Table 5-3 shows that the majority of survey measures across different years, survey respondents and authors support an MRP of about 6.0 per cent.

**Table 5-3 Key findings of MRP surveys**

Survey	Number of responses	Mean	Median	Mode
KPMG (2005)	33	7.5%	6.0%	6.0%
Capital Research (2006)	12	5.1%	5.0%	5.0%
Truong, Partington and Peat (2008)	38	5.9%	6.0%	6.0%
Bishop (2009)	27	N/A	6.0%	6.0%
Fernandez (2009)	23	5.9%	6.0%	N/A
Fernandez and Del Campo (2010)	7	5.4%	5.5%	N/A
Fernandez et al (2011)	40	5.8%	5.2%	N/A
Asher (2011)	45	4.7%	5.0%	5.0%
Asher (2012)	49	4.6%	5.0%	4.0–6.0%
Ernst & Young (2012)	17	6.26%	6.0%	6.0%
Fernandez et al (2013)	73	5.9%	6.0%	N/A
KPMG (2013)	23	N/A	6.0%	N/A
Fernandez et al (2013)	17	6.8%	5.8%	N/A

Sources: Table extracted from AER, *Explanatory statement rate of return guideline (appendices)*, December 2013, p. 92. Information sourced from KPMG (2005), Capital Research (2006), Truong, Partington and Peat (2008), Bishop (2009), Fernandez (2009), Fernandez and Del Campo (2010), Fernandez et al. (2011), Asher (2011), Asher (2012), Fernandez et al. (2013a3), KPMG (2013), Fernandez (2013b).

## Equity beta

The equity beta provides a measure of the riskiness of an asset's return relative to the entire market. The equity beta reflects the exposure of the asset to systematic or non-diversifiable risk, which is the only form of risk that requires compensation under the Sharpe–Lintner CAPM.<sup>219</sup>

The pricing principles consider Australian energy networks can be used as a proxy for the systematic risk of Australian water networks. The ACCC considers this approach achieves its regulatory task set out in rule 29 and described in sections 5.2 and 5.4.1. For the reasons outlined in the draft decision, we consider Australian energy networks are an appropriate comparator for Australian water infrastructure operators.<sup>220</sup>

- The pricing principles set out that the equity beta should be 0.7. We consider 0.7 is a reasonable estimate of the equity beta that contributes to determining regulated charges that should meet the prudent and efficient costs of providing infrastructure services. Empirical equity beta estimates for Australian energy networks (see Table 5-4) suggest that an estimate of 0.7 is reasonable, albeit conservative.

**Table 5-4 Equity beta point estimates for Australian energy networks**

Source	Estimation period	Individual firm averages	Fixed portfolios	Varying portfolios	Summary of analysis permutations
<b>Henry 2009</b>	2002–2008	0.45–0.71	0.49–0.66	0.43–0.78	Monthly/weekly intervals, 2002/2003 start. Ordinary least squares (OLS) and least absolute deviations (LAD) regressions. Value/equal weighted fixed portfolios and average/median time varying portfolios
<b>ERA 2011</b>	2002–2011	0.44–0.60	–	–	Monthly/weekly intervals. OLS/LAD regressions
<b>ERA 2013</b>	2002–2012	Range of firms averaged across permutations 0.20–1.1. Range of permutations averaged across firms 0.48–0.52	Range of portfolios averaged across permutations 0.42–0.53. Range of permutations averaged across portfolios 0.45–0.52	–	OLS, LAD, method of moments and Theil-Sen regressions. Value/equal weighted portfolios <sup>221</sup>
<b>SFG 2013</b>	2002–2012	0.60	–	0.55	Four weekly repeat sampling
<b>Henry 2014</b>	2002–2013	0.2–0.8, mean and median point estimates clustered around 0.5 and 0.4	0.43–0.55	0.38–0.53, but considers this evidence unreliable	See Henry 2009

Source: Henry, *Estimating  $\beta$ : An update*, April 2014, pp. 27, 44, 59; AER, *Explanatory statement rate of return guideline*, December 2013, p.87; ERA, *Explanatory statement for the rate of return guidelines*, December 2013, pp. 171, 173; SFG, *Regression-based estimates of risk parameters for the benchmark firm*, 24 June 2013, pp. 12–15; Henry, *Estimating  $\beta$* , 23 April 2009. Note some averages are calculated by the AER.

<sup>219</sup> McKenzie and Partington, *Risk, asset pricing models and WACC*, June 2013, p. 21.

<sup>220</sup> See *Draft decision on State Water (attachments)*, March 2014, pp. 157–159.

<sup>221</sup> SFG, *Report to State Water*, April 2013, p. 15.

- The OLS regression performed by SFG for State Water also suggested that 0.7 is a conservative estimate for the equity beta. SFG's OLS regression estimated a re-levered equity beta of 0.59 for Australian listed energy networks.<sup>222</sup>
- Table 5-5 shows the range of equity beta estimates used in recent regulatory decisions for Australian water networks. This information supports applying an equity beta estimate of 0.7 to State Water.

**Table 5-5 Recent regulatory determinations of equity betas for Australian water networks**

Regulator	Decision	Date	Equity beta
IPART	Essential Energy's water and sewerage services in Broken Hill (Draft report)	Mar 2014	0.6–0.8
ESCOSA	Second SA Water price determination: Draft framework and approach	Nov 2013	0.8
ESC	Greater metropolitan water businesses, regional urban water businesses	Jun 2013	0.65
ESC	Rural water businesses	Jun 2013	0.65 or 0.7 <sup>a</sup>
IPART	Hunter Water Corporation	Jun 2013	0.6–0.8 (20 basis points above WACC range under current market conditions)
ESCOSA	SA Water	May 2013	0.8
IPART	Gosford City Council, Wyong Shire Council	May 2013	0.6–0.8 (20 basis points above WACC range under current market conditions)
QCA	Seqwater's water supply schemes	Apr 2013	0.65
ERA	Water Corporation, Aqest, Busselton Water	Mar 2013	0.65
IPART	Sydney Catchment Authority	Jun 2012	0.6–0.8 (midpoint WACC)
IPART	Sydney Water Corporation	Jun 2012	0.6–0.8 (midpoint WACC)
QCA	SunWater's water supply schemes	May 2012	0.55

Source: IPART, *Essential Energy's water and sewerage services in Broken Hill*, March 2014, p. 141; ESCOSA, *Second SA Water price determination: Draft framework and approach*, November 2013 p. 34; ESC, *Price review 2013 — Final decision*, June 2013; IPART, *Hunter Water Corporation: Final report*, June 2013; ESCOSA, *SA Water's water and sewerage revenues: Final determination — Statement of reasons*, May 2013; IPART, *Gosford City Council and Wyong Shire Council, Water — Final Report*, June 2013; QCA, *Final report: Seqwater irrigation price review*, vol. 1, April 2013; ERA, *Inquiry into the efficient costs and tariffs of the Water Corporation, Aqwest and the Busselton Water Board: Revised final report*, March 2013; IPART, *Review of prices for the Sydney Catchment Authority*, June 2012; IPART, *Review of prices for Sydney Water Corporation's water, sewerage, stormwater drainage and other services*, June 2012; QCA, *Final report: SunWater, Irrigation price review*, vol. 1; May 2012.

Note: (a) ESC is required to adhere to the ACCC pricing principles when regulating water utilities in the Murray Darling Basin. Therefore, it applies an equity beta of 0.7 to Goulburn–Murray Water and Lower Murray Water.

- Regarding the estimates in Table 5-5:
  - IPART has applied an equity beta range of 0.6–0.8 to water networks, based on a report from its consultant, SFG.<sup>223</sup> Using this data, SFG recommended IPART adopt a 0.7 equity beta

<sup>222</sup> The ERA's guideline also included a bootstrapping permutation. The ERA found the 95 per cent confidence interval fell within the range of 0.3 –0.72 when an average of the end points for each firm was taken. See ERA, *Explanatory statement for the rate of return guideline*, 16 December 2013, p. 190.

<sup>223</sup> IPART, *Review of water prices for SDP*, December 2011, p. 87.

under 60 per cent leverage.<sup>224</sup> We note this recommendation was above its mean OLS beta estimate of 0.55, and fell within a 90 per cent confidence interval of 0.40–0.70.<sup>225</sup>

- QCA applied an equity beta of 0.55 to SunWater in 2012.<sup>226</sup> QCA's consultant, NERA concluded, 'the equity beta of an Australian water business should be set at a value that is no different from the equity beta of an Australian energy utility'.<sup>227</sup>
- ESCOSA applied an equity beta of 0.8 to SA Water in 2013, placing more weight on regulatory stability than on empirical evidence.<sup>228</sup> ESCOSA considered regulatory decisions heavily weighted towards empirical evidence and firm specific characteristics produce estimates of around 0.6–0.7.<sup>229</sup>

## 5.5 Response to State Water's submission to the draft decision

In its response to the ACCC's draft decision, State Water recommended 'the ACCC reconsider the risk-free rate, market risk premium and equity beta'.<sup>230</sup> State Water also requested we consider the advice of its consultant, Frontier Economics (Frontier), which State Water attached to its submission.<sup>231</sup> We consider this information in the following paragraphs.

### 5.5.1 Consistency between the market risk premium and risk free rate

In its submission to the draft decision, State Water's position concerning how the ACCC should calculate MRP and the risk free rate was unclear. However, State Water expressed clear concerns that the ACCC has proposed to estimate the risk free rate and MRP inconsistently.

In contrast to its pricing application, State Water did not specify whether the ACCC should calculate the risk free rate using a 10 year historical averaging period or a 10–40 business day averaging period. However, State Water's consultant, Frontier, noted the following:<sup>232</sup>

- If the ACCC uses a MRP estimate derived using long-run, historical market data, then it should be consistent and use relatively long run historic data to estimate the risk free rate.
- If the ACCC uses only short run market data, it should recognise the negative relationship between the risk free rate and MRP.
- Conceptually, it is less preferable to use long run data. However, both of the above options would result in internally consistent return on equity estimates.
- 'The disagreement between State Water and the ACCC over the risk-free rate is really disagreement over the MRP'.<sup>233</sup>

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<sup>224</sup> SFG, *Cost of capital parameters for SDP*, August 2011, p. 38.

<sup>225</sup> SFG, *Cost of capital parameters for SDP*, August 2011, p. 5.

<sup>226</sup> QCA, *Final Report: SunWater irrigation price review: 2012–17*, Vol. 1, May 2012, p. 493.

<sup>227</sup> NERA recommended an equity beta of 0.8, as applied by the AER during the time of this determination. See NERA, *Cost of capital for water infrastructure company: Report for the QCA*, 28 March 2011, p. 48.

<sup>228</sup> ESCOSA, *Advice on a regulatory rate of return for SA Water: Final Advice*, February 2012, pp. 33–34.

<sup>229</sup> ESCOSA, *Advice on a regulatory rate of return for SA Water: Final Advice*, February 2012, p. 33.

<sup>230</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 6.

<sup>231</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 20.

<sup>232</sup> Frontier Economics, *Analysis of aspects of ACCC draft decision on State Water application: A report for State Water*, April 2014, pp. 53–54. (Frontier, *Analysis of the ACCC's draft decision*, April 2014).

<sup>233</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 61.

In its draft decision, the ACCC stated that its methods for calculating the risk free rate and MRP were appropriate and internally consistent.<sup>234</sup> We have maintained this view. In response to this view, State Water's consultant, Frontier stated:<sup>235</sup>

the inconsistency in the ACCC's approach that State Water wished to draw attention to was not an inconsistency in the assumed maturity of the risk-free rate and MRP... As we understand it, State Water's concern is that ACCC's approach uses, exclusively, short-run market data to estimate a contemporaneous risk-free, but places heavy reliance on long-run, historical market data to estimate the MRP.

This statement implies that Frontier has, in part, misunderstood the ACCC's position. The relevant factor, in terms of estimating parameters consistently, is that the individual parameters are consistent with one another. That is, we have consistently estimated 10 year forward looking parameters. As long as we are doing this, what matters for consistency is the accuracy of these estimates. This idea is supported by McKenzie and Partington when they stated, 'what matters is getting the best estimate of the current risk free rate and the best estimate of the current market risk premium'.<sup>236</sup>

### Relationship between the market risk premium and risk free rate

In its response to our draft decision, State Water's consultant, Frontier, submitted that 'the ACCC has inappropriately dismissed evidence of the negative relationship between the risk-free rate and the MRP'.<sup>237</sup> The ACCC disagrees with Frontier. The ACCC's position was based on careful analysis. Specifically, the ACCC took into account the substantial analysis on this matter from the AER's VicGAAR process. In light of this submission, we emphasise the following details:

- Contrary to Frontier's submission, we consider it appropriate to refer to consultant advice provided to the AER on the relationship between the MRP and risk free rate.<sup>238</sup> This is for the following reasons:
  - While this consultant advice was provided for an energy decision, the MRP and risk free rate are both market-wide parameters (specifically, the Australian market). As such, this advice is relevant to setting a rate of return for any business operating in Australia.
  - This information is highly relevant because Wright's report that State Water referred to in its pricing application was commissioned specifically for the AER's VicGAAR.<sup>239</sup> The relationship between the risk free rate and MRP was a particularly contentious issue in the VicGAAR. As such, the AER gave this issue great consideration and sought expert advice from a range of reputable consultants. We agree with the position reached by the AER and its consultants in the VicGAAR. Further, when the Victorian gas businesses sought review by the Australian Competition Tribunal (the Tribunal), the Tribunal found no error with the AER's position to adopt an MRP estimate of 6.0 per cent.<sup>240</sup>
- We consider McKenzie and Partington's report for the AER to be a particularly reliable source of information. McKenzie and Partington's report contained an extensive review of the theoretical and empirical evidence on the relationship between the risk free rate and MRP. McKenzie and

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<sup>234</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 152–153.

<sup>235</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 53.

<sup>236</sup> McKenzie and Partington, *Review of the AER's approach to the risk free rate and MRP*, February 2013, p. 6.

<sup>237</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 63.

<sup>238</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 56.

<sup>239</sup> Specifically, the report was in relation to the AER's final Roma to Brisbane Pipeline decision and draft decisions for APA GasNet and SP AusNet. See Wright, *Review of Risk Free Rate and Cost of Equity Estimates: A Comparison of UK Approaches with the AER*, October 2012, p. 1.

<sup>240</sup> Australian Competition Tribunal, *Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8*, 18 September 2013, paragraphs 227–308.

Partington's conclusion was based on a more comprehensive analysis of the academic literature on this issue than that contained in Wright's report. The report found that a negative relationship was insufficiently established to form the basis for a regulatory adjustment to the MRP.<sup>241</sup> Having considered empirical evidence from the USA, UK and Australia, McKenzie and Partington found that both pro and counter-cyclical relations were possible.<sup>242</sup>

- We do not consider Frontier's objection to McKenzie and Partington's report to be valid. Frontier stated, 'the key problem with this analysis is that when analysing the question of the stability of the cost of equity, the authors appear to conflate realised and expected returns'.<sup>243</sup> However, referencing a recent report by Wright and Smithers, Frontier stated:<sup>244</sup>

...realised returns averaged over a long enough history should reveal the average expected return...it is possible to estimate the MRP by calculating the average expected market return and subtracting from this the observed risk-free rate.

Frontier was suggesting that, at any point in time, a good estimate of expected returns is the historical average realised return. Wright's analysis would require making such an assumption, because unlike realised returns, expected returns are not observable. Further, there may be grounds to make this assumption because, assuming markets are efficient over the medium to long term, it would be reasonable to suggest that expected and realised returns would not differ substantially. However, on these grounds, Frontier's criticism of McKenzie and Partington's report is not valid. To show that Wright's assumptions are fair (or otherwise), it is important to analyse how realised returns have varied over time.

- Frontier objected to several concerns that our draft decision raised about Wright's report. In his report for the AER, Lally articulated these concerns succinctly as:<sup>245</sup>

I am not persuaded by this evidence for the following reasons. Firstly, since the concern here is with the cost of equity in Australia, Australian evidence would be more relevant than US evidence. Secondly, the definition of the MRP used by Australian regulators (and more generally) is the excess of the expected market return over the bond yield rather than the bond return and the time-series behaviours of the latter two series is quite different. For example, in the last few years, bond yields have been very low whilst Wright's Figure shows bond returns in recent years to be extremely high. Thirdly, since Wright's point is that the expected market return is more stable over time than the MRP, the Figure ought to have shown the time-series of MRP estimates and it does not do so. Fourthly, Wright appeals only to the visual evidence in this Figure rather than offering numerical results, and the natural numerical result would be the standard deviations for both the average market return series and the estimated MRP series.

In response to his concerns, Lally considered a time series of Australian market returns. Lally concluded that, 'contrary to Wright's claims, the estimated MRP series is much more stable than the average real market return series and therefore supports estimating the MRP rather than the real market cost of equity from historical data'.<sup>246</sup>

## Risk free rate

The ACCC has estimated the risk free rate to apply to State Water using market data from 26 March 2014 to 23 May 2014. This represents an averaging period of 40 business days commencing as close as practically possible to the start of the regulatory period. This is consistent with the pricing principles.

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<sup>241</sup> McKenzie and Partington, *Review of the AER's approach to the risk free rate and MRP*, February 2013, p. 6.

<sup>242</sup> McKenzie and Partington, *Review of the AER's approach to the risk free rate and MRP*, February 2013, p. 28.

<sup>243</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 60.

<sup>244</sup> Wright, Smithers, *the cost of equity capital for regulated companies: A review for Ofgem*, 2014; Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 57.

<sup>245</sup> Lally, *Review of the AER's methodology for the risk free rate and the MRP*, March 2013, p. 13.

<sup>246</sup> Lally, *Review of the AER's methodology for the risk free rate and the MRP*, March 2013, p. 13.

The ACCC determined this averaging period through the following process:

- ACCC staff wrote to State Water consulting on the exact period for the averaging period.<sup>247</sup> The context of this consultation was how the ACCC should implement its averaging period, in the event that the ACCC maintained its draft decision. Specifically, staff proposed to apply a 10 day averaging period of 12 May to 23 May. Staff proposed the end date on practical grounds, given the need to incorporate the rate of return into the revenue modelling and tariffs, and to have the final numbers approved by an internal committee and the ACCC.
- State Water responded submitting that the averaging period should be 40 business days commencing 26 March 2014 and ending on 23 May 2014.<sup>248</sup>
- The ACCC accepted State Water's proposed averaging period on the grounds that it was consistent with the pricing principles.

In contrast to its pricing application, State Water did not specify whether the ACCC should calculate the risk free rate using an average of yields on CGS over a 10 year historical period. In proposing an averaging period of 40 business days, State Water submitted the following reasoning:<sup>249</sup>

- The ACCC's pricing principles endorse an averaging period of 10– 40 days as close as practically possible to the start of the regulatory period;
- The ACCC's draft decision applied an indicative averaging period of 20 days. Also, the ESC has previously applied 40 and 20 day averaging periods to water operators in the MDB.
- In the case of *Application by Energy Australia and Others*, the Tribunal commented that 'it sees no special virtue in an averaging period close to the date of the AER's final decision'.<sup>250</sup> It also commented that it 'considers that an averaging period during which interest rates were at historically low levels is unlikely to produce a rate of return appropriate for the regulatory period'.<sup>251</sup>
- The averaging period includes the handing down of the Commonwealth Government budget, which has always impacted on CGS yields in the short term. Therefore, State Water considered that a 10 business day period would unlikely reflect the economic conditions to be experienced in 2014–17.

The ACCC has accepted the first of these reasons. As explained above, adopting a 10–40 day averaging period as close as practically possible to the start of the regulatory period is consistent with the pricing principles. This also estimates the risk free rate and MRP in an internally consistent manner. The ACCC did not accept the additional reasoning proposed by State Water for the following reasons:

- State Water's second reason is simply reflecting that the pricing principles allow for an averaging period of between 10– 40 business days.

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<sup>247</sup> Director–ACCC Water Branch, *Risk free rate averaging period*, email sent 8 May 2014.

<sup>248</sup> State Water, *ACCC information request post draft (averaging period for risk free rate)*, email received 9 May 2014.

<sup>249</sup> State Water, *ACCC information request post draft (averaging period for risk free rate)*, email received 9 May 2014.

<sup>250</sup> Australian Competition Tribunal, *Application by EnergyAustralia and Others [2009] ACompT 8*, 1 December 2009, paragraph 111.

<sup>251</sup> Australian Competition Tribunal, *Application by EnergyAustralia and Others [2009] ACompT 8*, 1 December 2009, paragraph 114.

- The Tribunal decision State Water referenced as its third reason was superseded under the VicGAAR. During VicGAAR, the AER departed from the previous Tribunal decision. This was upheld by the Tribunal, indicating the Tribunal changed its position.<sup>252</sup>
- We do not accept State Water's final reason because, in equilibrium, prevailing yields on CGS reflect the return that investors are willing to receive in current market conditions on an investment that is almost default risk. McKenzie and Partington note that, at any point in time, the prevailing risk free rate is the benchmark that the expected return on a risky investment must exceed.<sup>253</sup> Further, the Treasury and the Australian Office of Financial Management have advised that the current yields on CGS reflect what would be expected of a well-functioning risk free rate proxy in current demand and supply conditions.<sup>254</sup>

State Water has not provided us with any new material on why we should apply a historical risk free rate. Therefore, we see no reason to depart from our draft decision in applying a risk free rate using the yields on 10 year CGS, averaged over a period of 10–40 business days commencing as close as practically possible to the start of the regulatory period. The reasoning set out in our draft decision is still relevant and applies to this final decision.<sup>255</sup>

## Market risk premium

State Water's consultant, Frontier, submitted that our estimate of the MRP gave primacy to long run historical data and did not give any reasonable consideration to forward looking evidence.<sup>256</sup>

The pricing principles have regard to historical excess returns and survey evidence from market practitioners and academics when specifying a MRP estimate of 6.0 per cent. The ACCC considers that historical excess returns and survey evidence produce reasonable forward looking estimates of the MRP.

The ACCC notes that it must exercise judgement when estimating the MRP. This is because the MRP cannot be directly observed. While methods are available to infer investor expectations at a point in time, experts employ different methods and assumptions for estimating the MRP. In addition, each method has strengths and limitations, and may give conflicting outcomes.<sup>257</sup> Further, academic literature and reports by regulated businesses recognise that the evidence available for estimating the MRP is imprecise and subject to interpretation.<sup>258</sup>

- The ACCC considers that historical excess returns produce reasonable estimates of forward looking MRPs. In its draft decision, the ACCC noted, 'we use historical excess returns on the basis that they are likely to influence investors' expectations of the future'.<sup>259</sup> Historical excess returns have been used to estimate a forward looking MRP on the view that investors base their

<sup>252</sup> Australian Competition Tribunal, *Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8*, 18 September 2012, paragraphs 227–308.

<sup>253</sup> McKenzie, M. and Partington, G., Supplementary report on the market risk premium, 22 February 2012, p. 11. (McKenzie and Partington, Supplementary report on the MRP, February 2012).

<sup>254</sup> The Treasury and AOFM advice indicates that the movement in the Australian yield curve reflects a range of factors, including the changed stance of monetary policy and global financial market instability. See Australian Treasury and Australian Office of Financial Management, *The Commonwealth Government Securities Market*, July 2012. (Treasury and AOFM, Letter regarding the CGS Market, July 2012).

<sup>255</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p. 149–151.

<sup>256</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 52–63.

<sup>257</sup> See, for example, Mehra R. and Prescott E.C., 'The equity premium, a puzzle', *Journal of Monetary Economics*, 15, 1985, pp. 145–61; Damodoran A., *Equity risk premiums (ERP), determinants, estimation and implications*, September 2008, p. 1; Doran J.S., Ronn E.I. and Goldberg R.S., *A simple model for time-varying expected returns on the S&P 500 Index*, August 2005, pp. 2–3

<sup>258</sup> See, for example, Officer B. and Bishop S., *Market risk premium, a review paper*, August 2008, pp. 3–4.

<sup>259</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p. 152



forward looking expectations on past experience. This view has been recognised by the Tribunal in the Dampier to Bunbury Natural Gas Pipeline matter.<sup>260</sup> In fact, Dimson, Marsh and Staunton have indicated there is no better forecast of expected excess returns than the historical average.<sup>261</sup> Their conclusion was informed by their assessment of the current state of research on the MRP, which suggests there is no consensus on whether the equity premium is predictable.<sup>262</sup>

- Further, the ACCC considers that survey evidence can contribute to a reasonable estimate of a forward looking MRP. This information reflects the forward looking MRP applied in practice. However, we also recognise that survey evidence must be treated with caution because results may be subject to limitations. For instance, the relevance of survey results can depend on how clearly the survey sets out the framework for MRP estimation. This includes the term over which the MRP is estimated and the treatment of imputation credits. Survey based estimates may be subjective, because market practitioners may look at a range of different time horizons and they are likely to have differing views on the market risk. However, this concern may be mitigated as the sample size increases.<sup>263</sup>

### **Additional evidence to inform the market risk premium estimate**

State Water's consultant, Frontier, criticised the ACCC for not considering MRP estimates derived from dividend growth models (DGMs).<sup>264</sup>

- The ACCC notes that the AER has recently moved to place greater emphasis on DGM estimates. However, the AER stated that 'while we do not consider DGM estimates of the MRP as robust as estimates produced by historical excess returns, we consider these estimates useful'.<sup>265</sup> The AER also noted that DGM estimates of the MRP produced by different consultants in 2012 ranged from 5.90 to 9.56 per cent.<sup>266</sup> State Water also recognised these sensitivities in its pricing application by stating:<sup>267</sup>

In practice, DGM MRP estimates can be highly sensitive to the assumed inputs. One of the main difficulties with implementing the DGM sensibly is the challenges associated with forecasting long-term growth in dividends. In practice, earnings/growth forecasts are often obtained from market analysts. Unfortunately, the basis for analysts' forecasts is often unclear, and the forecasts themselves can vary significantly over time. In addition, DGM estimates can vary significantly depending on whether a constant growth rate is assumed, or whether a multi-stage model is used. There is often considerable dispute over the appropriate specification of the model.

Further, given the ACCC's reasons for maintaining consistency with the pricing principles (see section 5.4.1), we consider any potential refinements to our MRP approach should be considered as part of a full review of the pricing principles (including the rate of return pricing principles). We consider this is preferable to reviewing our approach on a determination by determination basis. We have stated that 'the ACCC will comprehensively review all pricing principles after 1 July 2014'.<sup>268</sup> Given the significant range of results produced by consultants that have applied DGMs, we would want to have a thorough and consultative assessment of DGMs before adopting them as part of our approach. As such, we

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<sup>260</sup> Australian Competition Tribunal, *Application by DBNGP (WA) Transmission Pty Ltd (No 3) [2012] ACompT 14*, 26 July 2012, paragraph 153.

<sup>261</sup> Dimson, Marsh and Staunton, *Credit Suisse Global Investment Returns Sourcebook 2012*, February 2012, p. 37.

<sup>262</sup> Dimson, Marsh and Staunton, *Credit Suisse Global Investment Returns Sourcebook 2012*, February 2012, p. 36.

<sup>263</sup> Australian Competition Tribunal, *Application by Envestra Limited (No 2) [2012] ACompT 3*, 11 January 2012, paragraphs 159–63.

<sup>264</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 55–56.

<sup>265</sup> AER, *Explanatory statement rate of return guideline (appendices)*, December 2013, p. 84.

<sup>266</sup> AER, *Explanatory statement rate of return guideline (appendices)*, December 2013, p. 87.

<sup>267</sup> State Water, *Pricing application to the ACCC*, June 2013, p. 103.

<sup>268</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 6.

consider the upcoming review of the pricing principles would be a more appropriate opportunity to consider how we might use such information.

When the ACCC reviews the pricing principles, it will consider the merits of using other sources of evidence to estimate the MRP. For instance, in its rate of return review, the AER considered a range of information that could inform the MRP. This included historical excess returns, survey evidence, DGMs, conditioning variables, Australian regulatory decisions, Tribunal decisions, expert advice, consistency between parameters, and return predictability.<sup>269</sup> Similarly, we could also consider the merits of using various sources of information to estimate the MRP.

## Equity beta

In its response to the ACCC's draft decision, State Water recommended the ACCC reconsider the equity beta and consider the advice of its consultant, Frontier Economics.<sup>270</sup> Specifically, State Water submitted that the ACCC's draft decision was based on 'a lack of justification for rejecting international water networks' equity betas in determining State Water's equity beta'.<sup>271</sup>

### ***Australian energy networks as benchmark for systematic risk***

State Water's consultant, Frontier, advised that the ACCC should give greater weight to international data. However, Frontier still maintained that energy based equity betas were appropriate to apply to water businesses.<sup>272</sup> This position is also consistent with the equity beta proposed in State Water's pricing application, which included empirical estimates from Australian energy networks.<sup>273</sup> Therefore, the ACCC sees no reason to depart from its draft decision to consider Australian energy networks as relevant comparators. The reasoning outlined in our draft decision still applies.<sup>274</sup>

### ***Having regard to decisions of Australian water regulators***

The ACCC considers State Water's consultant, Frontier, has misconstrued its position on considering regulatory decisions for Australian water networks. Frontier states:<sup>275</sup>

Having given reasons why the sample of overseas water utilities relied upon by State Water is inappropriate, the ACCC refers to determinations by other Australian regulators that use estimates for overseas water businesses as a means to justify its own estimate.

In its draft decision, the ACCC did not deem SFG's sample to be inappropriate. Rather, we flagged the need to be careful with using this information. We also stated that, by placing 67 per cent weight on this information, SFG was giving it too much weight.<sup>276</sup> Our draft decision recognised that, in considering regulatory decisions for Australian water networks, 'we have had some regard to equity betas for international water networks'.<sup>277</sup> Further, we do not agree with Frontier's inference that we have a 'reliance' on these estimates because regulatory decisions and empirical evidence equally support an estimate of 0.7.

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<sup>269</sup> AER, *Explanatory statement rate of return guideline (appendices)*, December 2013, pp. 78–113.

<sup>270</sup> State Water, *Response to the ACCC's draft decision*, April 2014, pp. 6, 20.

<sup>271</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 6.

<sup>272</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 65.

<sup>273</sup> This information is given 33 per cent weighting. 67 per cent weighting is given to international water businesses.

<sup>274</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 157–159.

<sup>275</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 72.

<sup>276</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p.159.

<sup>277</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p.162.

Further, we consider Frontier quoted its advice out of context when stating that the ACCC ignored its caution about relying on past regulatory determinations. Frontier's comment specifically related to advice it previously provided the AER.<sup>278</sup>

State regulators of water businesses in Australia have tended to evidence the AER's assessment of the covariance risk of regulated Australian energy networks to inform their estimates of covariance risk for the water companies they regulate. If the AER were to then employ precedents from these state regulators, it would introduce circularity to the analysis by effectively referencing its own past decisions. We think that this would be misleading and unhelpful. Therefore, we recommend that the AER not rely on precedent from Australian regulators of water businesses to inform its estimate of covariance risk for energy networks.

Frontier's advice to the AER concerned a particular circularity issue that relates to Australian energy regulators referencing the decisions of Australian water regulators. This advice was not intended to apply to water regulators referencing the decisions of other water regulators. We do not consider it problematic that the decisions of other water regulators are influenced by Australian energy networks. This reflects a general consensus that Australian energy networks are reasonable comparators for the systematic risk of Australian water networks. Further, some Australian water regulators, like IPART, consider international water networks to inform their equity beta estimates, and have still formed conclusions on the equity beta below that proposed by State Water.<sup>279</sup>

### ***International water networks as benchmark entities***

State Water submitted that the ACCC's draft decision gave insufficient consideration to international water networks.<sup>280</sup> State Water's consultant, Frontier, submitted similar concerns.<sup>281</sup>

Contrary to State Water's submission and the Frontier report, the ACCC does not consider the use of equity beta estimates from international water networks to be a key issue in its decision. Importantly, if we were to give greater weight to international data, this would have no impact on our estimate of the equity beta. Table 5-6 illustrates this. Table 5-6 shows SFG's OLS estimates of the equity beta, which it produced for State Water's pricing application.<sup>282</sup> These estimates indicate that 0.7 is a conservative estimate of State Water's equity beta. Importantly, we would draw this conclusion regardless of whether we used Australian energy networks, international water networks, or some combination of the two.

The source of SFG's high equity beta estimate is not its use of international comparators, but rather, its use of pooled and fitted estimates. Therefore, the ACCC considers SFG's choice of econometric models to be the key issue. Unlike OLS, which is standard practice, SFG's pooled and fitted regressions are inconsistent with the Sharpe–Lintner CAPM. See Methodological issues underpinning equity beta estimates for further analysis.

**Table 5-6 SFG's re-levered OLS point estimates for different comparator sets**

Sample	Re-levered OLS point estimate
Australian energy networks	0.59
US and UK water networks	0.64

Source: SFG, *Report to State Water*, April 2013, p. 3.

<sup>278</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 73.

<sup>279</sup> Specifically, IPART applies an equity beta range of 0.6–0.8.

<sup>280</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 6.

<sup>281</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 64–69.

<sup>282</sup> SFG, *Report to State Water*, April 2013, p. 3.

Given the results produced by OLS, the ACCC is satisfied that 0.7 is a conservative estimate. Frontier stated that it favoured SFG's sample because 'the analysis relied upon by State Water uses a larger sample of firms in order to mitigate estimation error associated with the very small sample of Australian energy networks relied upon by the ACCC'.<sup>283</sup> Even if we implemented Frontier's preference, the evidence before us would suggest that 0.7 was a conservative estimate of equity beta.

While giving greater consideration to international data would have no impact on State Water's estimated equity beta, the ACCC considers that SFG gave this information excessive weight. We consider that when defending SFG's approach, Frontier mischaracterised SFG's approach. That is, Frontier submitted, 'SFG suggested that overseas-listed water utilities could provide some useful information for estimating equity beta'.<sup>284</sup> SFG's analysis gave overseas-listed water utilities 67 per cent weight.<sup>285</sup> This, in our opinion, is going further than merely suggesting that overseas-listed water utilities could provide 'some' useful information. We do not consider it reasonable for Frontier to state that SFG's evidence was compatible with its advice because SFG did not place 100% weight on overseas evidence.<sup>286</sup> Frontier had advised that 'evidence on overseas water networks could be helpful, but should be interpreted with some care'.<sup>287</sup>

Further, the ACCC considers State Water mischaracterised its approach by submitting that the ACCC's draft decision was based on, 'a lack of justification for rejecting international water networks' equity betas in determining State Water's equity beta'.<sup>288</sup> We did not 'reject' the equity betas of international water networks. Rather, our draft decision had some regard to the equity betas of international water networks. This is because we considered regulatory decisions for Australian water networks; some of which have regard to international water networks.

With this in mind, the ACCC still considers that a degree of caution must be exercised when considering international comparators. As stated in our draft decision, a comparator business' geography will influence the conditions under which it operates relating to the regulatory regime, tax laws, industry structure and broader economic environment. As most of these conditions will be different for international comparator entities, the risk profiles of overseas entities are likely to differ from those within Australia.

Table 5-7 demonstrates how equity betas can vary with geographical differences. Considering the international comparators used by SFG, we can see that the difference between the average equity beta for the U.S. comparators (0.57) and U.K. comparators (0.77) are notably different.

**Table 5-7 SFG's re-levered OLS point estimates for different comparator**

Region	Average	Median
All	0.64	0.50
UK only <sup>a</sup>	0.77	0.54
US only <sup>b</sup>	0.57	0.48

Source: Calculated from SFG, *Report to State Water*, April 2013, p. 19.

<sup>283</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 68.

<sup>284</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 64.

<sup>285</sup> SFG, *Report to State Water*, April 2013, p. 5.

<sup>286</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 65.

<sup>287</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 65. See also Frontier, *The cross sectoral application of equity betas: energy to water*, April 2010, p. 10.

<sup>288</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 6.

Notes: (a) Calculated using Consolidated Water Co. Ltd., Northumbrian Water Group 1–2, United Utilities Group, Severn Trent Water, Pennon Group Plc.  
(b) Calculating using Pennichuck Corp., SJW Corp., American Water Works Company Inc., Artesian Resources Corp., Cadiz Inc., California Water Service Company, American States Water Company, Aqua America Inc., The York Water Company, Connecticut Water, Middlesex Water.

In its draft decision, the ACCC noted that many of the international comparators have relatively diversified operations compared to State Water. While it is important to be aware of such differences, there may be instances where these differences are immaterial in a practical sense. In response to the ACCC's draft decision, Frontier identified that these diversified operations can contribute to a small proportion of the comparator businesses' overall revenue.<sup>289</sup> We also observe that typically, where businesses' diversified operations have had an immaterial impact on overall revenue; the estimated equity beta has been low.<sup>290</sup>

Notwithstanding this, the ACCC still considers that some of the businesses used in SFG's set of comparators are likely to face significantly different systematic risks to State Water. For example:

- Since 1993, Cadiz has maintained various levels of agriculture and this operation has provided its 'principal source of revenue'.<sup>291</sup> Cadiz's water project did not transition from its environmental entitlement phase to a pre-construction development and planning phase until 2012.<sup>292</sup> This is problematic because equity beta estimates are derived from historical observations. Distinct to State Water, Cadiz is a particularly risky entity as its development activities are yet to generate significant revenues and Cadiz states, 'we do not know when, if ever, we will receive operating revenues sufficient to offset the costs of our development activities'.<sup>293</sup>
- Consolidated Water operates desalination plants in the Cayman Islands, the Bahamas, Belize, the British Virgin Islands and the US.<sup>294</sup> The nature of its business exposes it to a variety of systematic risks that State Water would not face. For instance, Consolidated Water relies on water supply agreements that may not be renewed, its operations are affected by tourism, it is subject to the regulatory/political risks of various countries and it faces exchange rate risks.<sup>295</sup>

### **Methodological issues underpinning equity beta estimates**

State Water's view on the methodological issues underpinning empirical equity beta estimates was unclear in its response to the ACCC's draft decision. However, State Water did request that the ACCC consider the Frontier report.<sup>296</sup> The Frontier report defended SFG's use of pooled and fitted estimates. Further, the use of pooled and fitted estimates, in line with SFG's methodology, would produce equity beta estimates that are greater than 0.7. Therefore, we discuss these methodological issues.

In its pricing application, State Water submitted a consultant report, by SFG, that estimated State Water's equity beta using OLS, fitted and pooled empirical estimates.<sup>297</sup> Our draft decision stated that

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<sup>289</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 66–68.

<sup>290</sup> In its report for State Water, Frontier suggested that SWJ Corporation, Pennon Group, Northumbrian Water Group and United Utilities Group predominately receive revenue from water operations. However, these comparators do not have notably high equity betas (0.67, 0.49, 0.33/1.25, 0.58). While Frontier's report suggests Cadiz Inc. (equity beta of 1.78) predominately receives revenue from its water operations, we show below that we disagree with Frontier's assessment. See Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 66–68.

<sup>291</sup> Cadiz Inc., *Annual report*, 10 March 2014, p. 1.

<sup>292</sup> Cadiz Inc., *Annual report*, 10 March 2014, p. 3.

<sup>293</sup> Cadiz Inc., *Annual report*, 10 March 2014, p. 12.

<sup>294</sup> Reuters (US Edition), *Profile: Consolidated Water Co Ltd (CWCO.O)*, accessed 26 November 2013, <http://www.reuters.com/finance/stocks/companyProfile?symbol=CWCO.O>.

<sup>295</sup> Consolidated Water, *2013 annual report*, pp. 17–25.

<sup>296</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 20.

<sup>297</sup> SFG, *Report to State Water*, April 2013.

we did not consider SFG's fitted and pooled estimates to be consistent with well accepted economic and finance principles. We maintain this view in our final decision. Therefore, we have not considered SFG's pooled and fitted estimates when updating the equity beta estimate set out in the pricing principles. However, we consider estimates from a variety of econometric studies, as listed in Table 5-4. These use a variety of permutations, but predominately use OLS.<sup>298</sup>

The ACCC's draft decision set out why the ACCC considers the AER's 2009 WACC review to have used empirical equity beta estimates based on sound methodologies.<sup>299</sup> We see no reason to depart from this reasoning in our final decision. However, we also emphasise the following:

- We consider OLS to be a sound econometric technique. Henry has noted that typically, the equity beta in the Sharpe–Lintner CAPM is estimated using OLS.<sup>300</sup> Further, evidence suggests the OLS estimator is unbiased.<sup>301</sup> McKenzie and Partington have commented on the most commonly used method for estimating the equity beta within the Sharpe–Lintner CAPM. They identified this is an OLS regression of the market returns against the individual stock returns, where the point estimate of the slope coefficient is the risk parameter.<sup>302</sup> Further, they noted that when the assumptions of classical linear regression model are satisfied, the OLS provides the best linear unbiased estimator of the equity beta.<sup>303</sup>
- Frontier has misrepresented Fama and French's argument when criticising OLS.<sup>304</sup>
  - ...it is well established, following empirical testing over four decades, that standard OLS estimation results in beta estimates that are too low for low-beta stocks and too high for high-beta stocks (Fama and French 2004).

Fama and French's argument concerned the empirical performance of the Sharpe–Lintner CAPM, not OLS as an estimation technique.<sup>305</sup> We note that State Water proposed to apply the Sharpe–Lintner CAPM in its pricing application and has not proposed to depart from it in its response to our draft decision.

- In addition to OLS, the empirical studies we consider in estimating State Water's equity beta use other econometric methods (see Table 5-4). All of these methods consistently produce results suggesting that 0.7 is a reasonable, albeit conservative, estimate of State Water's equity beta. These alternative methods can account for some potential limitations of OLS. For instance, Henry has noted that while there are some concerns about the validity of the OLS estimator in the presence of outliers, LAD is the most common approach to address this. LAD estimators of beta minimise the sum of absolute values of the residuals, whereas OLS minimises the sum of squared residuals.<sup>306</sup>

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<sup>298</sup> These also use least absolute deviations (LAD), method of moments and Theil-Sen. These econometric techniques unanimously indicated that 0.7 is a reasonable, albeit conservative estimate of the equity beta.

<sup>299</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 163–164.

<sup>300</sup> Henry, *Estimating  $\beta$* , 23 April 2009, p. 3.

<sup>301</sup> Henry, *Estimating  $\beta$* , 23 April 2009, p. 5.

<sup>302</sup> McKenzie, Partington, *Estimation of the equity beta (conceptual and econometric issues)*, April 2012, p. 19.

<sup>303</sup> McKenzie, Partington, *Estimation of the equity beta (conceptual and econometric issues)*, April 2012, p. 19.

<sup>304</sup> Frontier, *Analysis of the ACCC's draft decision*, April 2014, p. 70.

<sup>305</sup> Fama, French, 'The Capital Asset Pricing Model: Theory and Evidence', *Journal of Economic Perspectives*, 2004, v. 18, no. 3, p. 44

<sup>306</sup> J.M. Wooldridge, *Introductory econometrics: A modern approach*, South-Western Cengage Learning: Ed. 4e, 2009, p. 330; Henry, *Estimating  $\beta$* , 23 April 2009, p. 9.

The ACCC's draft decision set out why the ACCC did not have confidence in SFG's pooled and fitted estimates for estimating the systematic risk of State Water.<sup>307</sup> We consider this reasoning remains valid, and applies to our final decision. We also emphasise the following:

- If the coefficient on risk a factor is other than zero, this does not necessarily mean it has a role in informing systematic risk.<sup>308</sup> McKenzie and Partington have made this argument in response to an alternative SFG report that also uses pooled and fitted estimates of the equity beta.<sup>309</sup> McKenzie and Partington stated:<sup>310</sup>

Just because a factor is significant in a regression of realized returns on "factor premiums", does not mean that it is a priced risk factor. There is a wide variety of variables that could be used beyond those highlighted in SFGs report – in point of fact, Subramanyam (2010) documents over fifty variables that have been used to explain asset returns. Smith and Walsh (2013) provide an excellent discussion on this point and explain why it is that the use of factors (such as size and book to market) to construct portfolios ex post does not mean that those factors are 'priced' ex ante...

The point is that just because a factor may be used to identify an ex post efficient portfolio, does not mean that the factor is priced (and this includes other factors such as momentum). Thus, the analysis of SFG is combining an estimate of systematic risk (albeit imprecisely estimated) with another parameter that captures the ex post ability of certain factors to explain a given sample of returns.

- Contrary to Frontier's report, we maintain that the estimation techniques proposed by SFG result in a fundamentally different model to the CAPM.<sup>311</sup> In response to another SFG report using pooled and fitted estimates of the equity beta, McKenzie and Partington noted:<sup>312</sup>

There is another problem and that is the lack of a clear linking back of the estimation equations to the underlying theory of the CAPM. The inclusion of additional explanatory variables for return, for example, is inconsistent with the CAPM. Without the theoretical link it is not at all clear what the estimated beta's actually represent in terms of the CAPM and so it is not clear what their relation is to the CAPM beta.

- As stated in our draft decision, the equity beta under the Sharpe–Lintner CAPM measures the standardised correlation between the returns on an individual risky asset or business with that of the overall market.<sup>313</sup> This is exactly what SFG's OLS estimate aims to do.<sup>314</sup> By definition, this is not what SFG's pooled and fitted models are estimating.<sup>315</sup>

## 5.5.2 Return on debt

The ACCC has not seen any reason to depart from the methodology set out in its draft decision for estimating the return on debt.<sup>316</sup> In our draft decision, the ACCC used an indicative averaging period of 20 business days from 16 December 2013 to 15 January 2014 for DRP and risk free rate calculations. In this final decision, the ACCC has updated these parameters using market data from 26 March 2014 to 23 May 2014. For this averaging period, the ACCC downloaded the Bloomberg debt data series with ticker code C567Y. This is the same series used in the ACCC's draft decision. It appears that until the start of May 2014, this series comprised Bloomberg's fair value curve series; after which it comprised Bloomberg's Valuation (BVAL) curve series. During May 2014, Bloomberg ceased publishing its fair value curve series, and now publishes a BVAL curve.

<sup>307</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 165–166.

<sup>308</sup> This is contrary to what Frontier argues. See Frontier, *Analysis of the ACCC's draft decision*, April 2014, pp. 70–71.

<sup>309</sup> SFG Consulting, *Systematic risk of QR Network*, 31 August 2012, pp. 6–9.

<sup>310</sup> McKenzie, Partington, *Report to QRC: Review of Aurizon Network's draft access undertaking*, October 2013, p. 30.

<sup>311</sup> This is argued on page 70 of Frontier, *Analysis of the ACCC's draft decision*, April 2014.

<sup>312</sup> McKenzie, Partington, *Report to QRC: Review of Aurizon Network's draft access undertaking*, October 2013, p. 31. This is in response to SFG Consulting, *Systematic risk of QR Network*, 31 August 2012, pp. 6–9.

<sup>313</sup> See page 165 of ACCC, *Draft decision on State Water (attachments)*, March 2014. This statement is with reference to McKenzie and Partington, *Risk, asset pricing models and WACC*, June 2013, p. 21

<sup>314</sup> See the OLS equation under heading 2.2 in SFG, *Report to State Water*, April 2013, p. 6.

<sup>315</sup> See the equations under headings 2.3 and 2.4 in SFG, *Report to State Water*, April 2013, pp. 7–8.

<sup>316</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, pp. 166–168.

Based on the ACCC's bond pairing analysis for this averaging period, the ACCC calculated the extrapolated 10 year Bloomberg BBB DRP at 2.10 per cent. Combined with the ACCC's estimated risk free rate of 3.98 per cent, the ACCC's estimated return on debt to apply to State Water is 6.08 per cent.

In its pricing application, State Water proposed to estimate the DRP using a 10 year historical average. State Water proposed a historical DRP to achieve consistency with its proposed historical risk free rate.<sup>317</sup> However, given the ACCC has not accepted State Water's reasons for adopting a historical cost of equity; it does not consider it necessary to address the historical DRP calculation method proposed by State Water. Consistent with the risk free rate, the ACCC consider the DRP should be estimated using a method that is commensurate with prevailing market conditions.

The ACCC's decision to estimate the DRP using Bloomberg data has not been a controversial issue. In its pricing application, State Water proposed to estimate the DRP using Bloomberg fair value yields.<sup>318</sup> In the draft decision, the ACCC accepted State Water's proposal to estimate the DRP based on the Bloomberg BBB rated fair value curve.<sup>319</sup> In its submission to the draft decision, State Water did not raise any concerns regarding the DRP applied in the draft decision.<sup>320</sup> Accordingly, for this final decision, the ACCC has maintained the draft decision approach and continued to use Bloomberg's BBB rated debt data series. As noted above, practically, this has meant adopting the Bloomberg FVC until it ceased publication, and using Bloomberg's replacement of this curve thereafter.

Since December 2013, the Reserve Bank of Australia (RBA) has provided a new method for estimating the aggregate credit spreads of bonds issued by Australian non-financial corporations across a range of maturities.<sup>321</sup> Additionally, there is the BVAL curve published by Bloomberg. Therefore, for future decisions on approaches to the DRP, the ACCC will have the option to use Bloomberg's BVAL curve, the RBA's method, or a combination of the two.<sup>322</sup>

### 5.5.3 Gearing ratio

The ACCC sees no reason to depart from its draft decision to apply a gearing ratio to weight the return on debt and equity of 60:40 (that is, 60 per cent debt).<sup>323</sup> A 60:40 gearing ratio is consistent with State Water's pricing application and the pricing principles.<sup>324</sup>

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<sup>317</sup> State Water, *Pricing application to the ACCC*, June 2013, p. 99.

<sup>318</sup> State Water, *Pricing application to the ACCC*, June 2013, pp. 110–116.

<sup>319</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p. 166.

<sup>320</sup> State Water, *Response to the ACCC's draft decision*, April 2014, p. 20.

<sup>321</sup> RBA, *Bulletin: New measures of Australian corporate credit spreads*, December Quarter 2013.

<sup>322</sup> ACCC, *Pricing principles under the WCIR*, June 2011, p. 6.

<sup>323</sup> ACCC, *Draft decision on State Water (attachments)*, March 2014, p. 168.

<sup>324</sup> State Water, *Pricing application to the ACCC*, June 2013, p. 110; ACCC, *Pricing principles under the WCIR*, July 2011, p. 40.



## 6 Regulatory depreciation

Depreciation is the allowance provided so that capital investors can receive a return of invested capital over the economic life of the asset (also known as return of capital). Regulatory depreciation represents the value of straight-line depreciation less the annual inflation indexation on the RAB (or revaluation gain on the RAB).

Two key factors that affect the regulatory depreciation allowance for the 2014–17 regulatory period are the:

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

The opening RAB and the approved capex allowance also affect the regulatory depreciation allowance but are discussed in attachments 3 and 4 respectively.

The ACCC's draft decision<sup>325</sup> also contains information and analysis supporting this final decision.

### 6.1 Final decision

The ACCC's final decision is to determine State Water's total regulatory depreciation allowance over the 2014–17 regulatory period to be –\$9.6 million (nominal). The total amount is negative because State Water's RAB is depreciating at a slower rate than inflation. Table 6-1 shows the calculation of this figure.

**Table 6-1 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.

- Table 6-2 shows the breakdown of the ACCC's regulatory depreciation allowance by individual valley. Given the relatively long lives of some assets, the total regulatory depreciation allowance is negative overall. This is due to the indexation (inflation) adjustment to the RAB outweighing the straight-line depreciation component of regulatory depreciation. This is discussed in more detail in section 6.4.
- For comparative purposes, State Water's proposed regulatory depreciation allowance for each valley is also presented. These allowances reflect State Water's original pricing application as no revised models were submitted by State Water after the ACCC's draft decision.

<sup>325</sup> See Attachment 6 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

**Table 6-2 Comparison of State Water application and ACCC final decision regulatory depreciation allowance for the 2014–17 regulatory period (\$millions, nominal)**

Valley	State Water application			Final decision		
	User share	Govt share	Total	User share	Govt share	Total
Border Rivers	-0.1	0.0	<b>-0.1</b>	0.0	0.0	<b>0.0</b>
Fish River	-1.8	0.0	<b>-1.8</b>	-0.5	0.0	<b>-0.5</b>
Gwydir	-0.9	-2.6	<b>-3.5</b>	-0.4	-2.4	<b>-2.7</b>
Lachlan	-1.2	-1.8	<b>-3.0</b>	-0.1	-0.7	<b>-0.8</b>
Lowbidgee	0.0	0.0	<b>0.0</b>	0.0	0.0	<b>0.0</b>
Macquarie	-1.1	-1.9	<b>-2.9</b>	-0.4	-0.9	<b>-1.3</b>
Murray	-0.7	-0.3	<b>-1.1</b>	-0.1	-0.1	<b>-0.2</b>
Murrumbidgee	-1.1	-2.0	<b>-3.1</b>	0.3	0.0	<b>0.3</b>
Namoi	-0.6	-4.6	<b>-5.2</b>	-0.1	-2.6	<b>-2.8</b>
Peel	-0.1	-1.2	<b>-1.3</b>	-0.1	-1.5	<b>-1.5</b>
<b>Total regulated valleys</b>	<b>-7.7</b>	<b>-14.4</b>	<b>-22.1</b>	<b>-1.4</b>	<b>-8.1</b>	<b>-9.6</b>

Source: State Water proposed PTRMs and ACCC analysis.

## 6.2 Submissions

State Water noted that the ACCC’s draft decision on the regulatory depreciation allowance produced a negative figure. It observed that this lowers State Water’s annual revenue requirement which appeared counter intuitive. State Water submitted it would like to understand whether the ACCC’s regulatory depreciation approach is appropriate for bulk water pricing regulation and how the approach compares with that adopted by bulk water regulators in other jurisdictions.<sup>326</sup>

NSWIC’s submission raised concerns with the price impact of the remaining economic lives determined in the draft decision.<sup>327</sup> The submission did not raise any valley or asset specific issues with the remaining economic lives used in the draft decision. However, NSWIC submitted that the current IPART methodology should be carried over into the new determination to avoid price shocks to customers. NSWIC also raised concerns with accepting State Water’s proposed approach for forecast capex to be recognised on an as-incurred basis instead of the ACCC’s preferred approach of recognising capex on a partially as-incurred basis.<sup>328</sup>

## 6.3 Assessment approach

The ACCC did not change its assessment approach for the regulatory depreciation from its draft decision. Section 6.3 of the draft decision details that approach.<sup>329</sup>

<sup>326</sup> State Water, *Response to the Australian Competition and Consumer Commission Draft Decision on State Water Pricing Application: 2014–15—2016–17*, April 2014, p. 21.

<sup>327</sup> New South Wales Irrigators’ Council, *Submission to ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, April 2014, pp. 17-18.

<sup>328</sup> New South Wales Irrigators’ Council, *Submission to ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, April 2014, p. 25.

<sup>329</sup> See Attachment 6 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

## 6.4 Reasons for decision

The ACCC's final decision is to approve a total regulatory depreciation allowance for the 2014–17 regulatory period of –\$9.6 million (nominal). The breakdown by individual valley is shown in Table 6-2. This allowance reflects the ACCC's final decision on the opening RAB and forecast capex allowance, discussed in attachments 3 and 4 respectively.

The ACCC maintains its approach to use regulatory depreciation to calculate State Water's total revenue requirement. The ACCC's approach uses a nominal WACC multiplied by the indexed RAB to calculate State Water's return on capital building block. To avoid double counting the impact of inflation, indexation of the opening RAB (the revaluation gain on the RAB) is removed from straight-line depreciation to obtain regulatory depreciation (return of capital). For businesses like State Water with long-lived assets, straight-line depreciation may be lower than the indexation applied to the opening RAB in the early part of an asset's economic life.<sup>330</sup> This results in negative regulatory depreciation and therefore a negative contribution to State Water's total revenue requirement. The alternative approach used by IPART in its previous determination for State Water, is to index the opening RAB and multiply by a real WACC to calculate the return on capital. As inflation is only accounted for once in the indexation of the RAB (and not in the WACC), this approach does not require any further adjustment. The annual cash flows of the return on capital and return of capital resulting from the two approaches are equal and NPV neutral over the life of the assets. Therefore there is no reason for the ACCC to change its approach.

Table 6-3 displays the cash flow equivalence of the two approaches based on a stylised example with only the allocation across the revenue building blocks affected. The ACCC notes that its approach in the draft decision was the same as that used by State Water in its proposal.

**Table 6-3 Total cash flows of two depreciation approaches over first 10 years**

	Real WACC and indexed RAB	Nominal WACC and indexed RAB
Return on capital	\$55.9	\$81.2
Return of capital	\$23.0	–\$2.4
<b>Total cash flows</b>	<b>\$78.8</b>	<b>\$78.8</b>

Source: AER analysis.  
 Assumptions: Opening RAB = \$100  
 Remaining life = 50 years  
 Real WACC = 5.37%, Nominal WACC = 8.00% (using the Fisher equation)  
 Inflation = 2.5%

In determining State Water's regulatory depreciation allowance, the ACCC has maintained the standard economic lives as determined in the draft decision for calculating the depreciation of new assets associated with forecast net capex in the 2014–17 regulatory period.<sup>331</sup> For depreciation of State Water's existing assets associated with the opening RAB as at 1 July 2014 we have also maintained the remaining economic lives determined in the draft decision.<sup>332</sup>

The ACCC notes NSWIC's submission on the remaining economic lives. However, the ACCC considers the standard and remaining economic lives applied to be the best estimate of the expected

<sup>330</sup> It can also occur where inflation is forecast to be particularly high, so that the rate of inflation exceeds the rate of depreciation (measured as one divided by the remaining economic life) of the asset.

<sup>331</sup> Australian Competition and Consumer Commission, *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, Table 6-6, p. 178.

<sup>332</sup> Australian Competition and Consumer Commission, *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, Table 6-5, p. 176.

useful life of the assets incurred in State Water's RAB. In applying economic lives reflective of the asset's expected useful life, the ACCC considers that it is satisfying the WCIR and the Water Act 2007.<sup>333;334</sup> Using reflective useful lives avoids customers paying for assets too quickly (such that the asset is fully depreciated before the end of its useful life, which may encourage inefficient early replacement) or too slowly (such that customers continue to pay for assets after they are no longer being used). The breakdown of the standard economic lives by asset class also ensures greater transparency in the make-up of each valley's RAB.

In the draft decision the ACCC considered the impact of its decision on economic lives to be reasonable and unlikely to cause a price shock and thereby damage other markets or have a perverse or unintended pricing outcome.<sup>335</sup> The impact for the final decision is marginally lower than the draft decision due to a slight reduction in the opening RAB as at 1 July 2014.

The ACCC notes NSWIC's submission on the recognition of forecast capex for depreciation purposes. This issue does not ultimately impact how much State Water will recover through depreciation over an asset's life, but rather the timing of depreciation. For this final decision the ACCC has maintained the approach in the draft decision to accept the recognition of State Water's capex on an as-incurred basis for the 2014–17 regulatory period. The ACCC's preferred method is to recognise capex on a partially as-incurred approach. However, at present the ACCC is of the view that State Water's financial reporting techniques would require significant modification to provide the relevant data. In its draft decision, the ACCC noted that State Water would be required to address this matter for the 2017–21 price review.<sup>336</sup>

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<sup>333</sup> Rule 29(2) of the *Water Infrastructure Charge Rules 2010 (WCIR)*.

<sup>334</sup> *Water Act 2007*, Part 1, Division 1, 3(c).

<sup>335</sup> Australian Competition and Consumer Commission, *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, p. 175.

<sup>336</sup> Australian Competition and Consumer Commission, *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014, pp. 178-179.

## 7 Forecast water extraction and entitlement volumes

This attachment sets out the ACCC's final decision on forecast water extractions and entitlement volumes that are to apply over the 2014–17 regulatory period.

### 7.1 Final decision

The ACCC's final decision is to maintain its forecast methodology and its forecast water extractions and entitlement volumes as approved in the draft decision.<sup>337</sup>

The reasoning for the ACCC's final decision is set out in section 7.4. The ACCC's draft decision<sup>338</sup> also contains information and analysis supporting this final decision.

The ACCC's final decision on extraction forecasts for the regulatory year 2014–15 and the forecast entitlement volumes for the regulatory period by valley are set out in Table 7-1 to Table 7-4.

**Table 7-1 Forecast water entitlement volumes—ACCC final decision by valley for 2014–17**

Valley	High security entitlements (ML)	General security entitlements (ML)	Supplementary entitlements (ML)
Border	3,122.0	263,238.0	
Gwydir	21,457.9	509,665.0	
Namoi	8,881.0	256,076.0	
Peel	17,382.0	30,528.0	
Lachlan	60,745.0	632,837.0	
Macquarie	42,606.0	631,716.0	
Murray	261,400.7	2,075,822.0	
Murrumbidgee	436,928.0	2,260,133.0	
Lowbidgee	-	-	747,000.0

Source: State Water, *Pricing application to the ACCC*, June 2013, p. 147.

<sup>337</sup> See Attachment 7 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

<sup>338</sup> See Attachment 7.

**Table 7-2 Forecast MAQ—ACCC final decision for Fish River 2014–17**

Customer	MAQ (ML)
Delta electricity	8,184
Sydney Catchment Authority	3,650
Oberon Council	1064
Minor customers*	200*
Lithgow Council	1778

Note: Customers are assigned a share in the form of a MAQ (Minimum Annual Quantity) as part of the water sharing plan for Fish River under the NSW WMA. Over the next regulatory period, the MAQ will define the maximum volume of water that can be extracted by each of the major customers. This cannot be exceeded except under specific conditions (for example, carry over).

\* 200 kL per customer.

Source: State Water, *Pricing application to the ACCC*, June 2013, p.148 and, New South Wales Office of Water (NOW), (Miller, D), *Fish River water supply scheme: Water sharing arrangements*, 2012, section 4.2.

**Table 7-3 Forecast water extractions—ACCC final decision for 2014–15 by valley**

Valley	ML
Border	140,677
Gwydir	245,877
Namoi	158,961
Peel	11,164
Lachlan	227,697
Macquarie	279,671
Murray	1,459,689
Murrumbidgee	1,759,740
<b>Total</b>	<b>4,283,475</b>

Source: State Water, *Pricing application to the ACCC*, June 2013, and State Water, *Response 16.1 to ACCC information request*, received 3 October 2013.

**Table 7-4 Forecast water extractions—ACCC final decision for Fish River 2014-15**

Valley	MAQ (ML)
<b>Raw Water</b>	
Delta electricity	6,190
Sydney Catchment Authority	2,412
Oberon Council	717
Minor customers	52
<b>Filtered water</b>	
Lithgow council	986
Minor customers	132

Source: State Water, Pricing application to the ACCC, June 2013 and State Water, Response 16.1 to ACCC information request, received 3 October 2013.

## 7.2 Submissions

State Water accepted the ACCC’s draft decision. However, three submissions raised a concern in regard to the forecast water extractions the ACCC approved in its draft decision.<sup>339</sup> The concern raised in stakeholders’ submissions was based on the following:

- The 20 year moving average forecast of consumption includes extractions during a severe drought and this will have a significant influence on forecast extractions for many years.<sup>340</sup> The New South Wales Irrigators’ Council (NSWIC) rejected the ACCC’s approach of using the values of actual extractions in 1993–94 to 2012–13 for the forecast consumption in the first year of the next regulatory period. NSWIC submitted that this sample (1993–94 to 2012–13) is significantly biased due to the very low extractions during the millennium drought and will create significant downward bias which will directly impact bulk water charges.<sup>341</sup> New South Wales Farmers’ Association (NSWFA) submitted that the 20 year rolling average could significantly skew water forecasts given the millennium drought.<sup>342</sup>
- a longer period than the 20 year moving average is required to reduce the effects of severe climatic fluctuation.<sup>343</sup> NSWIC submitted that a consumption forecasting model that takes into consideration the Integrated Quantity and Quality Model (IQQM) data is the most valid method available.<sup>344</sup>

Stakeholders submitted that if the ACCC maintains the 20 year moving average forecast of water extractions, it should include:

<sup>339</sup> Lachlan Valley Water (LVW), *Submission on draft decision*, April 2014; New South Wales Irrigators’ Council (NSWIC), *Submission to Australian Competition and Consumer Commission –ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, 28 April 2014.

<sup>340</sup> LVW, *Submission*, April 2014, p.7; NSWIC, *Submission*, 28 April 2014, p. 26.

<sup>341</sup> NSWIC, *Submission*, 28 April 2014, p. 26

<sup>342</sup> New South Wales Farmers Association, *submission to ACCC Draft Decision on State Water Pricing Application: 2014/15-2016/17*, April 2014, p. 3.

<sup>343</sup> LVW, *Submission*, April 2014, p.7; NSWIC, *Submission*, 28 April 2014, p. 27.

<sup>344</sup> NSWIC, *Submission*, 28 April 2014, p. 27.

The IQQM was developed in the mid-1990s by the then NSW Department of Land and Water Conservation (DLWC). It is a water management tool to evaluate the long term impacts of various water management regimes. It is a hydrological model which measures water availability in a system, and enables the modelling (estimation) of water extraction levels over a series of years (over 100).

- a ‘circuit breaker’ mechanism, where if the actual extractions exceed the forecast extractions consistently through a three year pricing period, then the ACCC should reassess the consumption forecast for that valley.<sup>345</sup>
- the most recent consumption figures from 2013–14 to provide a more representative dataset on which bulk water charges would be based.<sup>346</sup>

## 7.3 Assessment approach

The ACCC’s approach to assessing State Water’s forecast water extractions and entitlement volumes is set out in attachment 7 of the ACCC’s draft decision.<sup>347</sup>

The ACCC took into account submissions received in relation to its draft decision in coming to a final decision on forecast water extractions and entitlement volumes that are to apply over the 2014–17 regulatory period.

## 7.4 Reasons for decision

The issues raised in submissions were addressed by the ACCC in its draft decision. These issues had been raised previously in submissions in response to State Water’s 2014–17 pricing application, which the ACCC considered in its draft decision.

In its draft decision, the ACCC assessed the appropriateness of the 20 year moving average as a forecasting methodology compared to an approach based on a longer term average (for example, IQQM).<sup>348</sup> Based on its assessment, the ACCC concluded that on balance, the 20 year moving average constitutes an appropriate methodology for forecasting water extractions over the next regulatory period.<sup>349</sup> The draft decision stated:<sup>350</sup>

If the recent drought years bias the forecast in State Water’s favour, such that the forecast is too low compared to actual extractions, and prices are higher (than if the forecasts was higher), the ACCC notes that the ‘unders’ and ‘overs’ account (discussed in Attachment 10 of this draft decision) will capture this and prices will be adjusted downward in subsequent years.

In regard to NSWIC’s submission on the inclusion of consumption figures from 2013–14, the ACCC notes that this matter was also addressed in its draft decision. The ACCC determined the inclusion of most recent consumption data with a lag as shown in Table 7-5.<sup>351</sup>

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<sup>345</sup> LVW, Submission, April 2014, p. 7.

<sup>346</sup> NSWIC, Submission, 28 April 2014, p. 26.

<sup>347</sup> See section 7.3 of *Attachment 7 of Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>348</sup> ACCC, *Draft decision*, Attachment 7, pp. 192–199.

<sup>349</sup> ACCC, *Draft decision*, Attachment 7, pp. 192–201.

<sup>350</sup> ACCC, *Draft decision*, Attachment 7, p. 194.

<sup>351</sup> ACCC, *Draft decision*, Attachment 7, pp. 200–201.



**Table 7-5 Actual water extraction data series for the derivation of forecast water extractions for 2014–17**

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: ACCC, Draft decision, p. 202.

The ACCC considers that stakeholders’ submissions on its draft decision did not provide additional information or raise new issues regarding the methodology for forecasting water extractions and entitlement volumes. The issues raised in these submissions were considered in the ACCC’s draft decision. The ACCC’s final decision is to maintain its forecast methodology and its forecast water extractions and entitlement volumes as approved in the draft decision.

## 8 Bulk water charges

This attachment sets out the ACCC's final decision on State Water's proposed MDB bulk water entitlement and usage charges. Bulk water charges are set to recover State Water's customers' share (i.e. the share borne by 'users' under the cost sharing arrangements) of the revenue requirement.

The ACCC's draft decision<sup>352</sup> also contains information and analysis relevant to this final decision.

The ACCC's approach to Peel valley charges and the recovery of MDBA and BRC costs is discussed in section 1 of the ACCC's final decision.

### 8.1 Final decision

The ACCC's final decision is to not approve State Water's proposed charges for entitlements and usage for the MDB valleys. This is because we consider they do not meet the requirements of rule 29 of the WCIR.

The bulk water entitlement and usage charges determined by the ACCC are set out in Appendix B of the final decision.

#### ***Tariff structures***

The ACCC does not approve the 80:20 fixed to variable tariff structure proposed by State Water. The ACCC's final decision is to maintain a 40:60 fixed to variable tariff structure, consistent with its draft decision.

#### ***Conversion factor - high security premium***

The ACCC does not approve the Water Sharing plan (WSP) ratio as the conversion factor for high security entitlement charges proposed by State Water. The ACCC's final decision is to maintain the calculation of the high security entitlement charges that applies in the current regulatory period,<sup>353</sup> consistent with the ACCC's draft decision.

#### ***Lowbidgee***

The ACCC has reviewed its draft decision on the bulk water charges for Lowbidgee. The ACCC's final decision is to approve only the fixed charge for Lowbidgee. The ACCC does not approve the application of the Murrumbidgee usage charge when a supplementary event occurs. This is because the fixed charge recovers 100 per cent of the Lowbidgee costs.

#### ***Peel Valley***

The ACCC's final decision is to maintain its draft decision to apply price increases in the Peel valley of 10 per cent per annum.

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<sup>352</sup> See attachment 8 of *Attachments to ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, March 2014.

<sup>353</sup> High security entitlement charge = general security entitlement charge x high security premium, where:  
high security premium = average water allocations (AWA) x water sharing plan ratio .

## **ICD rebates**

The ACCC has reviewed its draft decision to maintain the current methodology for calculating rebates as applied by IPART. This is in response to submissions from ICDs which showed that the current methodology may not correctly estimate the number of customer sites. In this final decision the ACCC has revised its estimate of the ICD rebate.

## **8.2 Submissions**

State Water did not accept the ACCC's draft decision in relation to the level of its proposed charges. This is because State Water did not accept other aspects of the ACCC's draft decision in relation to capex and opex forecasts and the rate of return applied under the building block model.

State Water also did not accept the ACCC's draft decision to maintain the 40:60 fixed to variable tariff structure.

In its submission State Water sought clarification on the ACCC's draft decision for Peel Valley and MDBA and BRC costs. In its submission State Water questioned what would happen if the NSW government did not provide a subsidy or provided a lower level of subsidy than that implicitly proposed by the ACCC's draft decision. State Water submitted that if the ACCC considers that State Water should carry this risk, the ACCC should explain how this outcome is more consistent with the BWCOP compared to alternative approaches.

State Water did not comment on other aspects of the ACCC's draft decision with respect to bulk water charges.

A summary of other submissions in response to the ACCC's draft decision on bulk water charges is set out below.

### **Tariff structure**

State Water maintained that more cost reflective tariffs (80:20 fixed to variable) are the most effective and efficient mechanism to ensure all the BWCOPs are met, given State Water's primarily fixed cost to operate its business.<sup>354</sup> State Water's consultant, Frontier Economics (Frontier) stated that the tariff structure determined in the ACCC's draft decision (and the associated Loss Capitalisation Model) does not meet the WCIR requirements and the BWCOP for the following reasons:

- it cannot reasonably be assessed as meeting the WCIR requirements regarding revenue adequacy
- it does not meet some of the BWCOP or at least does not meet them as well as State Water's proposal.<sup>355</sup>

The ACCC received nine submissions on tariff structure. All of these supported the ACCC's draft decision to maintain a 40:60 fixed to variable tariff structure.<sup>356</sup>

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<sup>354</sup> State Water, *Response to the Australian Competition and Consumer Commission draft decision on State Water pricing application 2014-15 – 2016-17*, April 2014, p.4.

<sup>355</sup> Frontier Economics, *Analysis of aspects of ACCC draft decision on State Water application*, April 2014, p.iv.

<sup>356</sup> List of stakeholder submissions: Lachlan Valley Water, p.2, NSW Farmers Association, p.1, Peel Valley Water Users Association, p.1, NSWIC submission 1, p.28, NSWIC submission 2 - Additional Information, p.4, Murray Irrigation, p.4, Kevin Anderson MP, p.5, Gwydir Valley Irrigators Association, p.1, Namoi Water, p.2 and Tamworth Regional Council, p.3.

### **High security conversion factor**

Lachlan Valley water (LVW) supported the high security entitlement charge adopted by the ACCC. LVW submitted that the calculation of the relative reliability of high and general security during recent years accurately reflects the value of high security water for customers during severe drought conditions, as were experienced in the Lachlan and Belubula valleys from 2002–03 to 2009–10.

The ACCC received two submissions that did not support the calculation of the high security entitlement charge. These were from the NSW Irrigators' Council (NSWIC) and South West Water Users.

NSWIC submitted:

NSWIC believes that the ACCC Draft Decision provides insufficient information on the methodology for calculating high security premiums in NSW (8-12). Based on the last IPART determination, NSWIC is of the understanding that the high security premium is based on an 'access' premium and a 'scarcity' premium. We have submitted to IPART in 2010 that we do not agree with the 'scarcity' premium as the concept of 'scarcity' does not relate to delivery infrastructure but to the good which is being delivered through it - water. The scarcity value of water is priced in the market for that commodity and hence there is no requirement for shadow pricing derived from that market for delivery infrastructure pricing.

NSWIC submits that scarcity is priced in the market for water and should not be further priced via delivery infrastructure.<sup>357</sup>

This was supported by South West Water Users:

Concepts of 'Scarcity' are irrelevant. The choice of a HS licence comes at a much greater capital cost/value to a water user – and as such is business decision by a water user. This is an irrelevance to State Water and the expenses it incurs.

Concepts of 'ability to pay' are also irrelevant to State Water. State Water is in no position to make judgements as to the financial performance of different classes of water licence. As an example, all of our members who produce wine grapes – mostly on HS licences - would be amused at any assumption that a HS licence generates greater profit/ability to pay.<sup>358</sup>

### **Lowbidgee bulk water charges**

The Commonwealth Environmental Water Holder (CEWO) commented that the revenue raised through the proposed Lowbidgee supplementary entitlement charges recovers 100 per cent of the revenue requirements for the Lowbidgee area of the Murrumbidgee catchment. CEWO submitted that if the entitlement charges cover 100 per cent of revenue requirements for the Lowbidgee, there is no justification for charging additional usage fees for the delivery of water against these licences.

### **ICD rebates**

NSWIC submitted that the current level of customer rebates ought to be maintained. NSWIC questioned the reduction in proposed rebates for several ICDs; specifically for Murrumbidgee Irrigation and Coleambally Irrigation (57 and 58 per cent, respectively). NSWIC suggested that State Water did not provide evidence that would warrant such a significant reduction in rebates.

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<sup>357</sup> NSW Irrigators' Council, *Submission to ACCC Draft Decision on State Water Pricing Application*, 17 April 2014.

<sup>358</sup> Brendan Barry, Secretary, South West Water Users, *Submission to the ACCC in response to Draft Decision*, April 2014.

## 8.3 Assessment approach

The ACCC's approach to assessing State Water's bulk water charges was set out in the ACCC's draft decision.<sup>359</sup>

The ACCC took into account submissions received in relation to its draft decision in forming its final decision on State Water's proposed bulk water charges. The ACCC's consideration of these submissions is set out below.

## 8.4 Reasons for decision

This section sets out the ACCC's reasons for its decision under the following headings:

- Tariff structures
- High security and general security entitlement charges
- Lowbidgee flood control and Irrigation District charges
- Peel Valley
- Large customer rebates
- MDBA and BRC costs.

### 8.4.1 Tariff structure

In its draft decision, the ACCC determined to maintain State Water's current tariff structure (40:60) 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.<sup>360</sup> The ACCC considered the current tariff structure best contributes to the BWCOP.<sup>361</sup> In addition, the ACCC stated that State Water's proposed 80:20 fixed to variable structure does not promote the three BWCOP factors which it had identified as particularly relevant to water infrastructure charges.<sup>362</sup>

State Water and its consultant Frontier disagreed with the ACCC's draft decision on tariff structure on the basis that the ACCC did not review State Water's proposal against all the criteria in the BWCOPs.<sup>363</sup>

In considering State Water's proposed tariff structure, the ACCC did consider all the BWCOPs before forming a view to place more weight on the following BWCOP:

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

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<sup>359</sup> See attachment 8 of ACCC, *Attachments to draft decision on State Water pricing application 2014-15 - 2016-17*, March 2014.

<sup>360</sup> ACCC, *Attachments to draft decision on State Water pricing application 2014-15 to 2016-17*, March 2014, p.210.

<sup>361</sup> ACCC, *Attachments*, p.210.

<sup>362</sup> ACCC, *Attachments*, p.213.

<sup>363</sup> State Water, *Response to the Australian Competition and Consumer Commission draft decision on State Water pricing application 2014-15 - 2016-17*, April 2014, p.10.

In its draft decision the ACCC stated that it considers these factors most relevant to determining water charges for MDB valleys.<sup>364</sup> The ACCC maintains this view in this final decision. The ACCC considers the BWCOP identified in the draft decision as being more relevant and most directly impacted by the change in tariff structure proposed by State Water. Accordingly, in considering the BWCOP with respect to State Water's proposed change to its tariff structure, the ACCC has placed more weight on the BWCOPs listed above.

The ACCC's consideration of State Water's submission regarding our assessment of its tariff structure against the more relevant BWCOPs is discussed further below.

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

State Water submitted that its proposed 80:20 tariff structure is cost reflective as it aligns tariffs with State Water costs which are approximately 95 per cent fixed.<sup>365</sup> The ACCC agrees that cost reflectivity is achieved where the fixed and variable components of a charge recover the fixed and variable costs of providing services. The ACCC notes that this would give better effect to the principle of pricing transparency in respect to water storage and delivery where fixed costs are greater than variable costs. However, the building block approach to regulation applied by the ACCC ensures that regulated businesses recover costs over the life of assets. In this respect, the ACCC did not reject 'cost reflective tariffs' as submitted by State Water<sup>366</sup>. The ACCC maintained the 40:60 tariff structure within a building block regulatory framework. The ACCC considers tariffs which are set to recover the costs determined by the building block model are cost reflective and consistent with rule 29 of the WCIR.

ACCC analysis shows that on average, 41 per cent of State Water's total revenue is guaranteed through the NSW government's share of revenue. Of the 59 per cent which constitute customers' share, 40 per cent is guaranteed through fixed charges; bringing average guaranteed revenue to 65 per cent even if no water is delivered.

In a scenario where only 20 per cent of water is extracted relative to forecast extractions, as was the case in 2007-08, State Water is able to recover approximately 70 per cent of its costs. In the 2010-14 regulatory period the ACCC estimates that State Water will recover 116 per cent of its user share of the revenue requirement for the period. This is under a 40:60 fixed to variable tariff structure.

NSWIC supports this analysis.

As State Water has over the last two determinations significantly underspent on its capital expenditure, its actual expenditure has not exceeded achieved revenue...In addition it must be stressed that State Water was able to recover 77.5 per cent of their allowed revenue in the period 2007-2010 despite the fact that water sales were only 31 per cent. This shows State Water has recovered a significant amount of revenue under the current tariff structure.<sup>367</sup>

Further, in order to moderate the revenue variability previously experienced by State Water under a 40:60 tariff structure the ACCC has decided to apply the following two mechanisms:

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<sup>364</sup> ACCC, *Draft Decision on State Water 2014-15 to 2016-17*, p.210.

<sup>365</sup> State Water, *Pricing application to the Australian Competition and Consumer Commission for regulated charges to apply from 1 July, June 2013*, p.140.

<sup>366</sup> State Water, *Pricing application*, p. 4.

<sup>367</sup> NSWIC, *Submission 2 to ACCC Draft Decision - Additional information*, p.14.

- A 20 year rolling average approach to forecast water extractions during the 2014-17 regulatory period. Under this approach, water extraction forecasts will be adjusted annually to reflect the latest actual water extractions. The ACCC considers this to be an effective mechanism to protect against revenue variability as it will allow usage prices to be adjusted annually to incorporate the updated forecast.
- A form of price control that includes an 'unders and overs' account that will adjust prices to reflect any under or over recovery in the account balance multiplied by the WACC.

The ACCC considers that the application of the:

- building block approach;
- NSW government's cost sharing arrangements; and
- rolling average forecast in conjunction with the unders and overs form of control

will ensure sufficient revenue streams to allow efficient delivery of required services by State Water.

### **To avoid perverse or unintended pricing outcomes**

In its draft decision the ACCC stated that given the makeup of farming output in the NSW MDB, many of State Water's customers are farmers that are likely to have a cash-flow which is positively correlated with water availability. The ACCC concluded that reducing the variable charges for water usage and increasing fixed charges on water entitlements will likely increase the overall variability in cash-flow for a large proportion of State Water customers, exposing them to more risk. The ACCC considered that State Water's proposal would reduce the cash-flow of farmers in dry periods which may limit their ability to raise capital with potentially detrimental economic impacts, giving rise to perverse or unintended outcomes (e.g. impacting negatively upon the viability of farms and investment).<sup>368</sup>

The ACCC noted that if water trade is possible, customers can reduce this risk by selling their entitlements and relying on trade in water allocation to meet their water needs. However, the ACCC considered that the water market in the MDB is not fully developed and that water users may not have access to risk management tools to hedge their exposure to water price risk. The ACCC concluded that the current structure of State Water's charges may play a risk management role and State Water's proposal would reduce that role.<sup>369</sup>

NSWIC supported the ACCC's draft decision:

NSWIC stresses that water costs are a significant input cost for irrigators in NSW. While every irrigation operation is different, water charges can constitute 20 per cent of on-farm input costs and fixed water charges are a significant obstacle for irrigator's financial viability in years of low water availability...SWC's proposed tariff structure would constitute such a price shock - in particular when water availability is low. In these circumstances, fixed water charges constitute an ongoing financial liability for irrigators despite the fact they are unable to utilise water to generate returns.<sup>370</sup>

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<sup>368</sup> See attachment 8 of *Attachments to ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, March 2014.

<sup>369</sup> ACCC, *ACCC Draft Decision on State Water Pricing Application 2014-15 to 2016-17*, p.213

<sup>370</sup> NSWIC, *Submission 2 to ACCC Draft Decision - Additional Information*, p2.

State Water and Frontier did not support the view that the current tariff structure reduces financial risk to irrigators and that a change in tariff structure would impact on farm budgets and farm viability. State Water submitted:

..recent decisions for other Australian bulk water utilities did not reach the same conclusion about the transfer of risk, including the Essential Services Commission's (ESC's) 2013 Final Decision for Goulburn Murray Water. The ESC's decision was made under the same BWCOP and WCIR as those used by the ACCC to make its Draft Decision on State Water's pricing application.<sup>371</sup>

Frontier commented that.

- risk management tools in the water market already exist and are becoming more available and therefore their absence should not be used to justify the use of the tariff structure as a risk management tool.<sup>372 373</sup>
- there are more direct and targeted measures to address any concerns about the financial position of water users at times of low water availability than to distort the tariff structure for all users and to impose risks on State Water, which it is not in a position to manage.<sup>374</sup>

### **Farm budgets**

Frontier suggested that the change in tariff structure would have too small an impact on farm budgets to have much impact on farm viability (and the ability to borrow/finance investment). Frontier put forward an analysis of gross farm budgets and concluded that the impact of State Water's tariff structure on gross farm margin relative to the status quo is relatively modest (i.e. 3-6 per cent).<sup>375</sup>

Frontier's analysis was based on comparing the effect of the change in tariff structure against the revenues and costs in a year in which farmers have a 100 per cent water allocation and 50 per cent water allocation.

In contrast, the ACCC's analysis was based on a worst-case scenario and the extent to which farms are limited in the amount they can borrow in such a scenario. This was to reflect the experience of the recent drought. The ACCC considers that the impact of State Water's proposed change in tariff structure would be most significant during periods of drought (the worst case scenario) when farm revenues are low. Frontier's analysis based on 50 per cent and 100 per cent allocation is substantially greater than the long term average yield in a number of NSW MDB valleys. Analysis of long term average water allocations show that over the last 10 years allocations have been significantly lower<sup>376</sup> with general security entitlement holders in some valleys receiving zero allocations in some years.<sup>377</sup> The ACCC notes that a study by Boyce shows that financial viability is threatened in cases of low water availability. The Boyce study highlighted that water charges are one of the three most important inputs into food and fibre production along with chemicals and pesticides. The study looked at cotton growers and showed that they manage their operating expenditure by reducing or not incurring certain costs. The study showed that water charges (based on the 40:60 tariff structure) make up between 4

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<sup>371</sup> State Water, *Response to the ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, p.11.

<sup>372</sup> State Water submit that these include a number of sophisticated water trading contracts, that are based on transactions of water entitlements or allocations, which are already on offer in the southern MDB valleys. This is in addition to Farm Management Deposits Scheme, Interim Farm Household Allowance, Drought Concessional Loans and Emergency Water Infrastructure Rebate Assistance.

<sup>373</sup> Frontier Economics, *Analysis of aspects of ACCC Draft Decision on State Water application - a report prepared for State Water*, (Analysis) April 2014, p. iii.

<sup>374</sup> Frontier Economics, *Analysis*, p. iii.

<sup>375</sup> Frontier Economics, *Analysis*, p.11.

<sup>376</sup> The average water allocations for general security entitlement holders in the last 10 years are Border 40 per cent, Gwydir 26 per cent, Lachlan 22 per cent, Namoi 35 per cent, Macquarie 24 per cent, Murray 41 per cent, Murrumbidgee 44 per cent, and Peel 53 per cent.

<sup>377</sup> ACCC analysis on water allocations for last 10 years.



per cent and 11 per cent of overall input costs, and highlighted that in low water years when crop output is also low, the percentage of total expenses for water increases while profits decline. Water costs were highest in dry years 9 to 11 per cent (2003, 2004, 2007, 2008 and 2009) compared to only 4 to 5 per cent in wet years.<sup>378</sup>

NSWIC submitted:

individual examples in the Gwydir highlight that the actual water costs per hectare (ha) can be significantly higher... the true water cost for a single irrigators during times of low water availability can be \$1016/ha rather than the Boyce average of \$188/ha. If an alternative tariff structure was proposed, this real cost per hectare would be even greater again.<sup>379</sup>

NSWIC also submitted:

Frontier uses an extremely simplified analysis of the effect of alternative bulk water charges in their analysis<sup>380</sup>....Frontier then goes onto show that by changing the tariff structure there would be no change in gross margins during times of 100% allocation and only a -6% change when allocations were 50%. This analysis does not consider the real impact of low water allocations. However, when comparing the costs versus income in relation to real production the numbers don't align.

According to the Murray Irrigation Farm Business Survey 43 percent of our farmers produce rice, so for the purposes of example, we estimate 43 percent of our held entitlement volume<sup>12</sup> which equals 598,783. Using the same farm income and variable costs and the same bulk water and alternative bulk water charges as used by Frontier Economics, Murray Irrigation analysed the real impact across the rice growing areas in the NSW Murray.

This analysis clearly shows the significant impact changing tariff structure can have on the percentage of total farm costs represented by water charges, particularly in years where there is zero production and water is the only crop-related cost incurred on a farm.<sup>381</sup>

The ACCC has reviewed the information provided by NSWIC. The Murray Irrigation analysis shows that in 2006-07 water costs were 4 per cent under a 40:60 tariff structure, but under an 80:20 tariff structure would be 9 per cent. In 2009-10 Murray Irrigation estimated that water costs were 24 per cent and an 80:20 tariff structure would be 54 per cent. In 2007-08 and 2008-09 there were zero allocations.<sup>382</sup>

The ACCC considers that the Boyce study and other information provided in submissions demonstrates that water input costs are not relatively modest in the context of farm budgets as suggested by Frontier and would be more material, particularly in dry years, if an 80:20 tariff structure tariff structure were in place.

### ***Risk management tools***

State Water submitted that risk management tools in the water market already exist and are becoming more available. Therefore their absence should not be used to justify the use of the tariff structure as a risk management tool.<sup>383</sup>

The ACCC considers that the key question is whether risk management tools are available which allow irrigators to hedge their water price risk and do so more effectively than through State Water's tariff structure. State Water did not demonstrate to the ACCC's satisfaction how farmers can use the

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<sup>378</sup> Boyce, *Australian Cotton Comparative Analysis 2012 Crop*, 2012.

<sup>379</sup> NSWIC, *Submission 2 to ACCC Draft Decision - Additional information*, p.7-8.

<sup>380</sup> NSWIC, *Submission 2*, p.9-10.

<sup>381</sup> NSWIC, *Submission 2*, p.9-10.

<sup>382</sup> NSWIC, *Submission 2*, p.11.

<sup>383</sup> State Water, *Response to the ACCC Draft Decision on State Water Pricing Application: 2014-15 - 2016-17*, p.11.

risk management tools available in the water market to hedge risk, or how they allow better management of risk than the current 40:60 tariff structure.

NSWIC submitted that to suggest that farmers have access to a range of other 'risk-mitigation' strategies is flawed given the following:

- funds held in farm management deposit schemes are often insufficient to cover the full impact of bulk water charges (and other input costs) during low water years
- funds from NSW and Commonwealth Government assistance are only available after a number of consecutive years of low water availability and the hardship provisions are only available in cases of three years of consecutive zero allocations
- water trading cannot be considered an effective risk management tool as water market prices are highly volatile and not necessarily available in all areas of NSW. In addition allocation trading to supplement cash flow has minimal effect on the fixed entitlement charges proposed by State Water as irrigators who hold the entitlement are liable to pay these costs
- the assumption that allocation trade can be used to offset other on farm costs is based on the assumption that allocations are available for trade. In the case of the Lachlan valley, only 4382ML of temporary water was traded in 2009/10 (compared to 660,000ML of entitlement in the valley) and only three general security water transfers took place. This indicates that in severe drought, water trading may not be an option.<sup>384</sup>

The ACCC acknowledges that risk-management instruments are becoming available, particularly in the more heavily traded valleys. However, the ACCC has not seen evidence that risk management tools in the water market are accessible enough to irrigators across State Water's MDB valleys to have a significant impact on their ability to better manage risk compared to that offered by a 40:60 tariff structure.

The ACCC concludes that a shift to an 80:20 fixed to variable tariff structure as proposed by State Water would increase financial risk to State Water's customers. In particular the ACCC maintains its view in the draft decision that the proposal would reduce the cash-flow of water users in dry periods which may limit their ability to raise capital with potentially detrimental economic impacts. The ACCC considers that the transfer of risk through an 80:20 tariff structure would not contribute to the principle to avoid perverse or unintended pricing outcomes and that a 40:60 tariff structure better contributes to this principle.

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

In its draft decision the ACCC concluded 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. In making this decision the ACCC considered valleys in which water trade is present and those where there is no trade. The ACCC notes that State Water's consultant Frontier agrees that in the no-trade case, economic efficiency is only affected when an individual's water value is less than the delivery charge.<sup>385</sup>

In the case of water trade, Frontier considered that high delivery charges in excess of the efficient level can distort water market outcomes and lead to water being inefficiently allocated between

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<sup>384</sup> NSWIC, *Submission 2 to ACCC Draft Decision, Additional Information*, p.2-3.

<sup>385</sup> Frontier Economics, *Review of Appendix A, ACCC Draft Decision on State Water Application - a report prepared for State Water*, April 2014, p.21.

competing uses within and outside of State Water areas / valleys.<sup>386</sup> Frontier submitted that State Water's proposed tariff structure would therefore contribute to improving the efficiency of water use.<sup>387</sup>

The ACCC received submissions from stakeholders which suggest that a move to higher fixed charges may reduce efficient water use.

NSWIC submitted:

where charges are fixed, rather than related to use, there is no incentive for water users to invest to improve efficiency or for State Water to respond to changed business circumstances. Further, where income to State Water is fixed, there is little incentive for State Water to adjust its business costs to reflect times of hardship as is required by non-regulated business.<sup>388</sup>

This was supported by Murray Irrigation:

A move to higher fixed charges and lower usage charges is inconsistent with this principle. It is widely accepted that the most efficient way to ensure efficient use is to make people pay to use. By fixing charges for irrigators (and other water users), it removes any incentive for them to ensure they are using water efficiently and getting the best return from their inputs.<sup>389</sup>

The ACCC considers that Frontier's analysis is most relevant where there is a large water market. This applies mostly in the two southern valleys (Murray and Murrumbidgee) in the NSW MDB.<sup>390</sup>

The ACCC concludes that when considering the whole NSW MDB, a 40:60 tariff structure will better promote the economically efficient and sustainable use of water resources and infrastructure assets than an 80:20 tariff structure.

### **To facilitate the efficient functioning of water markets**

The ACCC did not specifically discuss this criterion in its draft decision

Frontier submitted that more consistent charges across the Basin will facilitate the more efficient functioning of inter-jurisdictional water markets. This is because different customers' water trading decisions will not be distorted by the structure of the tariffs they face.<sup>391</sup>

The ACCC considers this to be an issue in allocation trade not entitlement trade. The ACCC agrees that with allocation trade there could be some distortion because the higher weighting of variable charges will add to the cost of usage and make NSW water more expensive. However, the ACCC notes that the valleys where allocation trade across boundaries occurs (Murray, Murrumbidgee) have amongst the lowest usage charges compared to the other MDB valleys. The ACCC concludes that a 40:60 tariff structure could distort different customers' water trading decisions for allocations in inter-jurisdictional water markets but that this is unlikely to be significant and would only occur at the margin.

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<sup>386</sup> Frontier Economics, *Review of Appendix A, ACCC Draft Decision on State Water Application - a report prepared for State Water, April 2014*, p.25.

<sup>387</sup> Frontier Economics, *Review of Appendix A*, p.26.

<sup>388</sup> NSWIC, *Submission 2 to ACCC Draft Decision - Additional Information*, p.15.

<sup>389</sup> Murray Irrigation, *Response to State Water's Corporation's pricing application for regulated bulk charges - submission to the ACCC*, September 2013, p.13.

<sup>390</sup> In its 2011-12 water monitoring report (p.14), the ACCC found that the southern MDB account for over 90 per cent of water trade. This observation is also set out a report by the National Water Commission, *Water markets in Australia: a short history*, 2011, p.96. The key reason is that water resources in this area are highly interconnected. This is not the case in the northern MDB where rivers are intermittently connected - meaning that trade is not always feasible. (see 2011-12 ACCC water monitoring report , p.16).

<sup>391</sup> Frontier Economics, *Analysis of aspects of ACCC Draft Decision on State Water Application, a report prepared for State Water, April 2014* p.12.

The ACCC acknowledges that maintaining a 40:60 tariff structure may distort the efficient functioning of the inter-jurisdictional water market for trade, but considers this is not likely to be significant. The ACCC considers it is only likely to impact allocation trade in interconnected valleys (Murray and Murrumbidgee) and notes that usage charges in these valleys are low. The ACCC has weighed this against the wider economic implications arising from an 80:20 tariff structure for the NSW MDB, as discussed above.

### **Other BWCOP**

As noted above, in making its draft decision the ACCC considered all of the BWCOP. The ACCC concluded that charges set to recover efficient and prudent costs as determined by the building block approach implied that the following BWCOP are met:

- water charges are to be based on full cost recovery for water services to ensure business viability and avoid monopoly rents
- water charges in the rural sector are to continue to move towards upper bound pricing where practicable

Upper bound pricing means the level at which, to avoid monopoly rents, a water business should not recover more than:

- the operational, maintenance and administrative costs, externalities, taxes or tax equivalent regimes;
- provision for the cost of asset consumption; and
- provision for the cost of capital (calculated using a weighted average cost of capital).

The building block model calculates the required revenue for a firm which is equal to the underlying cost components. By setting charges based on the revenue allowed by the building block model the ACCC is allowing full cost recovery of the services offered. The building block model also ensures that monopoly rents are not earned. In determining the level of charges based on the revenue calculated by the building block model the ACCC considers that State Water would not recover more than cost components listed above.

Further, the ACCC notes that the BWCOP that water charges are to include a consumption based component is met under both a 40:60 fixed to variable tariff structure and an 80:20 tariff structure. Under a 40:60 tariff structure users will pay more when they extract more water. The ACCC considers this gives effect to the principle of user pays.

### **Conclusion**

The ACCC maintains its position in the draft decision that State Water's proposed 80:20 tariff structure would not contribute to the BWCOP and that the current 40:60 tariff structure be maintained.

#### **8.4.2 Conversion factor - high security premium**

Section 8.4.2 of the ACCC's draft decision stated that it is reasonable for State Water to charge high security entitlement holders more than general security entitlement holders. This reflects the extra

'value', in terms of reliability and security that high security entitlement holders have compared to general security entitlement holders.<sup>392</sup>

The ACCC has considered the submissions (from NSWIC and South West Water Users) that did not support the calculation of high security entitlement charges. These submissions did not raise any new issues. In its draft decision the ACCC considered it is reasonable for State Water to charge high security entitlement holders more than general security entitlement holders. This is to reflect the extra 'value' in terms of reliability and security of supply that high security entitlement holders have compared to general security entitlement holders. The ACCC maintains its position explained in the draft decision that there is a premium for security and reliability of supply above the average water allocations, and that at this time the best measure to capture this value across all valleys is through the water sharing plan ratios.

The ACCC's final decision is to maintain the current method for calculating the high security entitlement charge.

### 8.4.3 Lowbidgee bulk water charges

In its draft decision the ACCC approved State Water's proposed fixed charge for Lowbidgee for the 2014-15 regulatory period. The ACCC also approved State Water's proposal to apply a usage charge equal to the applicable rate in the Murrumbidgee Valley when a supplementary event occurs. The ACCC determined that any revenue received through usage charges should be included in the Murrumbidgee unders and overs account.

The ACCC understands that water is to be extracted under supplementary water access licences in Lowbidgee only when there is a flooding event and this is only permitted in accordance with the Murrumbidgee water sharing plan.<sup>393</sup>

The ACCC agrees with the CEWO that the revenue raised through the Lowbidgee supplementary entitlement charges would recover 100 per cent of the revenue requirements for the Lowbidgee area of the Murrumbidgee catchment. This is because if State Water was allowed to recover additional revenue for a supplementary event it would be an over-recovery of revenue.

The ACCC's final decision is therefore to approve only the fixed charge for Lowbidgee. The ACCC does not approve the application of the Murrumbidgee usage charge when a supplementary event occurs.

### 8.4.4 Large customer rebates

As noted above, NSWIC questioned the reduction in proposed rebates for several ICDs in the ACCC's draft decision; specifically for Murrumbidgee Irrigation and Coleambally Irrigation (57 and 58 per cent, respectively). NSWIC suggested that State Water did not provide evidence that would warrant such a significant reduction in rebates. The differences in the level of the rebate between IPART's decision for its 2010 Determination and the ACCC's draft decision were due to updated costs applicable to the 2014-17 regulatory period for metering, compliance, billing, telemetry installation and

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<sup>392</sup> See attachment 8 of *Attachments to ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, March 2014.

<sup>393</sup> *Water sharing plan for Murrumbidgee regulated river water source*, 2003, clause 51.

data transfer. Changes in the current number of customer sites within each ICD, as advised by State Water, compared to the 2010 Determination were also a factor.<sup>394</sup>

In response to NSWIC's submission, the ACCC has reviewed its draft decision to maintain the current methodology for calculating rebates as applied by IPART. The ACCC sought to clarify the number of customer sites provided by State Water during the draft decision process. However, State Water did not provide any further information. In this final decision the ACCC has revised its estimate of the ICD rebate based on the number of customer sites within ICDs consistent with data collected by the ACCC for its Water Monitoring Report (2012–13) and confirmed with the ICDs. Further, the ACCC has updated the level of rebates to reflect its final decision on WACC. The levels of rebates determined in this final decision are generally consistent with those determined by IPART for its 2010 Determination.

Appendix B of the final decision sets out the ICD rebates determined by the ACCC.

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<sup>394</sup> ACCC, *Attachments to draft decision on State Water Pricing Application: 2014-15 – 2016-17*, attachment 8, table 8.17, p.227.

## 9 Form of price control

This attachment sets out the ACCC's final decision on State Water's form of price control for the second and third year of the 2014-17 regulatory period. The price control allows annual price adjustments to bulk water entitlement and usage charges.

### 9.1 Final decision

The ACCC's final decision is to not approve State Water's proposed revenue cap form of control. The ACCC's final decision is to maintain its unders and overs form of control as determined in the draft decision. The ACCC considers its unders and overs mechanism achieves a better balance between price stability for customers and revenue stability for State Water than State Water's proposed revenue cap and other alternatives put forward by State Water and other stakeholders in response to the ACCC's draft decision.

### 9.2 Submissions

State Water submitted that it is concerned that during periods of less than average water extractions, the ACCC tariff design and 'unders and overs' proposal places undue financial risk on State Water in the form of unsustainable borrowing levels, reduced credit ratings and higher debt costs.<sup>395</sup>

State Water's financial position worsens significantly under the ACCC's proposal given either actual extractions recorded over the past 10 years or the more favourable scenario. Most notably, State Water experiences a reduction in indicative credit ratings from BBB to BB+ and gearing increases to an unsustainable level of 83 per cent assuming actual extractions over the past 10 years. State Water's financial outlook is slightly better (yet still unsustainable) with the improved water extractions. The indicative credit rating falls to BB+ and gearing peaks at 73 per cent. The unsustainable financial outcomes are due to the need for increased short borrowings to overcome the difference between actual and allowed revenue.<sup>396</sup>

..the unders and overs proposal will reduce the businesses ability to meet its legislative obligations during periods of low water availability. This will necessarily impact service delivery at a time when customers are naturally expecting State Water to operate the rivers as efficiently as possible to maximise water availability.<sup>397</sup>

State Water also submitted that the unders and overs mechanism does not provide any compensation to State Water for providing the ancillary service of risk mitigation.

State Water agrees that by having variable tariffs, it does provide an ancillary service to its customers in the form of financial risk mitigation. State Water asserts that in a competitive market, this service would attract commensurate service and management fees. However, State Water does not receive any compensation.<sup>398</sup>

State Water submitted that the ACCC's decision to adopt the 'unders and overs' account to address State Water's revenue volatility risk is unprecedented and inconsistent with demonstrated regulatory precedents as set in recent regulatory decisions.<sup>399</sup>

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<sup>395</sup> State Water, *Response to the ACCC Draft Decision on State Water Pricing Application 2014-15 – 2016-17 (Response)*, April 2014, p.14.

<sup>396</sup> State Water, *Response*, p.15.

<sup>397</sup> State Water, *Response*, p.15.

<sup>398</sup> State Water, *Response*, p.16.

<sup>399</sup> State Water, *Response*, p.17.

State Water proposed that if the 40:60 tariff structure is maintained, the unders and overs mechanism should be adjusted to include the following:

- an annual repayment of the revenue shortfall equal to 10 per cent of the accumulated shortfall, applied to general security holders
- the proposed annual 10 per cent repayment should be in addition to the ACCC's proposed mechanism
- an annual CPI indexation of the unders and overs account balance.<sup>400</sup>

State Water's consultant Frontier Economics (Frontier) submitted:

...the form of price control proposed by the ACCC in its Draft Decision has many major deficiencies. Such a complex and non-transparent LCM mechanism should only be adopted in the absence of better alternative instruments to address the various policy issues of concern. In our view, a cost-reflective tariff structure, supplemented by direct measures (e.g. CSOs or hardship schemes) to address concerns about the cashflows of a small subset of irrigators, is a much superior policy response than distorting the tariff structure for all customers.<sup>401</sup>

...if the ACCC retains the current 40:60 tariff structure, it should couple this with a revenue cap subject to a constraint on price adjustments which it deems acceptable. Alternatively, but less preferably, it should adopt an adjusted version of its LCM approach that includes an allowance for the retiring of accumulating debt.<sup>402</sup>

Lachlan Valley Water (LVW) submitted:

Lachlan Valley Water (LVW) supports an under and overs account as a means of managing State Water's revenue volatility. However, we are concerned that in a prolonged and severe drought, the negative balance in the account could build to a high level and possibly lead to price shock for customers. In order to avoid perverse pricing outcomes during prolonged drought we suggest a further mechanism may be required to limit the price increase in the following year to no more than 5%.<sup>403</sup>

NSW Farmers submitted:

the unders/overs mechanism and the 20 year rolling average proposed to account for revenue volatility in the ACCC's draft decision is actually a shift of business risk to consumers. These mechanisms create unacceptable uncertainty for consumers, particularly given the millennium drought; the 20 year rolling average could significantly skew water forecasts.<sup>404</sup>

NSWIC submitted that it considers the charges:

as 'indicative' because many important input cost factors are yet to be determined. Furthermore, bulk water charges in 2015-16 and 2015-17 are even more uncertain due to the proposed 20 year rolling average approach and the 'overs/unders' mechanism. These two mechanisms will lead to even greater price volatility and make it virtually impossible for customers to make informed planning decisions for future water years. NSWIC submits that the 20 year moving average approach and the overs/unders mechanism will make it

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<sup>400</sup> State Water, *Response*, p.17.

<sup>401</sup> Frontier Economics, *Analysis of aspects of ACCC Draft Decision on State Water Application - a report prepared for State Water*, April 2014, p. 45.

<sup>402</sup> Frontier Economics, *Analysis of aspects of ACCC Draft Decision on State Water Application - a report prepared for State Water*, April 2014, p. 45.

<sup>403</sup> Lachlan Valley Water (LVW) submission to ACCC Draft Decision, 17 April 2014.

<sup>404</sup> NSW Farmers, Submission to ACCC Draft Decision, 17 April 2014.



virtually impossible for customers to make informed planning decisions for future water years.<sup>405</sup>

Murray Irrigation submitted:

The ACCC is effectively proposing that a revenue cap form of price control is applied to MDBA charges, as opposed to the hybrid model to be applied to the State Water charges. The implications of this methodology and the risk of substantial price shocks are significant and goes against the ACCC's pricing principle to achieve "revenue stability for the operator and price stability for customers" (emphasis added).

This places increased likelihood of significant price fluctuations between years for customers in valleys where MDBA charges are recovered...

The addition of the 'unders-and-overs' account adds to the uncertainty created by the price control measures adopted by the ACCC, mentioned below, where in these valleys three data points will be used to adjust prices at the annual price review.<sup>406</sup>

### 9.3 Assessment approach

The ACCC may determine 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 of State Water's maximum charges in the second and subsequent year of the regulatory period, in light of any updated information on demand and consumption forecasts, and also considering price stability for each year of the regulatory period.

The ACCC has also had regard to its water pricing principles which provide that:

In general the forms of price control available to a regulator include price caps and revenue caps, although regulators often adopt approaches that utilise both elements of price and revenue caps. This is known as a hybrid approach.

... the decision in applying a form of price control will largely reflect a decision about achieving revenue stability for the operator and price stability for customers. The ACCC considers that the regulator will be in the best position to decide on how to make this trade-off between different objectives. In making this decision the regulator may choose to seek input from the regulated business.<sup>407</sup>

The ACCC took into account submissions received from State Water and other stakeholders in response to its draft decision.

### 9.4 Reasons for decision

This section sets out the ACCC's final decision on the form of control. It addresses the price stability and financial viability issues raised by stakeholders in response to the unders and overs mechanism proposed in the ACCC's draft decision.

The ACCC's draft decision<sup>408</sup> also contains information and analysis relevant to this final decision.

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<sup>405</sup> NSWIC, Submission 1 to Final Decision.

<sup>406</sup> Murray Irrigation, *Response to ACCC Draft Decision on State Water Pricing Application 2014-15 to 2016-17*, p. 6.

<sup>407</sup> ACCC, *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011, pp. 50-51.

<sup>408</sup> See Attachment 10 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

In making this decision the ACCC considered the issues raised in submissions from State Water and its consultant Frontier Economics about financial risk to State Water. The ACCC also considered submissions from stakeholders that the unders and overs mechanism when combined with a rolling average forecast of demand transfers volume risk to stakeholders and creates price uncertainty.

In considering submissions the ACCC and its consultant Deloitte Access Economics (Deloitte) analysed the impact of the alternative forms of price control proposed by State Water and stakeholders using historical water extractions and the impacts these alternatives would have on the financial viability of State Water.

The ACCC also had regard to its obligations under rule 37 of the WCIR which requires the ACCC to consider price stability over the regulatory period.

### **Price stability**

The ACCC found that when volume forecasts are revised on an annual basis<sup>409</sup>, prices over the regulatory period are more variable than when volume forecasts are kept constant. When revised forecasts are applied in combination with a revenue cap or unders and overs form of control, the volatility in price increases. In comparing the ACCC's unders and overs form of control against alternatives proposed in response to the draft decision, the ACCC also took into account annual revisions to prices as a result of revised volume forecasts under rule 37 of the WCIR.

The ACCC compared its unders and overs mechanism against State Water's proposal to include an annual repayment of the revenue shortfall equal to 10 per cent of the accumulated shortfall, applied to general security holders. The ACCC found that State Water's proposed adjustment to the ACCC's unders and overs mechanism would result in greater price volatility than the ACCC's proposed unders and overs form of control.

The ACCC also considered Frontier's proposal that if the ACCC retains the current 40:60 tariff structure, it should couple this with a revenue cap subject to a constraint on price adjustments which it deems acceptable.<sup>410</sup>

The ACCC notes that stakeholders also suggested applying a cap to the unders and overs mechanism. LVW suggested a cap of five per cent.

As noted in the ACCC's draft decision, a revenue cap can result in significant price shocks over extended dry periods. By applying a cap to price adjustments, a larger proportion of revenue 'under recovery' will accumulate during dry periods. Having regard to Frontier's submission to apply a price cap to the revenue cap form of control, the ACCC considers that this will lead to larger price fluctuations between periods in order to recover the balance of the 'under recovery'.

The ACCC considered LVW's submission to apply a cap of five per cent to annual adjustments to the unders and overs account. The ACCC notes that this would create greater price stability and certainty for customers during a regulatory period but will increase the revenue risk to State Water because revenue is constrained by the cap. The ACCC found that without a cap there may be periods when the price adjustment is greater than five per cent. This could occur in dry periods as a result of the

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<sup>409</sup> Revenue requirements are divided by the 20 year volume average to determine prices. Each year the 20 year volume average is adjusted by adding volumes from the latest available year, and subtracting the data from the first year of the 20 year data set.

<sup>410</sup> Frontier Economics, *Analysis of aspects of ACCC Draft Decision on State Water Application - a report prepared for State Water*, April 2014, p. 45.

combination of both the unders and overs mechanism and revised volume forecasts. The ACCC considers that the application of a cap to price changes may not allow State Water to recover its revenue against revised volume forecasts during a regulatory period and potentially lead to large price adjustments in subsequent regulatory periods to recover the balance of the 'under recovery'.

The ACCC recognises that in dry periods the unders and overs mechanism will result in higher prices. However, it considers that customers will largely be protected from bill shocks through the 40:60 tariff structure. ACCC analysis shows that under a 40:60 tariff structure the increase in customer bills in dry periods is less than under a tariff structure where more weight is given to fixed charges, as originally proposed by State Water in its pricing application. The ACCC considers that the 40:60 tariff structure will mitigate bill impacts on customers during dry periods. The ACCC also considers that the application of a price cap to the unders and overs mechanism as proposed by LVW would distort the balance between revenue stability and certainty for State Water and price stability for customers that the mechanism seeks to achieve.

### Financial viability

The ACCC considers that its unders and overs form of control will result in more stable prices for customers over time than State Water's proposed forms of control, whilst still providing State Water with greater revenue certainty than its current price cap form of control. The ACCC considers that the unders and overs form of control in combination with revised annual volume forecasts will allow State Water to recover sufficient revenue streams to allow efficient delivery of the required services.

The ACCC engaged Deloitte to consider State Water's submission that during periods of less than average water extractions, the ACCC tariff design and unders and overs mechanism places undue financial risk on State Water in the form of unsustainable borrowing levels, reduced credit ratings and higher debt costs.<sup>411</sup>

Deloitte's key findings about the application of the unders and overs mechanism to the 2014-17 and 2017-21 regulatory periods were as follows:

- We have reviewed State Water's historical and forecast financial performance using a range of metrics, including in particular the three metrics used by IPART to assess the financeability of water businesses that results from its pricing determinations.
- Based on projections of State Water's financial outcomes from 2013-14 to 2020-21, under a low demand<sup>412</sup> scenario: The ACCC's 'unders' and 'overs' mechanism allows for financial performance that is generally considered sound. While debt generally increases over the period it remains within boundaries considered acceptable by IPART. Similarly, net operating cash flows are positive, with net operating cash flow metrics well within the IPART boundaries.
- We consider it unlikely ... that State Water's financial viability will be placed at risk by the ACCC's proposed 'unders' and 'overs' mechanism because:

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<sup>411</sup> State Water, *Response*, p.14

<sup>412</sup> The low demand assumed water extractions equal to those that occurred from 2004-05 to 2010-11, the lowest consecutive seven-year period between 1992-93 and 2012-13. This period included water extractions of just over 1,000 GL in 2007-08, the lowest on record and approximately 20% of long-term average water sales.<sup>5</sup> Total extractions over this period in the eight ACCC regulated valleys – Border, Gwydir, Namoi, Peel, Macquarie, Lachlan, Murrumbidgee and Murray – were 16,534 ML.

- A three-year regulatory period provides a measure of risk mitigation by allowing any changes in State Water's operating environment to be reviewed in the relatively short-term and reflected in its future revenue requirements and service standards;
- The availability of water resources is currently sound, with key NSW storages – Hume, Dartmouth and Blowering Dams – at 64% of total capacity. Coupled with the ACCC's proposal to forecast water extractions using a 20-year moving average, it is likely that water extractions in 2014-15 will at least be above the average of the previous 20 years (which has been used to set prices); and
- State Water's projected debt at the start of the next regulatory period – approximately 30 per cent of its Regulated Asset Base – is significantly below IPART's benchmark level. Should actual water extractions be less than forecast, there is scope for State Water to increase its gearing to fund its capital programs, or cut back dividends, in order to 'ride out' periods of low extractions.<sup>413</sup>

Having regard to Deloitte's findings, the ACCC maintains that the unders and overs form of control in combination with revised annual volume forecasts will allow State Water to recover sufficient revenue streams over the next two regulatory periods to allow efficient delivery of the required services, even under a low demand scenario. Further, as the unders and overs account is NPV neutral, State Water will fully recover all of its costs over time even if it experiences low demand in the short term.

### Pass through of MDBA and BRC costs

The ACCC maintains its draft decision to apply an unders and overs mechanism to the MDBA and BRC charges that will allow full adjustment to prices in the next year to reflect any under or over recovery in the previous year. This mechanism is symmetrical so if there is an over-recovery of costs this will be passed back to customers in full through lower prices the following year.

Murray Irrigation submitted that:

The ACCC is effectively proposing that a revenue cap form of price control is applied to MDBA charges, as opposed to the hybrid model to be applied to the State Water charges. The implications of this methodology and the risk of substantial price shocks is significant and goes against the ACCC's pricing principle to achieve "revenue stability for the operator and price stability for customers" (emphasis added).<sup>414</sup>

The ACCC has considered the issue raised by Murray Irrigation. However, under the terms of the direction to State Water by the NSW Treasurer made on 28 May 2014 for the recovery of MDBA and BRC costs over 2014-17, State Water is required to pay these costs to the NSW Consolidated Fund each year during the 2014-17 period. Specifically, it is a regulatory obligation on State Water to pay these costs to the NSW Consolidated Fund on 15 June in each year of the regulatory period.

Under the WCIR, the ACCC cannot approve the regulated charges set out in a pricing application unless it is satisfied that the total forecast revenue used to calculate those charges for each year of the regulatory period is reasonably likely to meet the prudent and efficient costs of providing

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<sup>413</sup> Deloitte Access Economics, *Review of proposed unders and overs approach - Final Report - Australian Competition and Consumer Commission*, 29 May 2014, p.3-4.

<sup>414</sup> Murray Irrigation, *Response to ACCC Draft Decision on State Water Pricing Application 2014-15 to 2016-17*, p. 6.

infrastructure services, including costs incurred in complying with regulatory obligations and requirements.<sup>415</sup>

To enable the pass-through of MDBA and BRC costs, the ACCC has included in the form of control for State Water's bulk water charges a mechanism to allow for these costs to be recovered through charges in the 2014-17 period. This mechanism was also set out in the draft decision. The control mechanism in this final decision refers to the costs in the NSW Treasurer's direction and will vary charges in line with that direction.

The ACCC's approach to the recovery of MDBA and BRC costs is discussed further in section 1 of the ACCC's final decision.

## **Conclusion**

The ACCC considers that State Water's proposed revenue cap form of control and proposed adjustment mechanism to the ACCC's unders and overs form of control would provide better financial outcomes for State Water than the ACCC's unders and overs form of control during dry times. However, it would result in greater price volatility for customers.

The ACCC considers that its unders and overs mechanism in combination with revised annual volume forecasts will allow State Water to recover sufficient revenue streams to allow efficient delivery of the required services. The ACCC considers that its unders and overs form of control, compared to alternatives proposed by stakeholders, achieves a better balance between delivering price stability for customers and revenue stability for State Water.

The ACCC notes that in reaching this decision it took into account its water pricing principles which state that the forms of price control available to a regulator include price caps and revenue caps, although regulators often adopt approaches that utilise both. The ACCC considers its unders and overs form of control to be a hybrid between a price cap and a revenue cap.

The formulae for the unders and overs form of control are set out in Appendix B to the ACCC's final decision.

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<sup>415</sup> WCIR, rule 29.

## 10 Metering charges

The ACCC is responsible for regulating certain water metering charges levied by State Water for the Murray-Darling Basin (MDB). These are in addition to the bulk water charges and other charges discussed in Chapter 3. The ACCC approves or determines State Water's metering charges for:

- extractive customers using a State Water owned meter in a river in the MDB (metering service charge)<sup>416</sup>
- gauging stations used to meter water delivered to non-extractive customers (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.

### 10.1 Metering service charge

Metering service charges (MSC) 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 government's 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.

The metering service charge is payable by all customers that use a State Water owned meter. Under the NSW metering scheme, customers upgrade their meters in accordance with the new standards by transitioning from a customer-owned meter to a State Water owned meter. The initial capital cost of meters installed under the NSW metering scheme is funded by the Australian government. In exchange, the Australian and NSW governments will retain a portion of the water savings achieved from the new meters. The remaining water savings will be left in the water system to improve reliability for existing entitlements.<sup>417</sup>

Customers may choose not to enter the NSW metering scheme, but may still use a State Water-owned meter which is not subsidised by the Australian government. In that case they will pay an additional charge to State Water to cover the initial capital cost of the meter.

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<sup>416</sup> Regulated river customers with a customer-owned meter are not charged a separate metering service charge. State Water's costs of reading customer-owned meters in regulated rivers are recovered through bulk water charges.

<sup>417</sup> NSW Office of Water, *NSW Sustaining the Basin Metering Project: Business Case*, June 2010, p. iv.

Additionally, 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 customer-owned meters for billing and compliance purposes (maintenance costs remain the responsibility of the customer that owns the meter). Customers choosing not to receive a State Water owned meter must still have a meter complying with the new standards by 2020.<sup>418</sup>

### 10.1.1 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 our forecast of prudent and efficient costs, as set out in Table 10-1 through to Table 10-4 in real \$2013-14. Nominal prices for each year are to be derived by adjusting the real prices by the inflation factors shown in Table 10–5. The ACCC’s draft decision<sup>419</sup> also contains information and analysis supporting this final decision.

**Table 10-1 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 analysis.

<sup>418</sup> NSW Office of Water, *NSW metering implementation plan under the national framework for non-urban water metering*, September 2013, p. 6.

<sup>419</sup> See Attachment 9 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

**Table 10-2 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 analysis.

**Table 10-3 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 analysis.



**Table 10-4 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 analysis.

**Table 10-5 Inflation factors to apply to metering charges**

Year	Adjustment factors to apply to metering charges in \$2013-14
2014–15	$(1 + (CPI^{\text{March 2014}} - CPI^{\text{March 2013}}) / CPI^{\text{March 2013}}) = 1.0293$
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.

In its draft decision the ACCC determined charges based on the actual costs experienced by State Water in its metering pilot program, with an additional allowance for replacement of failing meters. Replacement costs associated with failing meters are expected to occur in the future but have not been experienced by State Water to date. Actual costs experienced by State Water, plus an allowance for meter replacement, are significantly lower than State Water's forecast costs.

In response to the draft decision State Water submitted that actual costs to date do not cover the full range of costs expected to be incurred in the future. The ACCC's final decision determines charges that are higher than the charges in the draft decision and current charges, but lower than those proposed by State Water. The reasons are set out below. Section 10.1.4 provides further detail on the ACCC's consideration of the issues raised by stakeholders and State Water in response to the ACCC's draft 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 costs of providing the service. In particular, the forecast costs proposed by State Water are likely to exceed the efficient costs for meters recently installed.

The ACCC considers that:

- for meters installed for less than 2 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 installed for longer than 2 years, State Water's proposed costs for operating and maintaining meters are reasonable forecasts of prudent costs, subject to the following adjustments:
  - the cost of telemetry and information systems should be reduced to the level of historic costs for reading and processing meter data
  - the proposed corporate overheads allowance should be reduced to a level reflecting historical experience.

#### *Meter capital cost*

The ACCC's final decision on forecasts of capital costs is the same as the draft decision,<sup>420</sup> except that a proposed component for the capital cost of telemetry has been removed from the charges for Commonwealth-funded meters without telemetry.

### 10.1.2 Submissions

Submissions addressing metering issues were received from State Water, NSW Irrigators' Council (NSWIC) and Gwydir Valley Irrigators Association (GVIA).

State Water submitted that:

- its proposed metering service charges are based on prudent and efficient practice and costs
- its current charges are based on incomplete and insufficient assumptions and do not provide an appropriate benchmark for costs to be recovered by the proposed metering service charges
- the historical costs observed through the pilot project are inappropriate for establishing a baseline for anticipated costs; and
- the proposed metering service charges reflect necessary operations and maintenance required to meet the national standards in particular the National Framework for Non-urban Water Metering, AS4747 and the Metrological Assurance Framework.<sup>421</sup>

State Water provided an additional report reviewing the charges, which it prepared with assistance from consultants KPMG and MWH Global.<sup>422</sup> This set out further information on actual costs, other operators' charges and national standards to support its case.

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<sup>420</sup> See Attachment 9 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>421</sup> State Water, *Response to ACCC draft decision*, p.26-27.

<sup>422</sup> State Water with KPMG & MWH Global, *Response to ACCC draft decision: Metering service charges*, April 2014.

The NSWIC and GVIA were the only customer stakeholders to comment on metering service charges. NSWIC concluded that:

- without additional information and a comprehensive business case, NSWIC rejects State Water's meter service charges and the methodology in full
- a thorough cost benefit analysis should be undertaken to assess the viability of the proposed metering project and scrutinize the proposed charges
- telemetry is not part of the proposed metering standards and should not be considered for the review of SWC's bulk water charges.<sup>423</sup>

Stakeholder comments are considered further below.

### 10.1.3 Assessment approach

The ACCC assessed the proposed costs using a base, step and trend approach. That is, it considers:

- the base costs observed for the relevant activities in historical data
- step changes from that base which may be necessary; for example, due to regulatory changes
- trends in input prices affecting forecast costs.

The approach was set out in detail in the ACCC's draft decision.<sup>424</sup>

### 10.1.4 Reasons for decision

Metering charges determined in the ACCC's final decision are based on observed historic costs where appropriate, and largely on State Water's proposed costs for older meters.

State Water submitted that the actual costs of new meters incurred by State Water to date do not reflect the costs of all the components associated with compliance with the metrological assurance framework and AS4747.<sup>425</sup>

The reason for this is that under the Managing Contractor Agreement for the Metering Project, the Contractor is responsible for and bears the cost of rectifying defects and omissions from the date of installation of each meter through to twenty four months after all works have been completed. Although there is no "maintenance" scope included in the contract, the defects rectification regime has motivated the Contractor to maintain and rectify meter performance issues, and has incurred the corresponding cost on State Water's behalf.<sup>426</sup>

The ACCC understands that new meters to be installed in the 2014-17 regulatory period will continue to have the same warranty conditions, and can expect to have costs in line with those installed in the current period.<sup>427</sup>

State Water further submitted that the national standards have only recently come into effect and the costs incurred to date do not reflect future service standards. However, the ACCC understands that the new standard AS4747 came into effect in July 2013 and the ACCC has calculated actual costs

<sup>423</sup> NSWIC, *Submission to ACCC, ACCC Draft Decision on State Water Pricing Application 2014-15 - 2016-17*, p.8.

<sup>424</sup> See Attachment 9 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17, March 2014*.

<sup>425</sup> State Water, *Response 32.2 to ACCC information request*, received 9 December 2013.

<sup>426</sup> State Water with KPMG & MWH Global, *Response to ACCC draft decision, Metering service charges*, 17 April 2014, p.28.

<sup>427</sup> State Water, email to ACCC, received 14:25 Friday 23 May 2014.

from State Water data for the September quarter of 2014, when the new standards applied. State Water provided no evidence that the new standards are more onerous.

The National Framework for Non-urban Water Metering includes requirements that meters must be, for example:

- maintained periodically in accordance with the Pattern Approval certificate and relevant Australian Standards or Technical Specifications (e.g. ATS 4747)
- periodically validated by a certified validator
- audited on a regular basis.

The framework provides a degree of flexibility in how the requirements are interpreted and implemented. For this reason, given the material inconsistency between experienced costs and State Water's metering model, the ACCC considers that State Water's observed costs in implementing the requirements (where available) are a better guide to efficient costs than a theoretical cost build-up.

State Water provided some additional information on charges levied by other infrastructure operators, namely Murray Irrigation, Murrumbidgee Irrigation, Coleambally Irrigation and Goulburn-Murray Water. These were generally 'outlet charges', broadly equivalent to metering charges. The charges shown were generally within the range of State Water's proposed charges which range from \$530 to \$971 for varying sizes (with telemetry) in 2014–15.<sup>428</sup>

In the case of Murrumbidgee Irrigation, the ACCC considers that the closest equivalent charge is \$410.82 per outlet for Large Area Supplies.<sup>429</sup> This is below State Water's proposed range. Some other infrastructure operator charges are near the top of State Water's range. However, comparison between State Water's and other operators' charges is not straight-forward because there is insufficient information available to the ACCC<sup>430</sup> on:

- other operators' meter sizes and equivalency with State Water's meter types<sup>431</sup>
- the activities undertaken by other operators and equivalency with State Water's metering services.

Therefore the ACCC put less weight on these comparisons than on data directly relevant to State Water.

The data available on State Water's actual costs is limited to the experience of meters mainly within the initial warranty period of two years. The ACCC accepts that this period did not cover the full range of maintenance and validation costs likely to be experienced in later years. Even if these activities were required under the previous standards, no expenditure for them may have been necessary since the pilot project commenced in 2011.

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<sup>428</sup> State Water with KPMG and MWH Global *Response to ACCC draft decision, Metering service charges*, 17 April 2014, p.27.

<sup>429</sup> Murrumbidgee Irrigation, Schedule of charges 2014-15 (Tables 1 and 2) in <http://www.mirrigation.com.au/Customers/Schedule-of-Charges>. State Water's report listed \$686 for large automated outlets and \$516 per annum for small outlets, but these were not found in MI's current schedule.

<sup>430</sup> The ACCC contacted other operators but was unable to make direct comparisons based on the information provided.

<sup>431</sup> Further, other operators use various types of meter, for example, many of Coleambally's are flume-gates rather than closed conduit meters.

Although State Water has no historical experience to validate the proposed costs for its own meters in the longer term, the ACCC considers the cost build-up shown in its metering model offers a reasonable initial basis.

Therefore, our final decision is based on the following:

- for meters installed for less than 2 years, forecast costs per meter are based on actual costs incurred to date (the average annualised cost was \$296, but we distributed this between different size meters in the same ratio as for the proposed costs)
- for meters that have been installed for longer than 2 years, forecast costs per meter are based on proposed costs from State Water's metering model, with certain adjustments outlined below
- the categories of charges remain as proposed by State Water, but charges for a given size meter are a weighted average of the cost of older and newer meter batches.

Over time more of the meter fleet will move out of the warranty period until ultimately, after the roll-out is completed, all will be past the warranty period.<sup>432</sup> In future price reviews charges should reflect further experience of the actual costs to operate and maintain the meters.

State Water has advised the ACCC that it supports a two-tier approach to meter charges and that there should be separate charges for the two batches of meters, depending on the installation date.<sup>433</sup> The ACCC has considered this approach but considers that it would be more efficient to retain a single charge reflecting a weighted average, because:

- there would be little difference in effect as all meters would move through both tiers of charges so that the average over several years would be similar in both cases
- separate charges would further complicate the charging schedule, and stakeholders have not had an opportunity to comment on a new structure.

Gwydir Valley Irrigators Association would like further information on actual costs of the metering projects to be incorporated into future cost assumptions, as the GVIA has reservations about the accuracy of the proposed charges.<sup>434</sup> The ACCC agrees with this approach and at the next price review would, as a matter of course, take into account actual costs as they develop over the 2014–17 regulatory period.

### ***Adjustments to proposed MSC costs - telemetry***

State Water's proposed costs include components for:

- telemetry data transfer (\$76 per meter per annum)
- TMS (Telemetry Metering System) - information processing systems and staff - \$116 per meter per annum).

In recognition of the fact that telemetry on new meters will substitute for manual reading on old meters, State Water proposed removing the manual reading component from opex (Metering and compliance category). Consequently opex on metering and compliance is forecast to decrease further

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<sup>432</sup> The estimated number of meters out of the 2-year warranty period would increase from 39% at the start of 2014-15 to 63% at the end of 2016-17, based on State Water's forecasts in its metering model.

<sup>433</sup> State Water, email to ACCC of 23 May 2014.

<sup>434</sup> GVIA submission on ACCC draft decision, p.17.

each year as an increasing percentage of meters are replaced by new meters with telemetry. This saving was accepted by the ACCC in its draft decision.<sup>435</sup> State Water's proposed telemetry costs included in the MSC were not accepted by the ACCC and a lower amount was determined based on historical costs.

The NSWIC submitted that telemetry is not part of the current metering standards and should not be considered under the review of State Water's charges.<sup>436</sup> The ACCC accepts that telemetry is not a requirement under the national standards. However, the ACCC understands that the business case for the NSW metering scheme intends for telemetry units to be included with every meter funded under the scheme. Further, in conjunction with the NSW metering scheme, the NSW Office of Water may include telemetry obligations as a condition of water access licences. Given this, it seems prudent for State Water to offer telemetered meters to customers that request them. State Water proposes different metering service charges for meters with telemetry and meters without telemetry.

State Water has previously had to read, process and analyse the data from both old and new meters for its own operational purposes. Therefore there is an amount of expenditure for these activities embedded in historic costs, either in bulk water costs or MSC costs. State Water's proposed telemetry data transfer and TMS cost components of the metering service charge represents a new method of collecting and processing meter data. The ACCC considers that a new method of collecting and processing meter data should be at least as efficient as the previous method – that is, it should be at lower cost or offset by efficiency gains elsewhere, or any additional cost for improved service should be agreed by stakeholders.

State Water proposed offsetting efficiency gains from avoided manual meter reading. These efficiency gains were proposed, and accepted, as a step decrease in bulk water opex. State Water also submitted that the inclusion of telemetry with meters reduces the maintenance costs relative to meters without telemetry.<sup>437</sup> The three-year (2014–15 to 2016–17) total cost of telemetry, and the cost savings expected from telemetry, are shown in Table 10-6.

**Table 10-6 Telemetry costs (\$millions, real \$2013–14)**

	Total 3-year cost
Telemetry data transfer costs	2.532
TMS costs	1.613
<b>Total costs</b>	<b>4.145</b>
Manual meter reading savings (bulk water opex)	1.715
Meter maintenance savings	1.672
<b>Total savings</b>	<b>3.387</b>
Net benefit	(0.758)

Source: State Water, ACCC analysis.

State Water's proposed telemetry data transfer and TMS costs are greater than the proposed savings from the use of telemetry data systems. Therefore, the ACCC considers the costs underpinning the

<sup>435</sup> See section 2.6.2 of attachment 2 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>436</sup> NSWIC submission on ACCC draft decision, p.31.

<sup>437</sup> State Water, email from State Water to ACCC, received 16:07 Friday 23 May 2014.

MSC for meters greater than two years old should be reduced by \$0.758 million in total over the 2014–17 period (costs for meters less than two years old will be based on actual historical costs as outlined above). The ACCC has determined the metering service charges shown in Table 10-1 to Table 10-4 based on this reduced cost.

### ***Adjustments to proposed MSC costs - 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 included in the metering charge for customers that use State Water funded meters (that is, not funded by the Commonwealth government)
- an allowance for the capital cost of replacing failing meters included in charges for all customers that use State Water owned meters — State Water forecasts a non-warranty failure rate of 1% per year.

In its draft decision the ACCC accepted State Water's proposed cost input forecasts for purchase and installation of meters, but considered that the following adjustments should be made to the calculation of annual capital charges to reflect prudent and efficient costs:<sup>438</sup>

- annual charges should be based on an annuity rather than the building block approach proposed by State Water
- assumptions on timing of cash-flows made consistent with those for bulk water charges
- new meters added to the asset base each year
- the weighted average cost of capital made consistent with that for bulk water charges.

NSWIC expressed concern that State Water's meter asset base will grow over the course of the project, and customers will be asked to continuously pay a return on and depreciation of SWC's meter stock.<sup>439</sup>

The ACCC notes that the capital cost of State Water's meter assets does not enter the regulatory asset base which underlies bulk water charges. Rather it contributes only to metering charges. The capital cost of meters under the NSW metering scheme is funded by the Commonwealth, so does not enter State Water's costs. However, metering charges will include an allowance for the capital cost of replacing those meters expected to fail for reasons not covered by warranty. The proposed allowance reflects an expected fail rate of 1 per cent of the meter stock per annum, which would be adjusted in future price reviews to reflect actual failure rates. As meters fail, they will have to be replaced by State Water funded meters.

The capital replacement component of the MSC accounts for around 2 per cent of the MSC in 2014–15. However, it will grow over time until all meters have been replaced and State Water becomes responsible for capital as well as operating costs. At that stage customers with State Water-owned meters could expect to be paying the full cost including capital – that is, equivalent to the charges for State Water-funded meters. The ACCC considers that this is an efficient cost-reflective approach.

The ACCC received no other submissions on our draft decision on meter capital costs, and maintains the same approach in our final decision.

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<sup>438</sup> ACCC Draft decision, p.246.

<sup>439</sup> NSWIC submission on ACCC draft decision, p.32.

### ***Adjustments to proposed MSC costs - overheads***

State Water's metering model shows that a percentage allowance for corporate overheads of 90% is added to labour costs. The ACCC considers that an efficient forecast allowance should reflect observed historical overhead rates. State Water provided data showing that indirect and corporate charges as a percentage of salaries averaged 75% over 2011–12 and 2012–13 for non-regulated opex (the category which includes metering costs).<sup>440</sup> The ACCC considers that a 75% allowance is more prudent and efficient in the light of historical data, and has determined metering service charges on this basis.

### ***Other issues raised***

NSWIC submitted that not enough evidence has been provided that would warrant a fundamental change in the way meter service charges are being set. State Water's proposal for the change in methodology was based on the major change due to the national metering standards and a range of new types of meters.<sup>441</sup> The ACCC considers that the new structure of charges is more cost-reflective and provides price signals to install the most appropriate size of meter.

NSWIC also submitted that the new charging system is premature because the NSW metering scheme is far from being determined, does not currently have universal support and no product exists that complies with the standards.<sup>442</sup> The ACCC considers that, given the roll-out of new meters has begun in order to meet compliance dates in the new standards, it is prudent to establish a charging system that reflects the new meters. Although no pattern-approved meters are yet available, the NSW government has issued policy statements that meters installed in good faith under the interim standards will be acceptable under the national standards. [check & cite ref] The ACCC considers that this provides a reasonable assurance to State Water to begin the roll-out.

NSWIC queried whether the metering service charges are applicable for each meter or per site. NSWIC was concerned that, if charges were 'per meter', there would be significant cost increases for individual customers who have a range of meters on their property. The ACCC confirms that the charges are per meter, as they are based on itemised costs for individual meters, which is the most cost-reflective approach. The ACCC notes that State Water will assist customers in rationalising their meter assets as the NSW metering scheme is rolled out.<sup>443</sup>

G VIA submitted that the inclusion of metering service charges for State Water or Commonwealth funded meters is premature in the northern valleys, as negotiations continue on how irrigators will fund future metering requirements.<sup>444</sup> The ACCC notes that the metering charges determined by the ACCC only apply to State Water customers with a new State Water-owned meter. If irrigators in northern valleys such as Gwydir do not receive these meters, the charges will not apply to them.

## **10.2 Environmental gauging station charges**

State Water has 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.

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<sup>440</sup> State Water, Response 32.4 - 'ACCC 28 1 - 28 5 SW Cost analysis Revised.XLSX', received 6 December 2013.

<sup>441</sup> NSWIC submission, p. 30.

<sup>442</sup> NSWIC submission, p. 30.

<sup>443</sup> State Water, *NSW metering scheme fact sheet #3*, p. 1.

<sup>444</sup> G VIA submission on ACCC draft decision, p. 17.



## 10.2.1 Final decision – gauging stations

The ACCC accepts the creation of a new metering charge for upgraded environmental gauging stations as prudent and efficient, but does not accept the level of the charge as proposed by State Water (\$19,578 per meter in real \$2013–14). The ACCC has determined a lower charge based on the cost of upgrading the gauging stations, as shown in Table 10-7. The current costs of hydrometric monitoring at the stations will continue to be recovered through opex in bulk water charges.

**Table 10-7 Environmental gauging station charges – ACCC final decision**

ACCC final decision	
2014–15	\$8,562
2015–16	$\$8,562 \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}})$
2016–17	$\$8,562 \times (1 + (CPI^{\text{March 2015}} - CPI^{\text{March 2014}}) / CPI^{\text{March 2014}}) \times (1 + (CPI^{\text{March 2016}} - CPI^{\text{March 2015}}) / CPI^{\text{March 2015}})$

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.

The ACCC's consideration of the issues raised by stakeholders and State Water in response to the ACCC's draft decision is discussed below. The ACCC's draft decision also contains information and analysis supporting this final decision.<sup>445</sup>

## 10.2.2 Submissions

The ACCC received two submissions on the environmental gauging station charge. The Commonwealth Environmental Water Holder (CEWH) submitted that gauging station costs are a cost for all users, as they would still be needed even in the absence of environmental water, stating:<sup>446</sup>

...these gauging stations form part of SWC's existing metering network and were set up as a foundation for all customers—they were not constructed to provide additional services for environmental use. Further to this, were environmental water delivery to cease, there is no evidence to suggest that SWC would no longer require these gauging stations to meet their obligations to monitor instream flows for all customers and support broader reporting requirements, including those under the Murray-Darling Basin Plan.

The CEWH submitted that the meter charges are not consistent between environmental and other customers, stating:<sup>447</sup>

Further to the above, despite the proposal for environmental water holders to pay for all of the costs associated with the gauging stations that we are currently utilising, but that others are not, there is no reciprocal arrangement for environmental water holders to not pay for gauging stations that are not currently being used to deliver environmental water

The CEWH also submitted that the environmental metering charge is excessive relative to metering charges for other customers, stating:<sup>448</sup>

...the CEWO contends that passing on the full annual cost of \$19,578 per gauging station (adjusted annually for inflation) for the management and maintenance of this infrastructure is excessive and does not reflect pricing for service principles. In comparison, the ACCC have proposed that extractive customers

<sup>445</sup> See attachment 9 of *Attachments to ACCC Draft Decision on State Water Pricing Application: 2014-15 – 2016-17*, March 2014.

<sup>446</sup> CEWH submission, pp. 1–2.

<sup>447</sup> CEWH submission, p. 2.

<sup>448</sup> CEWH submission, p. 2.

contribute an annual metering service charge of no more than \$3,591 for the use of government funded in-channel meters, which provide a comparative service for irrigator

The Gwydir Valley Irrigators' Association submitted.<sup>449</sup>

The GVIA supports the adoption of environmental gauging station charges as outlined by the ACCC. All users of water should be held accountable to the same level of accuracy and therefore, the GVIA believe it is a positive approach to include environmental water use as well. The GVIA request that this is applied to all environmental water use; both held and planned water as per Water Sharing Plans.

### 10.2.3 Assessment approach

The ACCC's assessment approach is to test the prudence and efficiency of the proposed costs of hydrometric monitoring services by comparative analysis. The ACCC has compared the forecast cost of obtaining hydrometric monitoring services at the nominated 23 environmental gauging stations against the historical cost at these stations, as well as the historical costs incurred at other similar gauging stations.

The ACCC also had regard to State Water's obligation to obtain hydrometric monitoring services from the NSW Office of Water. Since the NSW Office of Water is a monopoly provider of these services, State Water may have limited bargaining power and may be a price-taker for these services.<sup>450</sup>

### 10.2.4 Reasons for decision

The ACCC accepts the creation of a new metering charge for upgraded environmental gauging stations as prudent and efficient on the basis that:

- the charge will recover the cost of upgrading the identified gauging stations to meet new national standards for meter accuracy<sup>451</sup>
- the charge will be paid by customers (typically environmental water holders) who nominate the station as their billing point — it is therefore equivalent to the metering charge paid by extractive users.

In relation to the CEWH submission, the ACCC agrees that the identified gauging stations form part of State Water's current gauging network, and that hydrometric monitoring at the stations would continue in the absence of environmental water. However, only the 23 identified gauging stations are being upgraded, and the upgrade is only being undertaken to facilitate compliance with the new metering standards.<sup>452</sup> The ACCC considers that, given the mandatory metering standards, the holders of environmental water entitlements are the only beneficiaries of the gauging station upgrades.

The ACCC considers that it is prudent and efficient to introduce a separate metering charge for environmental gauging stations as the upgrading of the gauging stations benefits only particular customers. Introducing the charge aligns State Water's charges more closely with the principle of user-pays. The efficient use of water storage and delivery infrastructure and the efficient functioning of water markets are promoted by ensuring that users pay for the services they use.

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<sup>449</sup> GVIA submission, pp. 11–18.

<sup>450</sup> See section 2.4.4 of the attachments to the ACCC draft decision.

<sup>451</sup> Subsequent to the release of the ACCC's draft decision, State Water advised the ACCC that the charge of \$19,578 per annum per station is just the cost of upgrading, rather than the full cost of monitoring as indicated in its pricing application (p.181) (email of 23 May 2014). State Water also advised that hydrometric monitoring for system-wide benefit would continue at gauging stations which are not nominated as a billing point by customers (Response 38.3 to ACCC information request, received 31 January 2014).

<sup>452</sup> State Water application, p.181; State Water, email to ACCC, received 14:25 Friday 23 May 2014.

However, the ACCC does not accept the level of the charge (\$19,578 real \$2013–14) as proposed by State Water. State Water proposes that the existing costs of hydrometric monitoring at the identified gauging stations continue to be recovered through opex in bulk water charges. The ACCC has accepted this proposal, as set out in attachment 2 (Opex). Therefore the gauging station charge covers only the cost of upgrading the gauging stations to meet the new metering standards.

State Water submitted that the current operating cost of the identified gauging stations prior to their upgrade is about \$12,000 per station per year, while the operating cost post-upgrade is forecast to be about \$19,000 per station per year (real \$2013–14).<sup>453</sup> State Water also forecasts the initial capital cost of the upgrade to be about \$17,000 (real \$2013–14).<sup>454</sup>

The incremental cost of operating the upgraded gauging stations is about \$7,000 per meter per year. With an addition of a capital annuity to recover the capital upgrade costs over the life of the gauging station,<sup>455</sup> the cost per meter per year is around \$8,562. The ACCC considers that this amount reflects the prudent and efficient costs of upgrading the gauging stations, particularly considering that the current cost of operating the stations is recovered through bulk water charges. On this basis, the ACCC does not accept State Water's proposed charge, and determines the charge as set out in Table 10-7.

In addition, since the gauging station charge is designed to recover costs of upgrading the stations, the ACCC expects that the charge will not be imposed until the gauging stations are upgraded.

The GVIA submitted that State Water environmental water delivered under water sharing plans should also be held accountable to the same levels of metering accuracy.

The ACCC understands that all nominated billing points for water access licences are to comply with the new metering standards.<sup>456</sup> The NSW metering scheme assists extractive customers in upgrading their meters to comply with the standards (see section 10.1 above). In addition to extractive customers, holders of non-extractive (environmental) water licences must upgrade their nominated water supply works that operate as the billing point for the water licences. These water supply works are the 23 gauging stations identified by State Water. Other environmental water delivered under water sharing plans is not held under water access licences, and as such there is no nominated works or billing point. Therefore, the ACCC understands that there is no mechanism currently in place for environmental water delivered under water sharing plans to be accountable to a metering standard.

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<sup>453</sup> State Water, email from State Water to ACCC, received 14:25 Friday 23 May 2014.

<sup>454</sup> State Water, email from State Water to ACCC, received 14:25 Friday 23 May 2014.

<sup>455</sup> Based on an expected life of 15 years - see Deloitte Access Economics, *Final report - asset lives for State Water's 2014 pricing proposal for ACCC*, 9 December 2013.

<sup>456</sup> State Water, email from State Water to ACCC, received 14:25 Friday 23 May 2014.

# 11 List of submissions

## on ACCC Draft Decision on State Water Pricing Application

Allot, Stephen and Judy	Morgan, WA
Anderson, Kevin	Moss, Allan and Nicolette
Bailey, John and Joan	Murray Irrigation Ltd
Benn, Ian	Namoi Water
Bolton, Phillip	NSW Farmers' Association
Brigden, John	NSW Irrigators' Council
Burke, TJ & M	Oates, Richard
Commonwealth Environmental Water Office	Peel Valley Water Users' Association
Ferguson, John	Peel Valley Working Group
Gibson, Allan	Pengelly, Laurie
Goodwin Kenny Pty Ltd	Rumbel, Dianne and Phillip
Gowing, David and Pamela	Simon, Len
Hahn, Jan	South West Water Users
Housden, AD	Stass, Mark
John, Anthony	State Water Corporation
Lachlan Valley Water	Swain, Geoff
McCarthy, Matthew	Tamworth Regional Council
McKinnon, Christine and David	Tout, Valda and Terry
McLean, Hilton	Vickery, Rob
Meadowbank Water Users' Association	White, Doug
Monticone, Ildu and Angela	Wilson, Brian and Vicki

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