IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Review of Rural Water Charging Systems

Water — Discussion Paper
June 2012

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Invitation for submissions

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

Submissions are due by 10 July 2012.

We would prefer to receive them electronically via our online submission form.

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

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

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

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1 Executive Summary

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

- identify options for the billing of bulk water charges that might be better matched to business cash flows
- identify options for determining the NSW Government's cost share for Australian Competition and Consumer Commission's (ACCC) determined bulk water charges in NSW, which may include a role for IPART
- make recommendations that will assist the NSW Government to maintain viable and economically sustainable provision of services to customers, taking into account the potential impact of future pricing arrangements on customers, State Water and the NSW Office of Water (NOW).

In making recommendations we have also been asked to consider State Water's and the NSW Office of Water's (NOW) cash flows, revenues streams, and forward business planning, the NSW financial position, statutory or policy barriers to implementation and the NSW Government's Commission of Audit into public sector management.

Prior to the last election, the NSW Government committed to reviewing options for bulk water charging that will better match farmers' cash flows. This review has resulted from that commitment. Recommendations from this review will inform future price determinations by ACCC and IPART for all rural water customers in NSW.

The review has also been triggered by changes to the regulatory environment for rural water providers. From 1 July 2014, the ACCC will be responsible for price determinations for State Water's operations in regulated rivers in the Murray-Darling Basin. The recommendations from this review may also be used by State Water and the Government to formulate policy and State Water's price submission to the ACCC after June 2014.

This discussion paper has been prepared to facilitate consultation for the review. It has been informed by the input we received from stakeholders who attended workshops held in the south (Griffith) and north (Narrabri) of the Murray-Darling Basin during June. This paper explores potential policy options and presents our preliminary views on the preferred option/s to be investigated in more detail in the next stage of the review.

We are now seeking written submissions to ascertain stakeholders' views on the options identified, our preliminary views and other specific questions we have raised in the paper.

1.1 Proposed assessment criteria

To compare the alternative policy options for tariff structures and costs shares, we have developed assessment criteria. Taking into account directions in the Terms of Reference, the proposed criteria are:

1. Effectiveness in addressing customer impacts and community impacts.
2. Financial impact on State Water and the NSW Office of Water.
3. Financial impact on the NSW Budget.
4. Consistency with the Water Charge Infrastructure Rules and the ACCC's pricing principles.
5. Consistency with the National Water Initiative pricing principles.
6. Economic efficiency.
7. Ease of administration and implementation.
8. Transparency.

We are seeking feedback from stakeholders on the appropriateness of the proposed assessment criteria.

1.2 Water availability and farm cash flows

Water availability varies, sometimes significantly, from year to year and between valleys but the extreme low levels of water availability experienced by some valleys in the recent drought occurs infrequently. Due to their location, entitlement and crops, different customer groups will experience water variability differently and be able to respond differently.

We are seeking stakeholder input on the relationship between water availability, customers' cash flows and water prices. Our analysis shows that water charges are a small component of customers' overall fixed costs, even when there is little water available. Also that there are a variety of ways customers can manage their revenue risk.

Namoi Water provided us with some recent research on this issue after the Narrabri workshop on 15 June 2012 and we will take that into account for the final report.

These initial findings informed the tariff structure and other policy options we analysed.

1.3 Tariff structures

We have been asked to recommend options to better match billing of water charges to business cash flows. We considered a range of options that use 2 different approaches to this problem: tariff structure options and new arrangements for conditional deferral of payment.

Based on our initial assessment of options against the assessment criteria, our preliminary view is that the option of maintaining the current tariff structure (40:60 fixed to variable) for State Water, combined with a volatility allowance in prices, provides a fair sharing of risk between customers and State Water. Given the alternative of a largely fixed but cost reflective tariff[1], this option achieves a middle ground between the interests of businesses' cash flows and State Water's financial viability, including its need to be compensated for the revenue risk that this tariff structure creates.

Similarly we consider maintaining the existing 70:30 fixed to variable ratio for NOW's customers, where a meter has been installed, provides an appropriate balance in the sharing of risk between NOW and its customers.

We also consider the current tariff structure for State Water and NOW, combined with new conditional deferral of payment arrangements would further address cash flow issues of customers during low water availability.

We are seeking stakeholder input on our preliminary view and our analysis of the tariff structure and other policy options to address cash flow issues of customers.

1.4 Cost shares

Over several pricing determinations, we have developed the cost shares between Government and users for State Water and NOW activities based on the impactor pays principle. Under the impactor pays principle, costs are allocated to users according to the contribution they make to the cost being incurred. These cost sharing ratios have been determined by examining each activity, and allocating the cost of the activity between users and Government.

1 ACCC, *Water Charge Infrastructure Rules Pricing Principles*, July 2011, p 51.

From July 2014, the ACCC will be responsible for determining prices for State Water and this has implications for the process of determining cost shares. Unlike our approach, the ACCC price review process will not facilitate the setting of government cost shares. The ACCC will set prices based on efficient costs, and take into account any contributions from sources other than users, for example from state governments. We understand the ACCC expects to be advised of any government contributions to State Water (eg, the government cost share) before the start of a price review process. This means that an alternative process to establishing the government and user cost shares for State Water is required in the future.

We examined the following methods for determining cost shares:

1. continue our existing method of reviewing cost sharing ratios at each determination
2. freeze the current cost sharing ratios
3. apply cost sharing ratios with reviews of methodology at set (longer) periods
4. Government to contribute a fixed amount.

Our preliminary view is to retain the current cost sharing ratios for State Water activities for a certain period, and review them from time to time (Option 3). In practice this means that outcomes of IPART's 2010 review of State Water's cost shares would remain in place until 1 July 2017. After that, we would review the cost shares at every second ACCC determination (ie, every 8 years). We consider reviewing the cost sharing ratios every second pricing determination period as a suitable balance between the need to ensure that the cost sharing ratios remain appropriate, and the additional costs imposed in undertaking a separate review of cost shares every pricing determination.

We are seeking stakeholders' feedback on the options presented and our preliminary view, including views on appropriate periods between reviews.

1.5 Under recovery of user share of costs

We currently determine prices using a valley by valley methodology. The cost sharing approach discussed above determines the users' share of costs in each valley. In some circumstances, State Water does not fully recover the user share. In the Murray-Darling Basin, the Peel Valley is the only valley not at full cost recovery. In the Peel, 2010 prices have been set to recover 90% of user costs. IPART did not set prices to recover the remaining 10% due to the unacceptable impact full cost recovery prices would have on water users.

The ACCC price determination process will require the NSW Government to advise the ACCC of any government subsidy, such as a community service obligation (CSO) payment, to users' share of costs prior to the commencement of the State Water price review.

Possible options for deciding the appropriate level of cost recovery and government subsidy in the Peel include:

1. freezing current Peel Valley prices with the remainder of the costs covered by a CSO
2. progressively increasing the average Peel Valley bill by 5% per annum with the remainder of the costs covered by a CSO
3. targeting lower bound pricing with the remainder of the costs covered by an explicit CSO.

Based on our initial assessment of these options against the criteria, our preliminary view is to recommend Option 2 where we progressively increase the average Peel Valley bill by 5% per annum. We consider this to be the most economically efficient option and the easiest option to implement. We are seeking stakeholder views on the alternative options, our preliminary position and the economic case for an ongoing subsidy for the Peel.

1.6 Our preliminary views

Tariff structures and other policy options

State Water: maintaining the current tariff structure (40:60 fixed to variable), combined with an appropriate volatility allowance. Also a conditional deferral payment arrangement in times of low water availability.

NOW: maintaining the existing tariff structure (70:30 fixed to variable for customers where a meter is installed). Also a conditional deferral payment arrangement in times of low water availability.

Determining government cost shares

Retain the current cost sharing ratios for State Water activities for a certain period, and review them from time to time (Option 3).

Determining government contributions to users' share of costs

Progressively increase the average Peel Valley bill by 5% per annum with the remainder of the costs covered by a CSO given the valley is at 90% cost recovery.

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1.8 Structure of this report

The rest of this report provides further details on the preliminary views outlined in this paper:

PART 1 – Introduction and context to the review

- Chapter 2 provides an overview of the review process and key dates.
- Chapter 3 provides background context for the review.
- Chapter 4 outlines our proposed assessment criteria.

PART 2 – Water availability, cash flows and tariff structures

Part 2 relates to all charges for rural water users in NSW. This includes NSW Office of Water charges for regulated, unregulated and groundwater users across the state and State Water charges for their customers in regulated rivers.

- Chapter 5 outlines our understanding of the relationship between farm cash flows and water availability.
- Chapter 6 and 7 discuss tariff structure and other options and assesses them against the criteria.

PART 3 – Cost shares, government contributions and implications for ACCC determinations

Part 3 relates only to State Water charges for their customers in regulated rivers within the Murray-Darling Basin.

- Chapter 8 discusses cost share options and assesses them against the criteria.
- Chapter 9 discusses the under recovery of the user share of efficient costs for the Peel Valley and presents options for deciding the appropriate level of cost recovery and the appropriate level of government subsidy.

Part1 - Introduction and context to the review

Part 1 provides an introduction to this review. It includes an overview of the review process and its focus, key background information and the criteria against which we propose to assess different policy options.

This part is relevant for all rural water users in NSW.

2 Review Process

As part of its election commitments in September 2010, the current NSW Government promised a review into:

> …the water charging system with a view to a new system that better reflects the cash flows of farmers, businesses and provides compassion for families doing it tough[2].

The NSW Government has expressed its intention to improve the manner in which bulk water charges are levied throughout the state. It has emphasised the importance of efficient and effective levying of bulk water charges for maintaining the viable provision of bulk water delivery services and profitable agricultural industry.

In May 2012, the Minister for Primary Industries wrote to us requesting we carry out a review of bulk water pricing in NSW. The specific terms of reference for the review are presented in Appendix A.

2.1 Scope of this review

Consistent with the Terms of Reference, we consider there are 3 key areas for exploration:

1. Water **tariff structures and other policy options** to better match bulk water price structures to farm cash flows and the requirements of State Water and the NOW for all rural water users in NSW. This includes exploration of hardship and other policies that provide government assistance to farmers in times of low water availability.
2. Approaches for determining **Government cost shares** for State Water activities to inform the ACCC's price review process for valleys in the Murray-Darling Basin.
3. Approaches for determining **Government contributions** for State Water activities in valleys in the Murray-Darling Basin that are not yet at full cost recovery.

In examining each of these 3 issues, the Terms of Reference requires us to have regard to the Commission of Audit report, as it relates to State Water and NOW. We will also consider the impacts on customers, State Water and NOW's financial position, NSW financial position, and statutory and policy barriers to implementation.

2 *Make NSW Number One Again*, Coalition pre-election policy, September 2010, p 20.

2.2 Review process

The Terms of Reference for this review require the preparation of an issues paper (this document) to facilitate consultation, the conduct of at least one public hearing and targeted consultation. The targeted consultation included 2 workshops within the Murray-Darling Basin, held in Griffith and Narrabri.

Key dates for the review are shown in Table 2.1.

Table 2.1 Key dates for the review

Milestone	Date
Stakeholder workshops (Griffith and Narrabri)	Week beginning 12 June
Release Discussion Paper	26 June 2012
Public hearing (Sydney)	3 July 2012
Submissions on Discussion Paper due	10 July 2012
Release executive summary	23 July 2012
Submissions in executive summary due	30 July 2012
Release Final Report to Government	15 August 2012

2.3 Purpose of this discussion paper

This paper has been prepared to facilitate consultation for this review. It presents the information we have reviewed and the analysis we have conducted to support the identification of possible policy options. This paper puts forward our preliminary views on the preferred option/s to be explored in more detail in the next stage of the review. The report also highlights key issues and questions where we are specifically seeking stakeholder input and views.

3 Review Context

3.1 State Water's operations

State Water is a statutory state-owned corporation which operates under the *State Water Corporation Act 2004* (the State Water Act). State Water levies charges for the capture, storage and release of water to licence holders, mainly small towns and irrigators on regulated rivers, as allowed under legislation.

Section 6 of the State Water Act outlines the following principal functions:

- to capture and store water and to release water to persons entitled to take the water, for the purposes of flood management, and for any other lawful purpose, including the release of environmental water
- to construct, maintain and operate water management works
- any other functions conferred or imposed on it by the operating licence or under the State Water Act or any other act or law.

State Water's area of operations covers 11 river valleys, the Fish River Water Supply Scheme, and includes some of the area managed by the Murray-Darling Basin Authority and Borders Rivers Commission. State Water operates around 20 dams and over 280 weirs and associated assets on regulated rivers.

Within its area of operation, State Water provides services to around 6,300 customers including irrigation corporations, country town water supply authorities, farms, mines and electricity generators. It is also responsible for delivering environmental flows on regulated rivers.

3.2 NSW Office of Water's operations

NOW levies water management charges on licence holders such as town councils and irrigators for holding entitlements to water from regulated rivers, unregulated rivers and groundwater sources. These charges reflect the costs of the water management activities NOW undertakes on behalf of the Water Administration Ministerial Corporation (WAMC). These activities aim to manage NSW's water resources in a way that ensures all users, and the environment, have access to sustainable water supplies over the long term, and that these resources are shared appropriately.

Water management charges reflect the cost of water management activities that are 'government monopoly services', as defined in the *Independent Pricing and Regulatory Tribunal (Water Services) Order 2004* (Water Services Order). Clause 3 of the Water Services Order defines the bulk water 'government monopoly services' as those that involve:

- the making available of water
- the making available of WAMC's water supply facilities, or
- the supplying of water, whether by means of WAMC's facilities or otherwise.

In the NOW 2011 Price Determination, our assessment was that about 20% of NOW's Full Time Equivalent staff are involved in government monopoly services.[3] These activities include expansion of the hydrometric network, making and implementing water sharing plans, and making and implementing other operational policies.

3.3 Regulatory environment

Under the NSW *Independent Pricing and Regulatory Tribunal Act (1992)*, we are required to determine prices for State Water and NOW's activities. Our most recent determinations for State Water's and NOW's prices run until 30 June 2014.

Under the Commonwealth *Water Act 2007*, the ACCC will be responsible for making price determinations for State Water's activities within the Murray-Darling Basin. The NSW Government can seek to have IPART accredited as a state regulator to conduct these pricing determinations on the ACCC's behalf, but the Government has indicated to the ACCC that it is not seeking this accreditation. Thus, when the current IPART determined prices expire in 2014, the ACCC will determine prices for State Water operations in the Murray-Darling Basin. NSW can elect to have the remainder of SW's charges for the coastal regions to be determined by the ACCC. The Government has not yet reached a view on this issue.

After 2014, we will continue to determine prices for NOW and, should the NSW Government decide to exclude these activities from the remit of the ACCC, for State Water's coastal operations.

The ACCC's pricing principles are outlined in the Water Charge (Infrastructure) Rules 2010 (WCIR). Under these rules, revenue (from all sources) must recover 100% of the likely efficient costs in a single price determination period and annual price reviews will be conducted[4].

3 IPART, *Review of prices for the Water Administration Ministerial Corporation - for the NSW Office of Water – From 1 July 2011 – Final Report*, February 2011, pp 33-34, 36.

4 *Water Charge (Infrastructure) Rules 2010* (WCIR), s.29(b), s.34.

3.4 Commission of Audit

The Terms of Reference requires us to give consideration to the Commission of Audit. The Commission of Audit was conducted by Kerry Schott on key areas of improvement in public sector management. At the time of release of this paper, only the Interim Report for the Commission of Audit was published. While the Interim Report raises key questions about government department governance, it does not directly raise issues relevant to State Water and NOW.

4 Assessment Criteria

This discussion paper explores options that relate to changes to:

- policies to better match rural water price structures with customer cash flows
- the process or methodology for determining government cost shares and government contributions to users' shares triggered by the ACCC's future involvement in State Water's price determinations.

The Terms of Reference provided for this review require us to consider the following when making recommendations:

- impacts on customers, State Water's and NSW Office of Water's cash flows, revenue streams and forward business planning
- potential impacts on the NSW financial position
- statutory or policy barriers
- the Commission of Audit report.

When evaluating options we will also have regard to pricing frameworks such as the National Water Initiative pricing principles[5], ACCC's pricing principles[6] and economic efficiency.

This chapter explores the context for and key considerations for developing more specific policy objectives. We also propose general criteria for the assessment of both policy (water price structure) and process (cost sharing) options.

5 Intergovernmental agreement on a National Water Initiative, June 2004, http://www.nwc.gov.au/__data/assets/pdf_file/0019/18208/Intergovernmental-Agreement-on-a-national-water-initiative2.pdf

6 ACCC, *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011, http://www.accc.gov.au/content/item.phtml?itemId=967534&nodeId=18b613006035400088ac9602a01b19ba&fn=Water%20charge%20rules%20-%20infrastructure%20-%20pricing%20principles.pdf

4.1 Proposed assessment criteria

We propose the following criteria to assess options for tariff structures and cost shares.

1. **Effectiveness in addressing customer impacts and community impacts**

   Does the option significantly improve (from the status quo or from the rules set out for the Water Charge Infrastructure Rules) the financial situation of farmers during times of low water availability?

2. **Financial impact on State Water and the NSW Office of Water (NOW)**

   Does the option adversely affect the financial position of State Water and NOW?

3. **Financial impact on the NSW Budget**

   Does the option adversely affect the NSW Budget? Does the option create extra costs for the state with little or no offsetting revenue in a financial year?

4. **Consistency with ACCC's pricing principles and WICR**

   Does the option comply with the Water Charge Infrastructure Rules and the ACCC's principles?

5. **Consistency with National Water Initiative pricing principles**

   Does the option comply with the National Water Initiative principles?

6. **Economic efficiency**

   Does the option create more benefits than costs for the economy? This includes external costs and benefits.

7. **Ease of administration and implementation**

   Will the option be costly or difficult to administer and implement?

8. **Transparency**

   Is the option easy to understand? Is the methodology transparent? Are stakeholders able to replicate any calculations independently?

Not all the criteria align with each other or can be fully quantified. We will need to exercise a degree of judgement when assessing the options. For example, at the Griffith workshop, stakeholders raised the issue that the impact of high costs during low water availability can also have negative impacts on the community as well as on individuals and that both need to be considered. For the purpose of this review, we will not be able to assess options for the impact on the community in detail. We will only be able to make high level comments on the potential impact on the community.

In this discussion paper, we have made preliminary assessments of options against these criteria. These assessments are illustrative, and show the likely direction of the impact, rather than the magnitude. In the next stage of this review, we intend to conduct more detailed analysis to quantify the magnitude.

Based on our interpretation of the WCIR, we have assumed that the overall pricing framework we use will be maintained in considering potential options against the proposed criteria. This specifically assumes that prices will continue to be determined at a valley or region scale as currently defined in line with cost-reflective pricing, and that the principle of full cost recovery over time is maintained so that any deferral of cost will be recovered at some stage in the future.

We seek feedback from stakeholders on the following questions:

1 Are the proposed assessment criteria appropriate?

2 Are there other factors or criteria we should consider when assessing options?

Part 2 - Water availability, farm cash flows and tariff structures

Part 2 (chapters 5, 6, and 7) examines the relationship between water availability and farm cash flows. It explores water tariff structures and other policy options that may better match bulk water price structures to customer cash flows and the requirements of State Water and the NOW. This includes exploration of hardship and other policies that provide government assistance to customers in times of low water availability.

This part relates to all charges for rural water users in NSW. This includes NOW charges for regulated, unregulated and groundwater users across the state and State Water charges for their customers in regulated rivers.

5 Water Availability and Customers' Cash Flow

This chapter analyses the relationship between water availability and customer cash flows. By understanding historical patterns of water availability, customer profiles and drivers of customers' cash flows during times of low water availability we can identify price structure options that better match customers' cash flows.

5.1 Understanding allocation announcements and water availability

5.1.1 Water users in NSW

Water extraction in NSW involves the capture, storage and supply of water in dams (regulated valleys), irrigation from unregulated rivers and irrigation from groundwater sources. State Water and NOW divide their areas of operations into valleys or regions for pricing purposes and for determining the amount of water that is available for extraction.

Regulated valleys have the majority of entitlements and contribute almost 80% of revenue from users when considering State Water's and NOW's revenue requirements.

Table 5.1 Percentage of entitlements and overall revenue from different water sources ($2009/10)

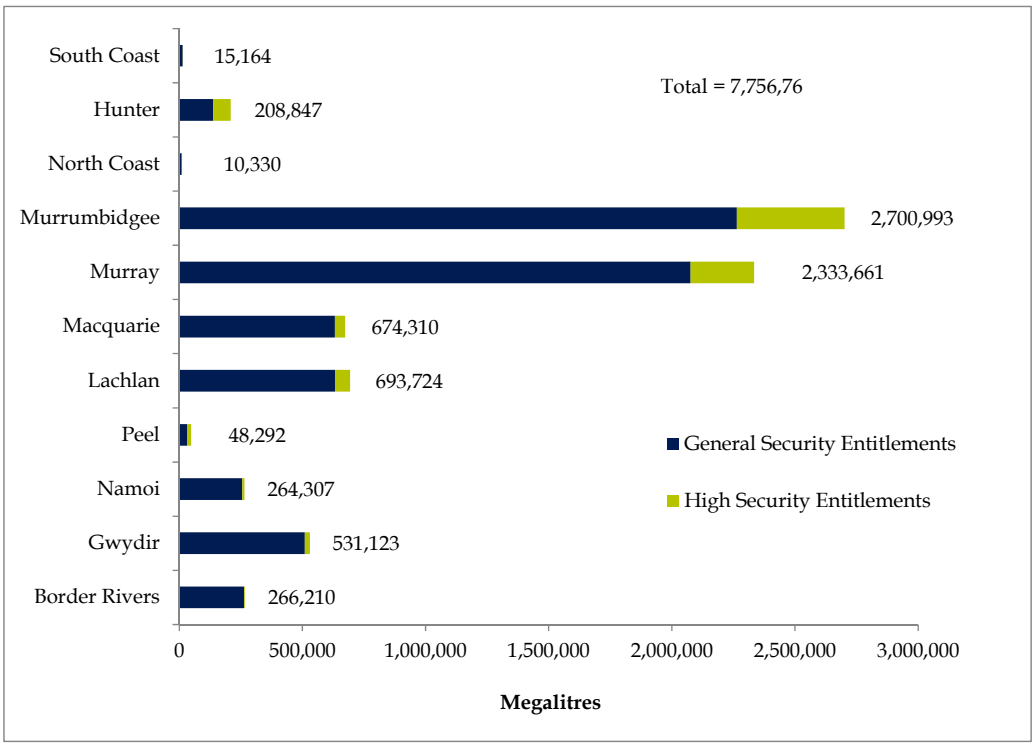
Water sources	Number of Entitlements	%	Contribution to combined SW and NOW revenue	%
Regulated	7,746,960	69.4	76,879,697	79.3
Unregulated	1,448,108	13.0	11,221,763	11.6
Groundwater	1,969,432	17.6	8,842,503	9.1
Total	11,164,500	100.0	96,943,963	100.0

Note:. Based on 2011/12 year.

Source: IPART analysis based on data in State Water and NOW Determinations.

There are 11 regulated valleys that State Water operates. The total entitlements for each valley in the 2010 State Water Determination are shown in Figure 5.1. The entitlements are divided into high security and general security entitlements.[7]

Figure 5.1 Forecast Annual Entitlements for the 2010 State Water Determination (ML)



Source: IPART, *Review of Bulk Water Charges for State Water Corporation - Final Report*, June 2010, p120.

7 For high security users, the reliability of full allocation is assured in all but severe periods of drought and has priority over general security and supplementary water categories. For general security entitlements, the reliability of full allocation is less assured than high security licences and is much more variable between river systems.

5.1.2 How allocations are made

Water allocation systems are the sets of policies and rules used to distribute the available water for use by water access entitlement holders.

Simple water allocation systems control the use of water without allocating particular volumes of water to each entitlement holder (non-volumetric systems). All other systems have rules designed for sharing available water on a volumetric basis (volumetric allocation systems).

A range of systems exist in NSW. These include:

- non-volumetric systems
- volumetric systems
- annual allocation systems
- annual allocation systems with carryover rules
- continuous accounting systems.

NOW issues water licences, which are the right to a certain share of water. A water access licence (WAL) is a perpetual or ongoing entitlement to exclusive access to a share of water from a specified consumptive pool as defined in the relevant water sharing plan. NOW determines water allocations that specify the amount of water that can be extracted by licence holders during the year. Under the *Water Management Act 2000*, water allocations are called Available Water Determinations (AWDs).

Regulated rivers

In regulated river water sources, the announced allocations are a function of water in storage – with further allocation announcements made and water volumes credited during the year if additional inflows occur, or if inflows exceed the levels assumed in the earlier allocations. AWDs are made for each regulated water source and licence category throughout the water year.

Annual allocation systems often apply for high security users like town and domestic and stock water supply, and for permanent plantings. In annual allocation systems:

- No carryover: limits apply to the total allocation that can be credited to each licence in a water year. At the end of each water year (often 30 June), any unused water credits are forfeited.
- With carryover rules: at the end of each water year, at least some part of any water remaining in a water allocation account can be retained (carried over) for use in the next water year. Generally, there are limits on the volume that may be carried over.

Under a continuous accounting allocation system, there is no 'end-of-year' rule on the volumes that may remain in licence accounts. Account limits and all other account rules apply at all times. However, there is no difference in the treatment of water allocations from previous years and current-year allocations.

Unregulated rivers

For unregulated rivers, various rules are established to share the available resource, these are generally annual allocation systems. These rules control the use of water that may be applied by limiting the rate of extraction, the size of pump that may be installed or the river flow that must occur before water can be taken (commence and cease to pump rules).

Groundwater

In most groundwater sources, the water allocated to licence holders will equate to their licensed volumetric entitlement, or their volumetric 'share' of the extraction limit. In groundwater water sources, annual allocation systems apply or there may be carryover rules that limit the amount of unused allocation that can be carried over from one water year to the next.

5.2 Variability in water availability

In this section we will focus our analysis of water variability on regulated systems given their relative size. Further analysis will be conducted on significant unregulated systems during the review.

5.2.1 Water availability through time

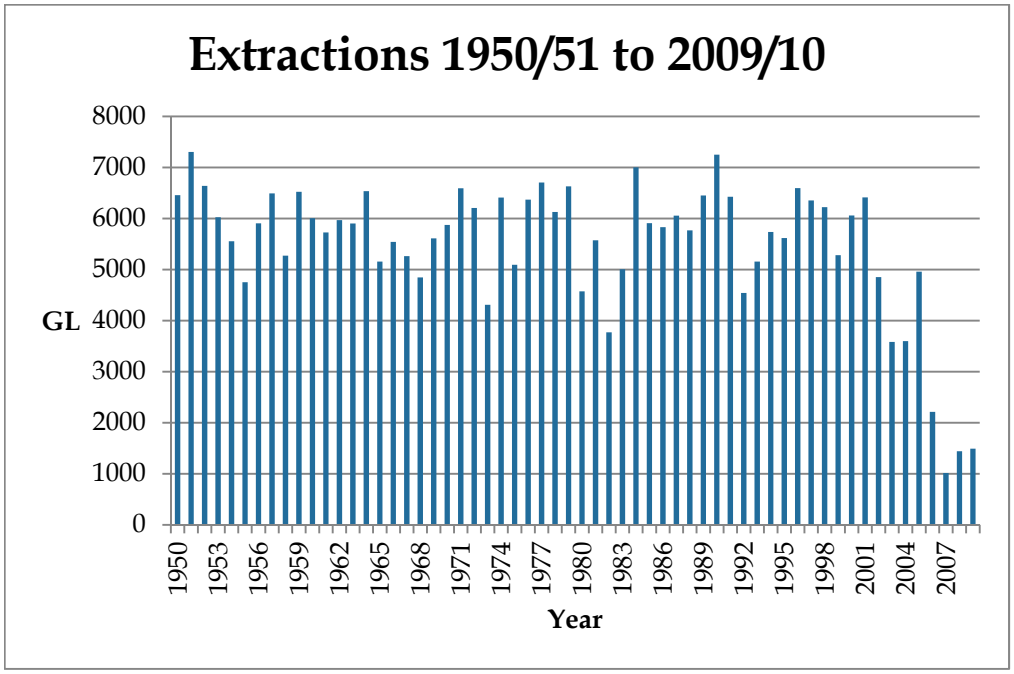
In regulated water sources, water availability differs from year to year, in line with climate conditions and management of storages.

Figure 5.2 shows total modelled extractions for regulated water sources from 1950/51 to 2009/10 using the Integrated Quantity and Quality Model (IQQM).[8] The use of the IQQM allows us to examine what would have occurred over 114 years of climatic data applying current water sharing plan rules and agricultural development.

The period from 2006/07 to 2009/10 stands out as having the lowest consistent extractions over the period.

[8] The Integrated Quantity and Quality Models (IQQM) forecast water availability and extractions that would have occurred based on the current water sharing plan rules and agricultural development. These models use over 100 years of historical data to forecast current water extractions. The outputs from these models have been provided by NOW and the Murray-Darling Basin Authority (MDBA).

Figure 5.2 Modelled extractions from 1950/51 to 2009/10



Note: Extractions are modelled extractions between 1950/51 to 2005/06. Actual extractions and forecast data are used between2006/07 and 2009/10.

Data source: NOW IQQM data 2010.

It is apparent that across NSW there is a considerable variability in water availability which has implications for irrigation farming businesses. However, it should be noted that water storages smooth the variability of regulated systems.

5.2.2 Water availability by valley

Water availability can differ considerably across valleys in the same time period, particularly for general security entitlement holders. Within the same year, some valleys may experience relatively high allocations while other valleys experience relatively low allocations compared to the average allocation over time. This is a function of the hydrology of the valley.

At a valley level, there are a number of ways the availability of water can be expressed.[9] These include:

- Average allocations: This measure is the average end of year AWD.
- % of time full entitlement is available: This measure is the percentage of years the maximum AWD is achieved by a specific date in the water year. For example, the percentage of years that the cumulative AWD of 100% (ie, full entitlement) is achieved by January.
- Average available water: This measure is the long term average available water/adaptive environmental water at a date in the water year.
- Average annual use: The long term average annual extractions divided by the sum of the issued shares.

Table 5.2 shows average water allocations by valley (regulated) over the 20 years between 1989/90 and 2008/09. The figures highlight the variability in water availability experienced by different valleys. Note comparisons across water sources is problematic as water sharing plans and accounting systems are different. Stakeholders at the Narrabri workshop raised the issue that the average allocations in the table below will not reflect current conditions due to changes in water sharing plans[10]. We will be updating our analysis with new data from the IQQM for the final report, which takes into account more recent changes to water sharing plans.

Table 5.2 Average allocations by valley 1989/90 to 2008/09

Valley	General Security Allocations	General Security Variability			High Security Allocations	High Security Variability		
		Min	Max	S.D.		Min	Max	S.D.
Border	33%	0%	96%	24%	100%	100%	100%	0
Gwydir	34%	0%	100%	41%	100%	100%	100%	0
Namoi	58%	0%	100%	57%	100%	100%	100%	0
Peel	74%	0%	100%	31%	100%	100%	100%	0
Lachlan	64%	0%	120%	50%	87%	30%	100%	26%
Macquarie	60%	0%	100%	43%	100%	100%	100%	0%
Murray	79%	0%	140%	48%	95%	50%	100%	13%
Murrumbidgee	77%	10%	120%	38%	98%	90%	100%	3%
North Coast	95%	80%	100%	8%	100%	100%	100%	0%
Hunter	97%	35%	100%	15%	100%	92%	100%	2%
South Coast	81%	40%	100%	23%	100%	100%	100%	0

Note: This table measures water availability as the long term average available water (Average allocations).; S.D. = standard deviation, data for the North Coast valley is from 2003/04 only.

Source: IPART Analysis of NOW data provided for 2010 Determination.

9 Table 5.2 measured water availability as long term average available water (average allocations).

10 Transcript from the Narrabri workshop, 15 June 2012, p 6.

We seek comment and explanation from stakeholders on:

3 The most appropriate method of analysing historical water availability to understand the relationship between water availability and customers' cash flows.

5.3 Categorising customers

NOW and State Water have a highly varied customer base, consisting of irrigators of varying sizes across different valleys, irrigation corporations (operate infrastructure assets within defined areas on behalf of their irrigator members), power generation companies that use water to run their power plants, and other government agencies such as the Commonwealth Environmental Water Holder (CEWH) that uses water for environmental purposes. These different customer types will also have different cash flow profiles.

State Water charges customers a fixed charge on the basis of entitlement and a usage charge. For State Water, entitlement charges differ between valleys and according to their security level (there are high-security entitlements and low security entitlements). Usage charges also differ between valleys.

High security entitlements do not exceed 36% of total entitlements in any valley, and for most valleys high security entitlements are less than 12% of total entitlements.[11] High security entitlements represent a relatively small proportion of total entitlements.

NOW charges customers a fixed charge on the basis of entitlement and a usage charge where the customer has a water meter. Entitlement charges for NOW customers differ between valleys. Where usage charges are levied, these also differ between valleys.

For high security users, the reliability of full allocation is assured in all but severe periods of drought and has priority over general security and supplementary water categories. For general security entitlements, the reliability of full allocation is less assured than high security licences and is much more variable between river systems (see Table 5.2).

Across the irrigated agriculture sector different industries are more prevalent in each valley depending largely on agronomic conditions and characteristics of water products available in each of the valleys. In the case of the Gwydir, Namoi and Macquarie valleys, cotton accounts for the majority of agricultural production.

In the southern valleys (Murray and Murrumbidgee) the major broadacre crop is rice though cotton is growing in significance. These annual crops are grown using general security water, as planting decisions can be made with some certainty if there is water available in storage. Significant areas of horticulture occur in the

11 IPART, *Review of Bulk Water Charges for State Water Corporation - Final Report*, June 2010, p 120.

Murrumbidgee and on the Murray around Swan Hill and Wentworth. These use high security water, as reliable water is generally demanded to maintain permanent plantings.

We seek comment and explanation from stakeholders on:

4 Do the differences between valleys and associated farming systems mean that instituting broad rules across valleys to measure the impact of water availability is not appropriate?

5 Which customers are most affected by variability? It is our preliminary view that those most affected by variability are general security users in regulated systems and users in unregulated water sources.

6 Are there circumstances where water variability affects the high security users?

5.4 State Water and NOW Billing Arrangement

All licensed water users in NSW pay charges to State Water and/or NOW. Users in regulated river systems pay both State Water and NOW, as they utilise dams and weirs that control water for irrigation purposes. Users in unregulated river systems and groundwater sources only pay NOW charges, as they do not rely on public infrastructure.

State Water fulfils the billing function for its own customers as well as those of NOW, issuing invoices to NOW's licence holders on its behalf. State Water bills all regulated river customers (its own and NOW's) quarterly, in arrears. State Water bills NOW's unregulated river and groundwater customers annually in arrears.[12] All accounts are payable in full, within 30 days of the date of issue and interest is charged on overdue bills in accordance with the current rate of 8.75%, which has been set by the Supreme Court of NSW.[13]

In the case of irrigators that are members of irrigation corporations, State Water issues water bills to the irrigation corporation. From State Water's and NOW's perspective, the irrigation corporation is the customer (not the individual members) and the irrigation corporation is responsible for paying State Water's or NOW's bills. The irrigation corporations is able to impose its own set of charges to its members to pay the bills. In other words, members of irrigation corporations are subject to the bills issued to them by their irrigation corporations, not State Water or NOW.

For State Water's hardship policy, which applies equally to the NOW's customers, see Appendix B.

12 http://www.water.nsw.gov.au/Water-management/water-management-charges/default.aspx
13 http://www.statewater.com.au/Customer+service/Billing+and+accounts

5.5 Understanding the link between water availability and farm business cash flows

5.5.1 Farm business cash flows

Net cash flow is the difference between total business cash receipts and all cash payments that occur during a certain time period. Cash flow from operations is not an ultimate measure of business profitability or viability.

Cash flow budgeting is important in an agricultural context because of the seasonality of production for many commodities and in some case long lag times between investment in production capacity and returns. The effect of a negative cash flow in a business depends on individual circumstances. However, a negative cash flow generally results in an increase in interest expense for a business with less than 100% equity.

Water availability can lead to higher levels of production/ farm revenue as it is the major farm input. However, water availability may not always be directly aligned to production/ farm revenue, for example:

- Farm cash flows may lag water availability as production of a crop and its marketing may take months (or in some cases years) after water is available.
- Irrigators may lose crops due to flood or other unexpected environmental conditions, resulting in low cash flows even if there is high water availability.
- Irrigators may elect not to use all of their water allocation.
- Irrigators may be in the process of switching crop types, installing new irrigation systems or undertaking other on-farm capital investment that prevents them from making full use of the current water allocations.

The focus in this review is the systematic analysis of a decrease in cash flow across a customer base associated with low water availability rather than exceptions and individual circumstances. Issues such as the level of water availability that causes cash flow issues and the degree of a lag across a farming system will be the subject of this review.

Farm cash flow is one of the risks that farming businesses face. Like other risks they can manage this risk in a variety of ways. For instance, they can:

- increase the technical efficiency of their farm operation
- diversify investment portfolios
- choose appropriate gearing levels
- maintain liquid asset reserves for periods of low water availability
- have unused borrowing capacity
- defer expenditures

- adjust input levels to seasonal conditions
- diversify farm activities.
- seek income off-farm.

5.5.2 Farm cash flows linked to water availability

State Water Billing history: % and profile of customers requesting customer assistance

To gain an understanding of the level of hardship faced by State Water customers, we analysed information provided by State Water on the number of customers who required assistance in managing the payment of their bills in recent years. For the final report we will also have information from NOW on its billing and customer assistance history. On average, less than 10% of State Water's customers across all valleys requested assistance each year. While percentages close to 10% are considerable, given the volatile nature of the agriculture industry and the period of analysis we do not consider that these percentages are excessive, and do not indicate a significant financial viability issues for customers.

Table 5.3 provides a breakdown of customer assistance statistics by year. It can be seen from the table that there is variation between valleys in the percentage of customers requesting assistance over time. We intend to conduct further analysis of diversions.

Table 5.3 Percentage of customers requesting customer assistance in each year

Valley	No. customer accounts 2010/11	2008/09	2009/10	2010/11	2011/12
Murray	1730	2.0%	0.8%	2.4%	0.6%
Murrumbidgee	833	2.2%	1.8%	5.6%	1.3%
Border Rivers	123	5.8%	0.8%	22.0%	5.7%
Namoi-Peel	469	7.3%	7.3%	3.6%	1.3%
Gwydir	178	0.0%	1.8%	1.1%	0.0%
Lachlan	904	9.0%	4.1%	4.9%	2.7%
Macquarie	641	3.1%	1.5%	4.7%	1.6%
Hunter	647	2.9%	2.0%	1.9%	3.9%
North Coast	53	0.0%	0.0%	0.0%	0.0%
South Coast	69	3.3%	5.6%	8.7%	0.0%
Fish River	287	1.4%	1.7%	0.7%	1.7%
Total	5934	3.8%	2.2%	3.8%	1.7%

Note: High number of customers requesting assistance in the Border Rivers in 2010/11 is due to 'notice of intent to suspend' letters being issued in quarter 4 of 2010/11, prompting licence holders to contact State Water to request payment plans. Data for all valleys for 2011/12 only includes up until the end of quarter 3 of that year.

Source: State Water, email 1 June 2012.

It is estimated that in 2010/11 approximately 25% of State Water's regulated revenue came from the 7 irrigation corporations such as Murray Irrigation Limited who are wholesale customers.[14] These corporations on-sell the water to end users and have different tariff structures to State Water. This means that some of State Water's risk will be mitigated because irrigation corporations will pay bills regardless of water availability.

We seek comment and explanation from stakeholders on:

7 Are the current customer assistance measures offered by State Water and NOW useful to customers in managing their cash flow issues?

Initial modelling of the impact of rural water charges on farm cash flow

To assess the impact on farm cash flows during periods where there were zero allocations, we constructed some simple farm models for typical irrigation businesses in the Murrumbidgee Valley (rice) and the Namoi Valley (cotton). We assumed that business overheads remained the same during the period of zero allocations and that farms incurred fixed water entitlement charges based on a typical entitlement size. Our results show that water bills in the Murrumbidgee area comprised 3% of overhead costs, and 8% of overhead costs in the Namoi. Table 5.4 below shows our assumptions and results.

14 Estimate provided by State Water June 2012.

Table 5.4 Water bills as a proportion of overhead costs on typical farm businesses in the Murrumbidgee and Namoi ($2011/12)

	Murrumbidgee	Namoi
Irrigation Entitlement (ML)	1400	1600
Entitlement Charge ($/ML)	1.59	8.9
Total overhead costs	$84,361	$175,808
Water Bill	2226	14240
Water Bill/ overhead costs	2.6%	8.1%

Source: Farming Systems in the Murrumbidgee Irrigation Area of NSW: An Economic Analysis, DPI, May 2005; and A Representative Irrigated Farming System in the Lower Namoi Valley of NSW: An Economic Analysis, January 2011.

In the 2011 Determination for NOW, we estimated the number of users subject to the minimum bill. Our estimates showed that approximately 51% of licences would be subject to the minimum bill of $95 ($2009/10) by 2013/14 for water management (excluding meter service charges). This demonstrates that while many users may have had significant water bills, approximately half of all NOW water users faced a relatively small bill.

A rice grower at the Griffith workshop stated that if allocations fall below 20% then it is difficult to be productive[15]. Stakeholders at the workshop also suggested the quality and timing of water availability was also important to farm cash flows. For example, an announcement of allocation by October each year is needed for production decisions[16].

We seek comment and explanation from stakeholders on:

8 Other options for measuring the impact of rural water bills on users?

9 How closely is water availability aligned with farm cash flows?

10 How and when do farmers take water availability into account when making production decisions?

5.6 Water trading: how it can help cash flows

The advent of water trading has assisted customers in managing their businesses. Customers can sell both entitlements and allocations. A sale of entitlements is permanent and will reduce the amount of water that the seller has available for future years (given the same percentage allocation). Buying and selling allocations involves the assignment of water to another user. It allows customers to manage water availability on a seasonal basis. It provides customers some flexibility in managing their cash flows as a sale will not affect potential water availability (and hence productive capacity) in future years.

15 Transcript, Griffith Workshop, 12 June 2012, p 7.
16 Transcript, Griffith Workshop, 12 June 2012, p 9.

In times of low allocations the level of water available for sale will determine the degree of offset of rural water charges. If customers receive zero or very low allocations their ability to mitigate financial difficulty by selling their allocations will be very limited.

Table 5.5 shows the estimated value of market turnover for water allocations in NSW from 2007/08 to 2010/11. The value of trade in water allocations in 2010/11 was $85 million, which was significantly lower than that in the previous three years. The decrease in value resulted from a rapid decline in allocation prices rather than a fall in trade volumes. While average prices fell by 68%, the volume traded increased by 27%. The considerably higher value of trade in allocations from 2007/08 to 2009/10 is likely to have resulted from higher prices due to the drought. This demonstrates that there may be considerable opportunity for farm businesses who receive some allocations in drought years to offset the impacts of drought by selling their allocations in these years.

Table 5.5 Estimated Value of Market Turnover, 2007/08 to 2010/11 ($ million)

Water System	Gross Value of Water Sales - Water allocations			
	2007/08	2008/09	2009/10	2010/11
Barwon	NA	NA	9.1	12.2
Hunter	NA	NA	NA	NA
Lachlan	NA	1	0.8	2.5
Macquarie	0.8	1.8	5.2	14.3
Lower Darling	7.6	15.4	NA	NA
Murrumbidgee	235.8	256.8	89.3	25.9
NSW Murray	94	121.6	80.5	28.4
NSW Other	45.8	51.4	33	1.8
All NSW	384	448	217.9	85

Note: These valleys are as reported by the National Water Commission and do not directly align with the valleys we use for pricing purposes.

Source: National Water Commission, *Australian Water Markets Report 2010-11*, p 182.

We seek comment and explanation from stakeholders on:

11 The degree to which water trading has allowed rural water customers to maintain the viability of their businesses and maintain cash flows in times of drought.

12 The limitations of water trading and the impact on customers of these limitations.

5.7 The link between water availability, customers' cash flows and tariff structure options

From our preliminary analysis, we know water availability will vary, sometimes significantly, from year to year but the extreme low levels of water availability in the most recent drought occurs very infrequently. Water variability also differs depending on the valley and different customer groups will experience water variability differently and be able to respond differently.

We also know that water charges are a small component of customers' overall fixed costs when there is little water available, and there are various ways customers can manage cash flow risks, such as having a diversified investment portfolio.

In chapter 7 we analysed a number of tariff structures and other policy options. In our analysis we took into account that different customer groups will experience water variability differently – a tariff structure choice for customers is therefore an option. We also took into account water charges is a small component of overall farm costs and the link between water availability and farm cash flows - some of the options are conditional, ie, are turned on when certain conditions are met, We will need to examine further the possible triggers for these conditional options. The triggers will be based on hydrological data on water availability.

The following is an example of 2 possible triggers: 1) 2 years of zero allocations; and 2) IQQM modelled extractions were in the lowest 5% of extraction levels experienced in a valley. The results of our analysis are shown in Table 5.6 below.

Table 5.6 Number of times water availability falls below certain trigger levels

	Trigger based on lowest 5% of modelled extractions		Trigger based on 2 consecutive years of zero allocations	
Valley	No. of times activated since beginning of IQQM modelling	%	No. of times activated in 25 years between 1984/85 to 2008/09	%
Border Rivers	1	1%	0	0%
Gwydir	6	5%	1	4%
Namoi	2	2%	0	0%
Peel	5	4%	0	0%
Lachlan	2	2%	3	12%
Macquarie	4	3%	0	0%
Murray	3	3%	1	4%
Murrumbidgee	2	2%	0	0%
Hunter	1	1%	0	0%

Source: NOW IQQM data, NOW water allocations data.

Table 5.6 shows that with a trigger level based on the lowest 5% of modelled extractions, there is considerable variability in the number of times each valley would have received hardship provisions over the IQQM modelling period, varying from 1 to 6 times. With the trigger level that uses 2 consecutive years of zero allocations, most valleys not have received any hardship provisions over the period between 1984/85 to 2008/09. However, the Lachlan valley would have required a policy response 3 times over this period.

We seek comment and explanation from stakeholders on:

13 What is an appropriate basis to determine a trigger level of water availability before there is a significant impact on the cash flows of customers?

6 Current Tariff Structures

In this chapter we discuss the current framework for tariff structures for rural water in NSW, including coastal and inland regions, surface water and groundwater. We also look at some common features of tariff structures under these frameworks, and the current tariff structures in NSW.

6.1 The policy framework for determining tariff structures

6.1.1 National Water Initiative pricing principles

The National Water Initiative (NWI) was agreed in 2004 by State, Territory and Commonwealth Governments, is the national blueprint for water reform[17]. The NWI articulated the national objectives for best practice water pricing and institutional arrangements.

The States and Territories agreed to bring into effect pricing policies for water storage and delivery in rural and urban systems that facilitate efficient water use and trade in water entitlements, including the use of full cost recovery for water services to ensure business viability and avoid monopoly rents[18].

States and Territories recognised that some rural water services may never be economically viable, but needed to be maintained to meet social and public health obligations. In these instances, where full cost recovery is unlikely to be achieved in the long term, a Community Service Obligation (CSO) may be deemed necessary. The NWI requires the size of this CSO subsidy to be reported publicly[19].

In April 2010, a set of pricing principles was agreed by the Council of Australian Governments to assist States and Territories meet the NWI principles. The principles have been agreed by governments as the basis for setting water prices and charges in their jurisdictions.

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17 Means the intergovernmental agreement on a national water initiative between the Commonwealth of Australia and the governments of New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, the Australian Capital Territory and the Northern Territory (as amended from time to time).

18 National Water Initiative, 2004, paragraph 65.

19 National Water Initiative, 2004, paragraph 66.

6.1.2 Commonwealth Government pricing objectives and principles

The Commonwealth *Water Act 2007* (the Water Act), made under Section 92(1) of the Water Act, creates the institutional and governance arrangements that address the sustainability and management of water resources in the Murray–Darling Basin (the Basin). Among other things, the Water Act gives the Minister for Water the role of making water charge rules. Schedule 2 of the Water Act documents the relevant objectives and principles for these charge rules.

The *Water Charge (Infrastructure) Rules 2010* contribute to achieving the Basin water charging objectives and principles set out in Schedule 2 of the Water Act.

Broadly, these objectives and principles seek to[20]:

a) promote the economically efficient and sustainable use of water resources, water infrastructure assets and government resources devoted to the management of water resources
b) ensure sufficient revenue streams to allow efficient delivery of the required services
c) facilitate the efficient functioning of water markets
d) give effect to the principle of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management, and
e) avoid perverse or unintended pricing outcomes.

The water charge infrastructure rules were registered on 11 January 2011 and had legal effect from 12 January 2011[21].

6.2 Rural water tariff structures

Current rural water tariff structures in NSW reflect the pricing principles outlined above. They also account for differences in infrastructure types, services provided, the customer base and entitlement mix, and operating requirements.

Appropriately structured water prices, that adequately reflect the cost to provide services, can act as a signal to customers allowing them to make informed decisions about whether use will generate benefits in excess of costs. In this way, prices encourage a level of water use that is economically efficient.

For water service providers, prices recover the costs of capturing water and delivering their services, and provide an appropriate return on capital invested in the business.

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20 Commonwealth of Australia (2010) Explanatory Statement - *Water Charge (Infrastructure) Rules 2010.*

21 http://www.environment.gov.au/water/australia/water-act/infrastructure-charge-rules.html

The key features of pricing structures that can be altered when considering tariff options are:

- Fixed charges or variable charges.
- 2-part or multi-part tariffs (including inclining or declining block tariffs).
- Peak and/or seasonal pricing.
- Differential pricing – based on location or customers.

Each of these elements are discussed in further detail in Box 6.1.

Box 6.1 Rural water tariff structure elements

Fixed and variable charges

A fixed charge is a charge that is unrelated to the amount of water used. In the rural sector, the fixed charge is commonly applied as a charge per property, per connection, per hectare, or per megalitre of entitlement. If the same fixed charge applies to all customers, it is set at the average costs of supplying a customer to recover costs.

A variable charge is based on actual usage. In the rural water sector, the variable charge is generally applied to each megalitre of water supplied. If the same usage charge is applied to all customers, then it is set at the average cost of supplying a unit of water to recover costs.

2-part tariffs

2-part tariffs involve a combination of fixed and variable charge components. 2-part tariffs are often levied in the pricing of regulated services, as they can balance the risks between the utility business and users. The proportion of costs recovered through the fixed charge as opposed to the variable charge can vary.

Multi-block tariffs (including inclining or declining block tariffs

In the rural sector there has been interest in using price to influence water use efficiency. One method that has been analysed is the use of inclining block tariffs. These tariffs involve specifying multi-part tariffs where the volumetric charge increases in a stepped manner as consumption increases. They generally involve high costs to implement as agricultural activities are diverse and simple rules of thumb to determine efficient level of application are fraught. Declining block tariffs are a form of multi-part tariffs where is a tariff structure in which the unit price of each succeeding block of usage is charged at a lower rate than the previous blocks.

Peak pricing

Peak pricing involves applying differential tariffs to reflect the different costs associated with providing services during peak and off-peak periods. In a rural context these can relate to periods within the irrigation season, such as mid-summer, when demand is greatest. Often the aim of peak pricing is to reduce consumption during peak periods, and so doing defer the need for capital investment.

Differential pricing

Differential pricing aims to levy charges on actual costs of providing water within a scheme or between groups of customers. This approach aims to reflect relative cost differences between these groups. Within most rural water schemes in Australia postage stamp pricing applies – where there are uniform charges to all customers regardless of location within a system. There are some policies which account for water losses in different parts of a system (such as loss allowances by river reaches) and there are also policy reforms that aim to differentiate service levels.

Price differentiation can also relate to customer type. In most cases these differences are based on the reliability of a water product. For State Water high security entitlement charges incorporate a high security premium that aims to equate the costs and benefits of high and general security entitlement charges.

Ancillary charges

There are a number of ancillary or service charges that are often levied on customers.

6.3 Current rural water pricing structures in NSW

Rural water pricing in NSW is generally based on a 2-part tariff with differential pricing for valleys and for customers who hold different water products. Different prices are set for each valley and between high and general security users.

Valley based differential pricing enables appropriate cost allocation of directly attributable costs that can vary significantly between valleys such as cost of capital and operations. High security users pay a premium for the services that they receive. This differential pricing is consistent with the principle of user pays. Table 6.1 provides an overview of the current tariff structures in NSW.

Table 6.1 Overview of tariff structures for bulk water pricing in NSW

Element	Application
2-part tariffs	All regulated valleys for general and high security users
Differential pricing	Different pricing between valleys based on the direct costs of service associated with storages and works Different charges for each customer group based on water product (eg, high versus general security entitlement holders)
Peak pricing	Not applied
Fixed charges ($ per yr)	In some regions where there is no metering
Variable charges ($ per ML)	Supplementary users

Source: IPART analysis.

There are some exceptions to this general approach. For example, the Fish River has a multi-part tariff structure. In the Border Rivers and in one area of the Murrumbidgee (the Yanco Columbo) there are specific levies on usage or as a fixed charge per licence[22].

6.3.1 State Water

The main tariff structure applied to bulk water and associated services for State Water in NSW, is a 2-part tariff[23].

These tariff parts are labelled Entitlement and Usage and are applied as follows:

- Entitlement charge – fixed charge based on the customer entitlement by valley and by entitlement type (applies per megalitre of entitlement), and
- Usage charges – variable charge based on the actual water used as determined by meter readings by valley and by entitlement type (applies per megalitre delivered).

State Water currently charges rural water users different prices, depending on which valley they are located in, and whether they hold a high security, general security or supplementary licence. Entitlement charges are typically set to recover around 40% of costs and usage charges to recover 60% of costs. Exceptions are in the North Coast and Hunter valleys where prices are set to generate revenue from entitlement and usage charges in the ratio of 60:40[24].

22 State Water Tariffs schedules, http://www.statewater.com.au/Customer+service/water-ordering-trading-pricing/Water+Pricing

23 IPART, *Review of bulk water charges for State Water Corporation From 1 July 2010 to 30 June 2014 Water – Final Report,* June 2010, p 45.

24 IPART, *Review of bulk water charges for State Water Corporation From 1 July 2010 to 30 June 2014 Water – Final Report,* June 2010, p 133.

Box 6.2 Revenue volatility allowance – IPART's 2010 Determination for State Water

In the 2010 determination we concluded that State Water will remain exposed to the risk of revenue volatility due to annual variability in water available for extraction. The approach used to address this volatility was to include a specific allowance in the notional revenue requirement.

This allowance is designed to recover the costs State Water will face in managing the risk of revenue volatility – such as the holding costs it will incur if it needs to borrow funds to conduct its business in years when its revenue is low due to lower than forecast extractions.

The allowance added around $7.78 million to State Water's notional revenue requirement over the 4 years of the 2010 Determination (in NPV terms), all of which is allocated to the user share (through the general security entitlement charge). The volatility allowance is only recovered from general security entitlement holders[a].

a IPART, *Review of bulk water charges for State Water Corporation From 1 July 2010 to 30 June 2014 - Final Report*, June 2010, pp 50-60.

Currently, holders of high security entitlements are charged a premium over general security using a formula[25]:

> High Security Entitlement Charge = General Security Entitlement Charge x (Conversion Factor[26] x High Security Premium)

where, the high security premium is derived as follows:

> High Security Premium = (average allocation to High Security over last 20 years / average allocation to General Security over last 20 years)

Table 6.2 outlines the current high security factors which range from 1.32 in the North Coast to 9.09 in the Peel valley. In the 2010, price review we carefully considered the value of the premium that high security users should pay and increases in high security entitlement charges over the 2010 Determination period ranged from 3.2% in the Murray valley to 136.9% in the Border valley[27].

25 IPART, *Review of bulk water charges for State Water Corporation From 1 July 2010 to 30 June 2014 Water – Final Report,* June 2010, p 143.

26 The factor is determined to convert an entitlement of one type, with lower reliability into an entitlement of another type, with higher reliability, or vice versa. The factor accounts for the storage requirements to meet the reliability and aims to not affect the reliability of the existing licence holders.

27 IPART, *Review of bulk water charges for State Water Corporation From 1 July 2010 to 30 June 2014 Water – Final Report,* June 2010, p 134.

Table 6.2 High security factors used for the 2006 and 2010 Determinations

Valley	2006 Determination (conversion factor only)	2010 Determination Conversion factor x HS premium
Border Rivers	1.28	3.86
Gwydir	1.81	5.27
Namoi	1.25	2.15
Peel	6.73	9.09
Lachlan	2.45	3.32
Macquarie	1.88	3.12
Murray	1.25	1.52
Murrumbidgee	1.63	2.08
North Coast	1.25	1.32
Hunter	3.00	3.10
South Coast	1.70	2.09

Source: IPART, *Review of bulk water charges for State Water Corporation - From 1 July 2010 to 30 June 2014 - Final Report*, June 2010, p 147.

We consider that the current high security premium represents the benefit that high security customers enjoy from a secure water supply under varying degrees of water availability.

6.3.2 NSW Office of Water charges

There is a 2-part tariff (comprising a fixed charge and a usage charge) for all users with a meter and a 1-part tariff for users without a meter[28].

In the 2011 NOW determination, we decided to maintain the current system of valley-based prices for regulated and unregulated rivers and to move towards region-based charges for groundwater and for differential prices between high security and general security users (where the state is divided into 2 regions comprising 'inland' valleys and 'coastal' valleys). We also established tariffs for supplementary water, floodplain harvesting licence holders, high flow licence holders and supplementary groundwater entitlements[29].

6.4 Rural water tariff structures in other jurisdictions

Rural water sector in other jurisdictions commonly have 2-part tariff structures. However, there are varying ratios of fixed to variable charges.

28 IPART, *Review of prices for the Water Administration Ministerial Corporation - for the NSW Office of Water – From 1 July 2011 – Final Report*, February 2011, p 80.

29 IPART, *Review of prices for the Water Administration Ministerial Corporation - for the NSW Office of Water – From 1 July 2011 – Final Report*, February 2011, p 104.

In Victoria, Southern Rural Water (SRW) estimated that its costs are approximately 90% fixed and 10% variable, in a normal year[30]. In 2 of 3 SRW pricing districts, all costs are recovered through a fixed charge. In the third district, costs are recovered by a 2-part tariff. This 2-part tariff recovers approximately 80% of costs through the fixed charge with the remainder recovered through a variable charge.

In Goulburn-Murray Water's (GMW) area of operations, various fixed charges apply, including[31]:

- a service fee to recover the cost of administering entitlements
- an Entitlement Storage Fee (per ML water entitlement) which recovers water harvesting and storage costs in dams and weirs
- an Infrastructure Access Fee (per ML/day delivery share) which recovers fixed costs of maintaining and renewing the channel system.

Variable charges include an Infrastructure Use Fee (per ML delivered up to annual delivery allowance) which recovers the variable costs of delivering water. This includes the costs of scheduling customers' orders and operating regulators.

In effect, bulk water charges are fixed and only distribution is variable.

30 PricewaterhouseCoopers, *Pricing Principles and Tariff Structures for SunWater's Water Supply Schemes Issues Paper prepared for the Queensland Competition Authority*, September 2010, p 18.

31 Source: Goulburn Murray Water (2010) Account information 2010/11.

7 Tariff structures and other policy options to address customer cash flow issues

This chapter examines a number of options to address the cash flow issues of customers, particularly in regard to low water availability. These options can be generally categorised as tariff structure options and payment terms/hardship policies. The options explored are:

- Tariff structure options
  1. variations of the 2-part tariff
  2. altering the tariff structure between customer groups
  3. a conditional price structure.
- Payment terms/hardship policy options
  4. conditional payment terms
  5. non-conditional payment terms.

Both tariff structures and payment terms can be conditional. This means that they come into effect when certain pre-determined conditions or "triggers" are met. In chapter 5, we explored possible trigger levels such as when there are 2 consecutive years of no water allocations.

The following discusses the range of options outlined above. There is also the possibility of variations within each option, depending on the particular policy settings adopted. For the purpose of discussion, we have explored a range of policy settings within each option to illustrate the impacts resulting from different options.

7.1 Our preliminary view

Based on our initial assessment of options against the assessment criteria, our preliminary view is that the option of maintaining the current tariff structure (40:60 fixed to variable charge) for State Water, combined with a volatility allowance (option 1) and improved arrangements for the deferral of payments, provides a fair sharing of risk between customers and State Water. The option balances a tariff structure that better matches customers' cash flows with a mechanism that provides State Water with additional revenue for taking on more revenue risk.

Like State Water, NOW's costs are mostly fixed and in unmetered areas a small fixed fee is charged. We consider maintaining the existing 70:30 fixed to variable ratio provides an appropriate balance in the sharing of risk between NOW and its customers, given NOW does not have the ability to borrow money to manage revenue volatility.

To assist in times of low water availability, conditional deferral of fixed charges arrangements (option 4A), where payment terms are extended if certain conditions are satisfied, provides targeted relief from the payment of charges in times of low cash flow while protecting State Water's and/or NOW's revenue over the longer term.

Our preferred option for State Water is then a combination of:

- option 1A : retention of the current tariff structure (40:60 fixed to variable) with a volatility allowance and
- option 4A.: conditional deferral of fixed charges provided to customers in times of low water availability.

The preferred option for NOW is a combination of:

- option 1A: maintaining the current tariff structure (70:30 fixed to variable in metered areas and 100% fixed in unmetered areas)
- option 4A: conditional deferral of fixed charges in times of low water availability.

7.2 Tariff structure options

Many of the options identified to align tariff design to business cash flows depend on the availability of meters. In contrast to regulated river users, currently most unregulated river extraction is unmetered.[32] This is a barrier to the implementation of these options for customers of NOW. However, NSW and Commonwealth Governments have recently reached agreement on $198.6 million for a state-wide program to upgrade rural water meters[33].

In the NOW 2011 determination, we made the definition of a meter more transparent and less restrictive[34] and established that all users with a meter will be charged a two-part tariff[35].

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32 Independent Pricing and Regulatory Tribunal, *Review of prices for the Water administration Ministerial Corporation – for the NSW Office of Water – from 1 July 2011 – Final Report*, February 2011, p 93.

33 The Hon. Tony Burke MP, *$469m for NSW to deliver major rural infrastructure projects*, media release, 10 June 2012, http://www.environment.gov.au/minister/burke/2012/mr20120610.html

34 See Schedule 5 of the Determination. In broad terms a meter is: a meter installed by the users being an apparatus that measures and records the amount of water extracted by the license holders and is manufactured for that purpose; a meter installed by the Office of Water or State water; or an meter equivalent approved by the Office of Water or the Minister.

Not all of the tariff design options would be applicable to NOW due to the lack of meters. All options discussed below are relevant for State Water and all options are designed such that State Water recovers its costs over time from charges.

7.2.1 Option 1 - 2-part tariffs - varying the fixed to variable ratio

This option involves considering 2-part tariff designs with different fixed to variable ratios. In general, a higher proportion of variable charge will benefit users in times of lower water availability.

However, for State Water's basin customers from July 2014, usage charges will be subject to annual review under the Water Charge Infrastructure Rules[36]. This means that the variable (or usage) charge will vary inversely with forecast water availability. When forecast availability is low, the price regulator must consider whether or not to increase the usage charge so that State Water's revenues are maintained.

Table 7.1 highlights the financial benefit to customers of a low level of fixed charges (40%) in periods of low water availability and usage. In comparison, a higher fixed charge (90%) results in a higher water charge in periods of low usage. This example assumes no change in the variable charge.

The estimates here also assume the same revenue requirement. However, higher fixed charges should reduce the overall revenue target for State Water as the current volatility allowance would not be included in the cost base.

Table 7.1 Indicative water charge for State Water's Murrumbidgee general security customer for different fixed versus variable charges (Entitlement 1,400 ML)

	40:60			90:10	
Water usage	Fixed	Usage	Total	Fixed	Usage	Total
80%	$2,103	$4,005	**$6,108**	$4,731	$668	**$5,398**
60%	$2,103	$3,004	**$5,106**	$4,731	$501	**$5,232**
50%	$2,103	$2,503	**$4,606**	$4,731	$417	**$5,148**
20%	$2,103	$1,001	**$3,104**	$4,731	$167	**$4,898**
5%	$2,103	$250	**$2,353**	$4,731	$42	**$4,773**
0%	$2,103	$-	**$2,103**	$4,731	$-	**$4,731**

Note: This table assumes the same usage charge would be applied during a determination period. This may not be the case under ACCC's annual reviews process for customers within the Basin.
Source: IPART analysis using indicative prices only.

35 Independent Pricing and Regulatory Tribunal, *Review of prices for the Water administration Ministerial Corporation – for the NSW Office of Water – from 1 July 2011 – Final Report*, February 2011, p 88.

36 *Water Charge (Infrastructure) Rules 2010* (WCIR), s.34.

To explore the impact of different policy settings, we have chosen 3 variations of the fixed to variable ratios (note that only Option 1A applies to NOW):

- Current tariff structure (Option 1A) – 40% fixed for State Water (plus a volatility allowance) and 70% fixed for NOW.
- A move to a higher fixed charge (Option 1B) for State Water only – this is a possible scenario under the next determination to be conducted by the ACCC[37]. Note this is not an ACCC policy and is used here for comparison only.
- Customer choice on fixed to variable proportions (Option 1C) for State Water only – which involves the provision of a choice to customers or their representatives (such as the Irrigator Corporations). This may involve a choice between a low and a high fixed cost option at a point in time with a premium attached to a low fixed charge to ensure the service provider is revenue neutral.

Table 7.2 Preliminary policy options – variation of 2-part tariffs

Option	Description	Key design settings
1A Retention of current - part tariff	A 2-part tariff across all valleys for SW charges. NOW charges remain the same.	State Water: fixed versus variable is 40:60 with a volatility allowance in costs base. NOW: fixed versus variable is 70:30 if metered. No volatility allowance.
1B Move towards higher fixed charges	A 2-part tariff across all valleys for State Water charges. NOW charges remain the same: 70:30 where meters exist and 100% where no meter exists.	Fixed versus variable 90:10. No volatility allowance in State Water's cost base. NOW: fixed versus variable is 70:30 if metered. No volatility allowance.
1C Optional choice of ratio	A 2-part tariff across all valleys for SW charges. Prices are different depending on selection. NOW charges remain the same.	Fixed versus variable at 40:60 or 60:40 for State Water's customers. A premium equal to the costs of risk differential between options. NOW: fixed versus variable is 70:30 if metered. No volatility allowance.

37 ACCC, Water Charge Infrastructure Rules Pricing Principles, July 2011, p 51.

The provision of a choice to customers or their representatives of a range of fixed to variable ratios could take a number of forms. The provision of choice also raises a number of administrative policy considerations that would require resolution prior to implementation:

- the eligibility of customers (by groups or individual across a range of criteria)
- the period that the choice is available (eg, only at the start of a determination period)
- the proportion of fixed charges versus variable charges
- the price differential on higher variable charges.

Optional choice of a fixed to variable ratio for customers can be a way of addressing the different demand for risk mitigation between customer groups and/or individual customers. Letting the customer or their representatives choose the option well suited to their circumstance is one way of matching the tariff structure to the customers' cash flow. Stakeholders at both the Griffith and Narrabri workshops expressed a preference for this option, subject to consideration of the details including costs[38].

However, this option is a highly complex tariff structure that will require modelling of many variables including different customer preferences, risk premiums and the period over which the option must be fixed. The calculation of the risk premium is important as any errors in calculation would have negative implications for State Water. In addition, policy questions such as whether different choices within a valley could be accommodated, implications for other users in the valley and who pays the administrative costs require investigation. The administrative cost of such a complex system may outweigh any benefits. These issues were acknowledged by stakeholders at the workshops.

7.2.2 Option 2 - Fixed cost allocation - varying fixed charges for customer groups

For each valley, fixed charges are currently differentiated on the basis of entitlement types for State Water's customers. One key difference is the allocation of total fixed costs between types of entitlements. The cost differential between high and general security entitlement holders is estimated using a high security premium, as outlined in Section 6.3.1.

In State Water's 2010 bulk water price determination, the introduction of a high security premium to the calculation of entitlement charges increased the value of the high security entitlement charge and lowered the value of the general security entitlement charge.

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38 Transcript of workshops at Griffith, 12 June 2012, p 52. Transcript of workshop at Narrabri, 15 June 2012, p 34 http://www.ipart.nsw.gov.au/Home/Industries/Other/Reviews/Water/Review_of_Rural_Water_Charging_Systems_2012

There are alternative approaches to calculate the high security premium. Some approaches may result in a higher premium than is currently the case.

As the methodology for calculating a premium for high security users was carefully last reviewed and increased as part of State Water's 2010 determination, we do not consider there to be a case for further increases to the premium for high security users.

7.2.3 Option 3 - Conditional tariff structures options

A price structure could vary depending on certain conditions. There are many methods of identifying a threshold to apply a price structure or policy. In chapter 5, we looked at 2 possible trigger levels:

1. 2 consecutive years of zero allocations, and
2. where extraction levels are within the lowest 5% of historical extraction years.

These conditions may be codified in a policy, or be determined by a process. This process could be formal, and published as a policy of the organisation, or made as an operational decision taking into account a range of criteria established in an appropriate policy.

Conditional tariff policies include levying different fixed charges in periods of low water availability.

Different fixed charges depending on water availability

The conditions outlined could be used to trigger a reduced level of fixed charges. Such an approach would apply to all customers.

Variations of this policy include a deferral of fixed charges if the liability for the annual charges is not passed on to the customer. These charges could be recovered from the users in future years (Table 7.3). This would result in no direct repayment from the customers who benefit from the deferral. However, the charge would be recovered over time from the customer group who benefit.

Any deferral of fixed water charges requires additional debt for State Water and a calculation of the cost to State Water in line with the volatility allowance in the current determination[39]. A deferral of fixed water charges for NOW means that the Government would need to provide supplementary funds to NOW for lost revenue in that year[40]. In this option, the cost would be recovered over time from customers. We do not consider this option suitable for NOW given the complexity involved.

39 The current volatility allowance is a part of the State Water cost base that estimates the risk associated with the current level of fixed versus variable charges in the tariff.

40 NOW is a Government department and is not able to borrow money in its own right.

Alternatively, if the liability is passed to the customer, a policy to defer fixed charges would be categorised as a payment term policy (see Section 7.3).

Table 7.3 Illustrative policy options – conditional tariff structure

Option		Description	Key design settings
3A	Levying different fixed charges in period of low availability	A 2-part tariff across all valleys for State water charges. NOW charges remain the same. Low water availability determined on a valley by valley basis.	Fixed versus variable 40:60 Low water availability – 2 years of zero allocations 100% of fixed charges deferred till next annual determination - could be spread over future years

7.3 Billing, payment terms and hardship policies

As outlined in section 5.4, State Water's and NOW's water bills for regulated rivers are posted to users quarterly by State Water. The bills are levied in arrears. Hardship policies are currently predicated on the establishment of financial difficulty for individual customers (Appendix B). NOW's bills to customer in unregulated rivers and for groundwater are posted annually.

There are 2 broad approaches to changing payment terms or the hardship policy. First, the policies could be amended to all customers, or all customers in an area (non-conditional payment terms or hardship policies). Alternatively, the change would only apply once a trigger or condition is satisfied (ie, conditional payment terms and hardship policies). Instituting more lenient payment terms is unlikely to be a satisfactory outcome for State Water or NOW, and such an approach does not target the issue of low cash flows in years of low water availability.

One modification to the current customer billing arrangements could be the extension of quarterly billing in all irrigation corporation areas of operations.

7.3.1 Option 4 -conditional payment terms and hardship policies

Deferral of payment for fixed charges by customers (Option 4A)

Currently, all State Water and NOW's accounts are payable, in full, within 30 days of the date of issue. If an account is not paid by the due date, interest is currently charged on the outstanding amount at a rate of 8.75% (see section 5.4).

Deferring the payment of fixed charges means billing the customer so that the charge becomes a liability for the customer, but payment of the charge could be deferred until a future period. For illustrative purpose, the scenario below (Table 7.4) involves an extension of payment terms, with a higher rate of interest costs at the hardship rate plus 2.5%. This is likely to be below the standard rate available to customers,

and would assist with cash flow as repayments could be linked to water availability. This approach could be applied for both State Water and NOW.

The deferral of payment for fixed charges could take a number of forms. Key elements that could vary include:

- the eligibility of customers (all, by groups or individual across a range of criteria)
- the period that a deferral is available to eligible customers (each quarter or year at the declaration of a water availability period)
- the proportion of fixed charge payment that can be subject to deferral
- the length of partial deferral of payment.

Strengthen hardship policies (Option 4B)

Currently both State Water and NOW can negotiate a payment plan if a customer is experiencing genuine hardship (Appendix B). This policy aims to reduce the risk of licence suspension from non-payment.

The options available to improve hardship provisions include:

- relax the eligibility criteria
- improve the conditions of the deferred payment plan in terms of the length of the payback period or the interest terms.

Like the other policies, the changes could either be made general, that is apply in all valleys/areas and to all customers or be targeted in circumstances based on established criteria or a process to declare that a dedicated policy now applies.

Table 7.4 Illustrative policy options – conditional payment / hardship options

Option	Description	Key design settings
4A. Deferral of payment of fixed charges	A 2-part tariff across all valleys for State water charges. NOW maintains current tariff structure Low water availability determined on a valley by valley basis Bill issued to customers. Payment terms altered for all customers on basis of low water availability.	Fixed versus variable is 40:60 or 70:30 Low water availability – 2 year of zero allocations Option for extended payment terms at a higher rate eg, 8.5% + 2% for all customers
4B. Hardship policy	A 2-part tariff across all valleys for State water charges. NOW maintain current tariff structure Hardship eligibility criteria relaxed	Fixed versus variable is 40:60 or 70:30 Low water availability – 2 year of zero allocations Transfers and off farm income criteria on transfers relaxed

7.3.2 Option 5 – consistency of non-conditional billing and payment terms

Irrigation Corporations currently issue water bills for customers within their area of operations. The corporations "pass through" State Water's and NOW's fixed and variable costs in these bills.

Table 7.5 outlines a possible change to the current billing arrangements. The extensions of quarterly billing to all customers could affect some customers within irrigation corporations. As outlined, more lenient payment terms would not be considered prudent business practice, however, achieving a consistent billing approach across all customers may assist irrigators to manage their cash flow.

Table 7.5 Illustrative policy options – payment terms

Option	Description	Key design setting
5A. Payment terms	A 2-part tariff across all valleys for State water charges. NOW charges remain the same. Payment terms altered for all customers.	Fixed versus variable is 40:60 or 70:30. Billing policy stipulate the inclusion of a quarterly bill option for all customers.

7.4 Implementation issues

There are a number of issues that require consideration prior to the implementation of any option:

- If the ACCC adopt an annual determination of usage charges, this may lead to a situation where the prices vary greatly from year to year and negate any move to a higher proportion of fixed charges.
- Policies that involve a deferral of payment would require an assessment of the cost to State Water and NOW, and a description of how these costs are recovered over time from the group that receives the deferral.
- Policies that are conditional on certain triggers requires the specification of the conditions and an assessment of the impact. Conditions may need to be specified for each water source. An approach that is too generous and poorly targeted could result in a transfer from one customer group to another within a valley or in the under recovery of costs over time.
- Conditional policies would have to be integrated with the water bills. That is, a policy that uses a trigger that is assessed at the end of a season may relate to the subsequent year rather than current year charges if they are charged quarterly.
- Irrigation Corporations currently issue water bills for customers within their area of operations. Irrigation corporations may have polices that limit the effectiveness of hardship polices or tariff options that offer customers a choice of fixed charges. Members of irrigation corporations are subject to the billing and tariff policies of the irrigation corporations.

7.5 Initial assessment against criteria

Table 7.6 provides an initial assessment of each options outlined in Sections 7.1 to 7.3 against the proposed assessment criteria in Chapter 4.

The initial assessment is based on the following assumptions:

- The ACCC pricing determination process will enable the recovery of the same level of costs over time under all policies.
- The baseline for the assessment of change is the current situation i.e. a 40:60 or 70:30 ratio of fixed to variable charges for the majority of valleys and current payment terms and hardship polices.

Under these assumptions, all policies result in a transfer of cost from one period to another.

Table 7.6 Preliminary assessment of tariff options

Option	1. Effectiveness in addressing customer impacts	2. Financial impact on SW & NOW	3. Financial impact on the NSW Budget	4. ACCC's pricing principles and WCIR	5. National Water Initiative pricing principles	6. Economic efficiency	7. Ease of administration & implementation	8. Transparency
Variation of 2-part tariff								
1A State Water : retention of current 2-part tariff (40:60) with volatility allowance	No impact – maintain low fixed charge	No impact for State Water	No impact	Yes - compliant (if ratio is deemed compliant)	Yes - compliant – though involves trade-off between principles	No impact – provide incentive for water use efficiency	High – no change to current system	Medium to high – customers understand the current structure
1A NOW : retention of current 2-part tariff (70:30) where metered	No impact – maintain higher fixed charge	No impact for NOW	No impact	N/A	Yes compliant – though involves trade-off between principles	No impact – provide some incentive for water use efficiency	High – no change to current system	Medium to high – customers understand the current structure
1B State Water: higher fixed charges (90:10)	Negative impact	Positive – will reduce volatility	Positive – will reduce volatility	Yes - potentially more compliant	Yes - compliant	Less efficient – minor efficiency incentive removed	High – easy to change current system	Medium to high – customers understand 2-part tariffs
1C State Water: optional choice of fixed versus variable ratio	Potentially positive impact	Positive– may reduce volatility	Positive – may reduce volatility	Yes -potentially more compliant	Yes -compliant	No impact – may be little to no change if risk premium is robust	Low - additional administrative costs and complexity	Low – more complex than current structure
Conditional tariff structure policies								
3A State Water: different fixed charges in low water availability	Positive impact	Negative– may increase volatility	No impact -if covered by State Water debt	Non - compliant	Non - compliant	No impact - if full cost recovery over time	Medium - some complexity	Low to medium – customers understand the 2-part tariff

Option	1. Effectiveness in addressing customer impacts	2. Financial impact on SW & NOW	3. Financial impact on the NSW Budget	4. ACCC's pricing principles and WCIR	5. National Water Initiative pricing principles	6. Economic efficiency	7. Ease of administration & implementation	8. Transparency
Payment terms and polices								
4A. State Water and NOW: deferral of payment of fixed charges (conditional)	Positive impact - in low allocation years	No impact - if recovers holding costs	No impact	Yes -compliant if full costs recovered over time	Yes -compliant if full costs recovered over time	No impact - if involves recovery of holding costs	Medium -simple but need changes to annual SW financial process	Medium – if the condition set is easily verifiable
4B. State Water and NOW: conditional hardship policy	Positive impact - in low allocation years	Negative – increases volatility	Negative – increases volatility	Yes -compliant if full costs recovered over time	Yes -compliant if full costs recovered over time	No impact	Low - increase administration	Medium- if the condition set is easily verifiable
5A. Payment terms (non-conditional)	Positive impact - depending on terms	Negative – increases volatility	Negative – increases volatility	Yes -compliant if full costs recovered over time	Yes -compliant if full costs recovered over time	No impact	High - simple	Medium to high – all customers would have access to same payment terms.

These options are currently described as single policies, however, they can be combined to form a policy package to address the issue of low water availability and on-farm revenue.

Based on the above assessment, we consider that the current tariff structure for both State Water and NOW provide a fair sharing of risk between the service provider and the customer. We also consider the current tariff structure, combined with a conditional deferral of payment option would further address cash flow issues of customers during low water availability.

We seek feedback from stakeholders on the following questions:

14 What are the key issues in the current suite of price tariffs, pricing policies and payment terms that cause hardship in periods of low water availability?

15 Who should be responsible for establishing the conditions that would trigger a rural water charging policy response?

16 Should rural water charging policy triggers be established in the price determination process?

17 What are your views on the tariff structure options presented? Do you agree with our preliminary view for tariff structure or policy options that best meets the assessment criteria?

18 Are there any tariff structure or other policies or approaches that we should consider?

19 Are there any other implementation issues that should be considered for the tariff structures or other policy options outlined? Are there any implementation issues for tariff structure or other policy options at a local level (eg, within irrigation corporations) that we should be aware of?

Part 3 - Cost shares, government contributions and implications for ACCC determinations

Part 3 examines approaches for determining government cost shares for State Water activities in the Murray-Darling Basin and those for determining government contributions for valleys that are not yet at full cost recovery.

This part relates only to State Water charges for their customers in regulated rivers within the Murray-Darling Basin.

8 Setting the NSW Government's cost share for ACCC determined bulk water charges

We have developed the system of cost shares between Government and users for State Water over many determinations on the basis of the impactor pays principle. This means that costs are allocated to users according to the contribution they make to the costs of activities being incurred. These cost sharing ratios have been determined by IPART by examining each activity, and allocating this cost between users and Government. Government share of State Water's revenue requirement is estimated to be 35% to 40%[41].

From 1 July 2014[42], the ACCC will set prices for State Water's activities in the Murray-Darling Basin under the *Water Charge (Infrastructure) Rules* rather than the Independent Pricing and Regulatory Tribunal Act. Under this new approach, the NSW Government's share of funding is to be set independently by the NSW Government, not by the price regulator (ie, ACCC).

The ACCC expects the NSW Government's cost share of activities to be known at the time it sets State Water's prices. As we have been setting the government's cost shares in previous price determinations, the NSW Government has asked us to consider potential methods for determining the government's cost share under the ACCC framework. Given that the ACCC will only regulate State Water's prices for regulated water users in Basin NSW, in considering alternatives, we need to examine the implications any option will have for our future determinations for NOW and for State Water's coastal customers.

41 See IPART, *Bulk Water prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June* 2010, September 2006, p 48 and IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June* 2014, June 2010, p 15.

42 State Water's 2010 Determination finishes on 30 June 2014 and the NSW Government has advised the ACCC that it will not seek accreditation to set prices from 1 July 2014.

8.1 Our preliminary view

We examined the following methods for determining cost shares in the future:

1. continue our existing method of reviewing cost sharing ratios at each determination
2. freeze the current cost sharing ratios
3. apply cost sharing ratios with reviews of methodology at every second determination period (ie, initially for the 1 July 2017 price review, then every second determination (8 years))
4. Government to contribute a fixed amount.

Our preliminary view is to recommend Option 3, where we retain the current cost sharing ratios for State Water activities for a certain period, and review them from time to time. In practice this means maintaining the current cost shares for the 1 July 2014 price review, and then review the cost shares prior to the ACCC's 1 July 2017 review of State Water's prices. We would then review the cost shares at every second determination after this (ie, every 8 years). We consider reviewing the cost sharing ratios every second pricing determination period as a suitable balance between the need to ensure that the cost sharing ratios remain appropriate, and the additional costs imposed in undertaking a separate review of cost shares every pricing determination.

Under this approach, we would recommend to the NSW Government that it should pay State Water a CSO based on existing cost shares for the ACCC's 2014 determination.

8.2 Cost shares – the economic argument for a government contribution

As noted in Chapter 2, the ACCC will set prices for State Water's activities in the Murray-Darling Basin under the *Water Charge (Infrastructure) Rules*. These rules, the National Water Initiative and the *Commonwealth Water Act (2007)* envisage full cost recovery for the provision of bulk water services (ie, that users contribute 100% of State Water's efficient costs). This contrasts with our current approach, where some of State Water's efficient costs are recovered from the NSW Government (ie, the government cost share), with the remaining efficient costs recovered from users.

While there is consensus that the charges for monopoly services should generally cover the full costs of providing those services, in past reviews we have taken the view that where there are public goods or legacy issues, there is an economic argument for a government contribution to State Water's efficient costs[43]. This argument is discussed below.

[43] This also applies to our approach for pricing bulk water services provided by the NSW Office of Water.

8.2.1 Public good considerations and government contribution

There is an economic argument for long term under recovery of costs (ie, a government contribution) where there are public good aspects to the services provided by monopolies. For example where:

- monopoly infrastructure provides services other than services directly associated with the provision of bulk water
- those additional services cannot be directly and easily charged to the beneficiaries
- either those services require the supplier to incur some additional (incremental) cost; and/or there is an implicit or explicit agreement that any common costs will be shared in a particular way.

In the case of State Water's bulk water services, a public good element exists because the costs incurred in managing dams, weirs, canals, monitoring and flow control assets, and other parts of the bulk water system are not exclusively related to bulk water delivery. These infrastructure assets provide services to the broader community such as flood mitigation and environmental monitoring benefits. We have developed a cost sharing methodology to allocate costs between extractive users and the government that recognises the public good aspects of water services. Our objective in allocating costs between extractive users and the government is to ensure, as far as possible, that extractive users and the community (through the government cost share) both pay their fair share of the efficient costs of managing the bulk water system.

8.2.2 Legacy costs and the government contribution

Another aspect of the government contribution relates to legacy costs. These are current and future costs that relate to past practices and activities. There is an economic argument for a government contribution during the period of phase-in of new regulatory requirements for assets created under a previous regulatory framework and have not yet come to the end of their useful life.

Governments routinely seek to minimise the impact of new regulatory requirements on past investments made in good faith under a previous regulatory regime. This is particularly the case where the new regulatory obligation imposes substantial costs or reduces the benefit of that investment. In these circumstances, the costs of the new regulatory obligations should not necessarily be passed onto users. Our view is that it is appropriate for the government to contribute to those costs during the remaining life of existing infrastructure.

This issue applies to State Water's infrastructure assets. For example, the cost recovery expectations for bulk water assets and regulatory obligations on dams have increased over time. Dam safety standards are significantly higher than in the mid-20th century when they were constructed, and environmental standards and obligations have also increased. The costs associated with these new regulatory obligations should not necessarily be passed onto users. If prices jump significantly as a result of a new regulatory obligation, this may threaten future investment by customers. The inclusion of these legacy costs in today's prices may distort the signal to users of the current and future cost of providing bulk water services. Therefore, there is an economic argument for a government contribution related to legacy assets.

8.3 Our development of cost shares for activities

Given our view that there is an economic case for the government to make a contribution to State Water's efficient costs, we have developed our approach for determining cost shares of activities over a number of determination periods. Specifically we:

- decide the full, efficient costs of providing the regulated bulk water services over the determination period, based on a detailed analysis of State Water's forecast operating and capital costs and scope for efficiency gains, ie, the notional revenue requirement
- review the allocation of costs between activities
- decide how much of this efficient cost should be recovered from the NSW Government, and what proportion of the notional revenue requirement should be recovered from users through bulk water prices ie, the cost shares.

Our cost share ratios have been developed at an activity level, and a code is assigned to each activity. State Water records and presents its costs by activity code. Once the ratios have been decided, we apply them to the efficient costs for those activity codes to determine the user and government contribution. For example, if an activity code has a 50% user share and the efficient costs are $1,000, then the user and government share of cost would be $500 each.

We have developed and refined our approach to cost shares over a number of determinations with the assistance of users, State Water and the NSW Office of Water. This has led to a well-established and accepted methodology for determining cost shares. The history of our development of the cost sharing ratios and the key concepts used are presented in Appendices C, D and E.

8.4 State Water cost shares

In the 2010 State Water Determination[44] we maintained the approach and the cost sharing ratios adopted in the 2006 Determination. This reflected our view that the cost shares were the result of extensive review and consultation from the previous 2 determinations. It has remained consistent with our obligations under the IPART Act, Government's policies and commitments as part of Council of Australian Governments (COAG) and NWI.

Table 8.1 shows the current cost sharing ratios for State Water.

44 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June* 2014, June 2010.

Table 8.1 IPART's decision on percentage user cost share of operating and capital expenditure

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

Note: Some activity codes have not been used to set prices for the 2010 Determination period.

Source: IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 108.

8.5 Trends in the government cost share over time

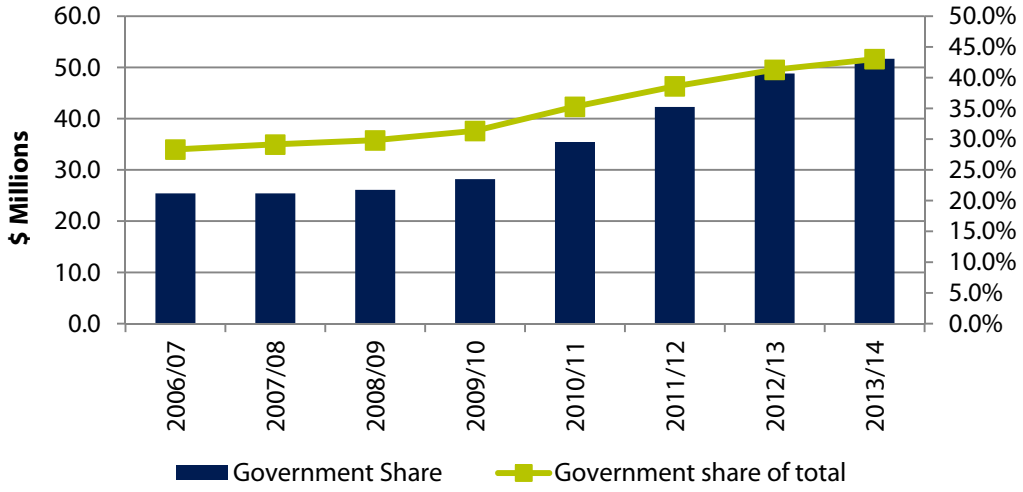
There are 2 factors that have affected the ratio of government and user cost shares over time:

- changes we have made to the cost shares
- changes to State Water's activities– eg, if State Water's expenditure on activities moves toward activity cost codes with a higher government share, the government's contribution will increase as the cost share ratio is multiplied by the dollar amount of costs allocated to that activity code.

Figure 8.1 shows the NSW Government's cost share, and the NSW Government's cost share as a total of State Water's efficient costs since 2006/07. The figure shows that the NSW Government's contribution has increased from around 30% of State Water's efficient costs in 2006/07 to around 45% in 2013/14. This increase in the governments contribution primarily relates to State Water's increased capital expenditure to undertake dam safety upgrades and related environmental measures (such as fish passage and cold water pollution mitigation works). These activities have a higher government cost share (50%).[45]

At the conclusion of these dam safety upgrade, the NSW Government contribution is likely to return to pre-2010 levels.

Figure 8.1 Trend in NSW Government's cost shares ($2010/11)



Data source: IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 48, IPART, *Bulk Water Prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June 2010 - Final Report*, September 2006, p 15. The figures have been adjusted to $2011/12.

45 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014*, June 2010, p 14.

8.6 Options for cost sharing ratios under the ACCC framework

Based on our experience in developing cost shares over time, we have found that most stakeholders support the continuation of the cost sharing ratios. We have also shown that there is an economic basis for a government contribution where there is a public good or legacy aspect of the bulk water services.

The ACCC has taken the view that:

> The regulator can only determine regulated charges. Hence, any government (or other) contribution to a Part 6 operator's costs will be taken as an independent input to the price approval or determination process…to the extent that a government is contributing to a Part 6 operator's costs this is independent of the Part 6 price approval or determination process[46].

This means that the proportion of costs that is allocated to the government does not constitute a regulated charge and is therefore beyond the scope of the Water Charge Infrastructure Rules. Where a government is contributing to State Water's costs, the rules envisage that the ACCC would take account of the government's contribution in advance of determining or approving charges. This would require either the NSW Government's share of costs or a methodology for determining the government's cost share to be known prior to the commencement of the ACCC's determination process, when State Water makes its submission.

This review is to provide recommendations on options for setting the government cost share in a way that is consistent with the ACCC's rules. The NSW Government will make the final decision on how the government cost shares will be determined. In developing this discussion paper we identified and examined 4 options:

- Option 1 – continue our existing method of reviewing cost sharing ratios at each determination.
- Option 2 – freeze the current cost sharing ratios.
- Option 3 – apply cost sharing ratios with reviews of methodology at every second determination period (ie, initially for the 1 July 2017 price review, then every second determination (8 years)).
- Option 4 – Government to contribute a fixed amount.

The sections below explore each of these options in further detail.

46 ACCC, *Pricing principles for price approvals and determinations under the Water Charge (Infrastructure) Rules 2010*, July 2011, p 65.

Option 1 – continue our existing method of reviewing cost sharing ratios at each determination

Under this option, we would have an ongoing role in reviewing the cost shares applicable to each cost code, and State Water's allocation of its costs between activities at each determination. This process involves reviewing the cost allocation and existing cost share ratios if there was new evidence, setting cost share ratios for any new activities and reviewing the application of the cost share ratios by State Water.

Under this option, our review process would be shorter (eg, 5 to 9 months) than the current determination, as we would only be considering the issue of allocation of costs between users and government. Our current determinations are more involved and lengthy (12 months), as they require an assessment of the efficiency of State Water's costs. In future pricing determinations, efficient costs will be determined by the ACCC. Under this option, we would still be required to release a draft decision and consider submissions.

The review process would need to be completed and the cost sharing ratios and proposed cost allocations to these ratios agreed by the NSW Government before State Water's submission is provided to the ACCC. It is important to note that the dollar amount of the Government's contribution will not be decided as the cost sharing ratios will need to be applied to State Water's efficient costs (as determined by the ACCC).

At our workshop in Griffith[47] some stakeholders were supportive of this option as they considered it maintained discipline, transparency and certainty with respect to our treatment of cost shares. Some stakeholders at the Narrabri Workshop were supportive of IPART's processes with Lachlan Valley Water stating that:

> IPART does apply a very logical, easily understandable framework and I think it is worthwhile that IPART continue to have some input in that framework[48].

State Water suggested that the administrative costs imposed on them to respond to an additional review needs to be considered, including the timing given that State Water's submission would need to be completed by March 2013.[49]

Option 2 – Freeze the current cost sharing ratios

Under this option, the cost sharing ratios that we determined in the 2010 State Water Determination would be fixed for the future. That is, the cost sharing ratios would be turned into a formula that could be applied by State Water and thus self-actualise. State Water would continue to record its costs by activity, but it would apply the current ratios unilaterally to the ACCC determined efficient costs to calculate the

47 IPART Transcript of public workshop – Griffith, 12 June 2012.
48 Lachlan Valley Water, IPART Transcript of public workshop – Narrabri, 15 June 2012, p 39.
49 State Water, IPART Transcript of public workshop – Griffith, 12 June 2012.

government share. We would no longer review the currency of the cost sharing ratios, changes to State Water's activities or how State Water allocates its costs to different activity codes at each determination.

This option assumes that the current cost sharing ratios are appropriate and that further adjustments to the ratios will not be required in the future. It also assumes that State Water's activities, and thus the determined cost shares, are not likely to change over time. This is consistent with our decision in the 2010 State Water Determination[50] to maintain the cost shares.

Under this option, State Water would apply the current cost sharing ratios to the efficient costs determined by the ACCC at each determination. The NSW Government would agree to contribute the amount, as determined by applying the cost sharing ratios.

At our workshops in Griffith[51] and Narrabri[52] some stakeholders were less supportive of this option as it locks in the cost sharing ratios set in the 2010 State Water Determination[53] and does not provide opportunity for review of the cost allocation. Stakeholders were concerned that the cost shares and cost allocations would no longer be reviewed, and suggested that there may be changes to State Water's activities that would require the cost shares and cost allocations to be reviewed on a regular basis.

We note that we have made very few changes to the cost shares over a number of State Water price determinations. In the 2006 State Water Determination[54], we made 2 changes, while in the 2010 Determination we made no changes to the cost shares. This reflected our view that the cost shares had been subject to 2 detailed external reviews, and review by State Water, NOW and general stakeholders who provided submissions to the determinations. We considered there was no basis for change on all the available evidence. So although we reviewed the cost sharing ratios and cost allocations, we effectively fixed the cost sharing ratios for 8 years. We consider that the scope for changes to State Water's activities in the future may be small. The need to reconsider the impactor pays principle may be unlikely and fixing the cost shares is not likely to be a problem. However, this option is less transparent as State Water's application of the cost shares will no longer be reviewed.

50 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014*, June 2010.
51 IPART Transcript of public workshop – Griffith, 12 June 2012.
52 IPART Transcript of public workshop – Narrabri, 15 June 2012.
53 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014*, June 2010.
54 IPART, *Bulk Water Prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June 2010 – Report*, September 2006.

Option 3 – Freeze the current cost sharing ratios for a certain period of time (8 years), with reviews of methodology at every second determination period

Under this option, we would freeze the cost sharing ratios for a period of time (similar to option 2) and review the cost sharing ratios and the allocation of costs after a fixed period of time. For example, our first review would be prior to lodgement of State Water's submission to the ACCC's 1 July 2017 price review[55]. We would then review the cost shares at every second determination (8 years). This would be similar to our approach for Trade Waste and Miscellaneous charges for metropolitan water utilities, where we reset the cost base in detail every few determinations, rather than at every determination.

As in option 2, the cost sharing ratios would be applied by State Water to the efficient costs as determined by the ACCC for the first determinations. Then for the third ACCC determination, we would review the cost sharing ratios, cost allocations and activities in detail as per our existing approach to ensure that they remained appropriate. Where State Water's activities have changed, new activity codes and cost shares would be developed. This option would be appropriate to ensure that State Water's implementation of cost shares remains consistent, that its systems for cost allocation between activities was verified and that new activities can be identified. In reviewing the cost sharing ratios and cost allocations every second determination, we would need to complete the review prior to State Water providing its submission to the ACCC.

Similar to option 2, some stakeholders at the Griffith workshop[56] were concerned about the length of time that the cost shares would be locked in, preferring them to be reviewed for each determination period. Stakeholders at the Narrabri Workshop were generally supportive of IPART continuing to have a role in reviewing the cost shares. Tamworth Regional Council indicated a preference for this option, suggesting that it:

> Gives process without too much inherent costs[57].

55 The *Water Charge (Infrastructure) Rules* specify that the initial price review is 3 years, while subsequent determinations are for 4 years).

56 IPART Transcript of public workshop – Griffith, 12 June 2012.

57 Tamworth Regional Council, IPART Transcript of public workshop – Narrabri, 15 June 2012, p 39.

Option 4 – Government to contribute fixed amount

Under this option, the NSW Government could independently decide how much it would contribute, or calculate the amount of contributions by applying a methodology and fix the dollar contribution in real or nominal terms. This could mean that the government contribution would no longer follow the impactor pays principle, which would be inconsistent with the NWI pricing principles[58]. The Government could decide on its contribution at each determination or their contribution could be fixed for a period of time.

This option was the least preferred option at our workshops. Some stakeholders at the Griffith[59] and Narrabri Workshops[60] were concerned that this option lacks transparency, discipline and certainty as to what the governments cost share would be. As noted above, some stakeholders have already expressed a preference for option 1 because it allows the cost sharing ratios to be reviewed more regularly. We note that in this review, we are making recommendations to the NSW Government on how the cost shares are determined, but that the NSW Government will make the final decision on the approach to be adopted.

8.7 Assessment of options against our criteria

Our initial assessment of the options against the proposed assessment criteria (see Chapter 4) is provided below and in Table 8.2. In assessing these options, it should be recognised that there is an uncertainty. While the methodology for the cost shares can be fixed to maintain regulatory certainty, the financial impacts on State Water, the NSW budget and customers is less clear. The financial outcomes will depend on whether State Water's expenditure is in categories with a higher or lower government share. That is, the government's and users' contribution will change as State Water's allocation of costs to activities change, depending on the programs planned for the regulatory period. In this section we consider each option against the status quo.

8.7.1 Effectiveness in addressing customer impacts

Assuming State Water's expenditure remains stable, the impacts on customers under options 1, 2 and 3 is likely to be low. This is because the relative share of costs between users and government is unlikely to change significantly. Under option 4, the impact on customers will depend on whether the government continues to make a contribution that is comparable with that determined by IPART in the past.

58 Under principle 4 of the NWI principles, water planning and management activities costs should be allocated between water users and government using an impactor pays approach.
59 IPART Transcript of public workshop – Griffith, 12 June 2012.
60 IPART Transcript of public workshop – Narrabri, 15 June 2012, p 39.

8.7.2 Financial impact on State Water

Since the cost shares determine the contribution from users and the government, if the government contribution is reduced or increased, the users' contribution increases or reduces by the same amount to maintain a revenue neutral outcome for State Water. However, as the users' contribution increases, there is a greater chance that users will be unable to meet their required payments. This can lead to higher debt to fund State Water's cash flows or Treasury's contribution is increased to cover the shortfall.

Options 1, 2 and 3 closely mirror our current methodology, so the methodology is unlikely to adversely affect State Water's finances. Under option 4, it is possible for the government to decide to make no contribution, and significantly increase the users' share. This could potentially impact users' ability to pay, and thus have a negative impact on State Water's finances.

8.7.3 Financial impact on the NSW Budget

Under options 1, 2 and 3, assuming State Water's activities remain stable, it is likely that there will be little change to the current Government share of the cost of activities. Hence, the impact on the NSW budget will be minimal. This assumes the ACCC's assessment of State Water's efficient costs will not significantly increase from our last determination.

Under option 4, the impact on the NSW Budget is less certain as it is based on government's decision on its contribution.

8.7.4 Consistency with ACCC and NWI pricing principles

The ACCC considers that the government contribution is outside the scope of the Water Charge (Infrastructure) Rules. The NWI pricing principles relating to full cost recovery only specify that charges should be set to full cost recovery where practical. Further, the NWI principles recognise that costs should be allocated between extractors and government using an 'impactor pays' approach. Therefore, our approach to cost shares in options 1, 2 and 3 is consistent with the NWI. Under option 4, the outcome will depend on the government's decision on its contribution and that could be inconsistent with the NWI.

8.7.5 Economic efficiency

Our approach under options 1, 2 and 3 uses the 'impactor pays' methodology to share efficient costs between extractive users and government. The cost shares are applied to efficient costs. Under option 4, the government's contribution may not reflect the 'impactor pays' principle and thus they may not be paying their fair share of efficient costs, though charges will still only recover the efficient costs.

8.7.6 Ease of administration and implementation

Ease of administration relates to the level of review required to determine the government's cost share. Options 2 and 4 are the easiest to administer and implement, as a method or a dollar amount is fixed over time. Option 1 and 3 will have some ongoing administration, as the cost shares will be reviewed at set periods.

8.7.7 Transparency

Under options 1 and 3 transparency is provided through external review of State Water's cost shares and cost allocations. This review process also provides certainty of the government contribution for the period between reviews. Option 2 and partly option 3, require a level of trust in State Water to apply the cost shares and accurately allocate its costs to the appropriate cost shares. Option 4 is potentially less transparent, unless the government is explicit as to how it will determine its contribution.

Table 8.2 provides a summary of our assessment of the proposed options.

Table 8.2 Assessment of proposed options against criteria

Criteria	Option 1	Option 2	Option 3	Option 4
Effectiveness in addressing customer impacts	No impact	No impact	No impact	Uncertain –based on government's decision on its contribution
Financial impact on State Water	No impact	No impact	No impact	No impact
Financial impact on State Budget	No impact – if cost shares component remains similar to current	No impact – if cost shares component remains similar to current	No impact – if cost shares component remains similar to current	Uncertain – could be positive or negative.
Consistent with ACCC rules	Yes	Yes	Yes	Yes
Consistency with NWI pricing principles	Yes	Yes	Yes	Uncertain – based on government's decision
Economic efficiency	No impact	No impact	No impact	Potentially less efficient
Ease of administration	Low	High	Medium	Potentially high
Transparency	High	Low	Medium	Potentially low

Based on our assessment our preliminary view is to recommend option 3. We consider reviewing the cost sharing ratios every second determination period as an appropriate balance between the need to ensure that the cost sharing ratios remain appropriate and consistent with the 'impactor pays' principle, and the additional costs imposed in undertaking a separate review of costs shares at every determination period. Under this option, we see a role for an independent body like IPART to review the cost sharing ratio methodology for any new evidence or activities and review the application of the ratios by State Water.

Some stakeholders at the Griffith workshop[61] expressed a preference for us to review the methodology every determination period (option 1). We have developed and refined the current cost sharing ratios over a number of determinations and we consider the cost of a review every determination period would outweigh the benefits. Reviewing the cost shares and cost allocations at each determination would impose additional costs on State Water and other stakeholders, and the likelihood of changes to the cost shares and cost allocations is small over the short term.

We seek feedback from stakeholders on the following questions:

20 What are your views on the cost share options presented? Do you agree with our preferred option on determining cost shares?

21 Are there alternative options for determining the cost sharing ratios that we have not yet considered?

22 Are there any other issues on determining cost shares that we need to consider?

61 IPART Transcript of public workshop – Griffith, 12 June 2012.

9 Valleys not at full costs recovery and the government contribution

The previous chapter discussed options for determining the users' and the government's contribution of bulk water services provided by State Water for regulated water users in the Murray-Darling Basin.

Current State Water prices for all valleys in the Murray Darling Basin, except the Peel, fully recover 100% of the users' share of State Water's efficient costs. In the case of the Peel, current prices recover 90% of the users' share of costs. We determined that setting Peel valley prices to fully recover users' share of the cost would have unacceptable impacts on customers. The remaining 10% of costs are included in arrangements between State Water and NSW Treasury and are not subject to IPART determination.

In this chapter we consider whether an explicit government subsidy should be made to recover the remaining costs of Peel valley services. This is an issue as section 29(2)(b) of the Water Charge (Infrastructure) Rules requires prices to be set so that they are reasonably likely to recover the full cost of service delivery less subsidy or other revenues.

This chapter considers options for dealing with the issue of under recovery and government subsidisation of State Water's services in the Peel Valley, as it will be subject to the ACCC's framework from 1 July 2014.

9.1 Our preliminary view

We examined the following options to decide the appropriate level of cost recovery and government subsidy in the Peel Valley:

- Option 1 - freeze current Peel Valley prices with the remainder of the costs covered by an explicit community service obligation (CSO).
- Option 2 - progressively increasing the average Peel Valley bill by 5% per annum in real terms with the remainder of the costs covered by a CSO.
- Option 3 - targeting lower bound pricing with the remainder of the costs covered by an explicit CSO.

Based on our initial assessment of these options against the criteria, our preliminary view is to recommend Option 2 where we progressively increase the average Peel Valley bill by 5% per annum in real terms. We consider this to be the most economically efficient option and the easiest option to implement.

9.2 Implications of Water Charge Infrastructure Rules for the Peel Valley

The Water Charge (Infrastructure) Rules require the ACCC to set prices that are reasonably likely to recover the full cost of services in the Murray Darling Basin, where the Peel Valley is located. This contrasts to our previous approach to setting prices, where we had discretion to consider customer impacts and other factors.

Under the 2010 State Water Determination, general security entitlement and usage charges in the Peel Valley increased by 46.4%[62]. If we had set prices to recover the users' share of costs, the 2013/14 prices would have to increase by a further 11.2%. In the 2010 State Water Determination, we examined customer and other impacts of price increases of this order. We reached the view that such increases were likely to make agriculture businesses in the Peel unviable. Given this, we set prices paid by users at below full cost recovery.

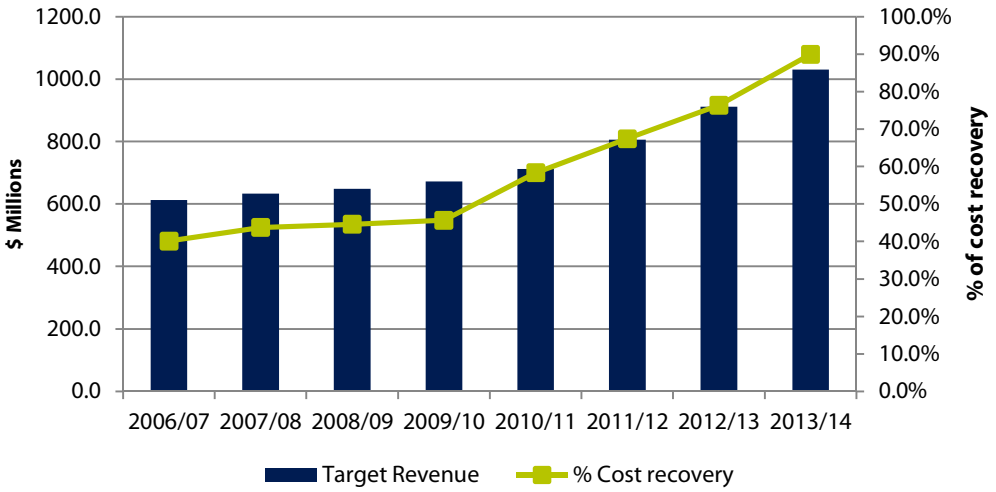
Under the Water Charge (Infrastructure) Rules, the ACCC will not have the same degree of discretion when setting future State Water prices. In the absence of alternative funding arrangements, these significant price rises would be passed on to Peel Valley users.

9.3 Cost recovery in the Peel Valley

Though we have set State Water prices below the full cost recovery in the Peel, over time, we have moved the level of cost recovery upwards (see Figure 9.1).

62 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 - Final Report,* June 2010, pp 134-135.

Figure 9.1 Target revenue (user share) and % cost recovery for the Peel Valley from 2006/07 to 2013/14



Data source: IPART Analysis.

In the 2010 State Water Determination[63] we made a decision to cap average valley bill increases for general security customers to 10% real per annum in the Peel Valley. This decision also restrained bill increases for high security customers due to the relationship between general security and high security entitlements. Our decision was based on the view that this valley is currently below the full cost recovery level and a move to full cost recovery over the 4-year determination would adversely affect the financial viability of farms in this valley.

In the 2006 State Water Determination we stated that:

> …in some valleys full cost recovery could not be achieved without substantial increases in tariffs that would have a damaging impact on users. In these cases the Tribunal has decided to limit increases. In some instances, the Tribunal considers that cost reflectivity will never be achieved. In such instances, it considers State Water should review the future of these services and consult with government in those cases where it considers that the service could be recognised as a Community Service Obligation[64]

With change to new price regulatory arrangements from 1 July 2014, a key issue for this review is whether there is an ongoing case for subsidising the full cost of Peel Valley services and the value of the subsidy to be paid.

The sections below discuss how a subsidy could be paid, assuming that in this review a robust case for an ongoing subsidy is made.

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

64 IPART, *Bulk Water Prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June 2010 – Report*, September 2006, p 9.

9.4 Options for deciding the appropriate level of cost recovery in the Peel Valley and the appropriate level of government subsidy

In this review we are considering methods for setting the value of government subsidy to the costs of State Water's Peel Valley services in a way that is consistent with the Water Charge (Infrastructure) Rules. We are to make recommendations to the government on our preferred approach, and the NSW Government will make the final decision on how the government contribution will be determined.

Possible options for deciding the appropriate level of cost recovery and government subsidy in the Peel include:

- Option 1 - freezing current Peel Valley prices with the remainder of the costs covered by an explicit Community Service Obligation (CSO)
- Option 2 - progressively increasing the average Peel Valley bill by 5% per annum in real terms with the remainder of the costs covered by a CSO
- Option 3 - targeting lower bound pricing with the remainder of the costs covered by an explicit CSO.

Each of these is described in further detail below.

9.4.1 Option 1 – Freeze current Peel valley prices, with the residual cost paid as a CSO to State Water

In this option, State Water's submission to the ACCC would propose a continuation of current price levels, together with information about the payment of a CSO by government for Peel Valley services.

At the Narrabri Workshop[65] stakeholders raised significant concerns about the cost of water in the Peel Valley suggesting that it represents:

> A huge component of our cost structure and it is something that we really need addressed urgently because we are being priced out of existence[66].

This option recognises stakeholders' significant concerns about prices and would protect users from future price increases. However, the significance of the size of the CSO for the State budget will depend on the size of State Water's expenditure profile for the Peel Valley. We seek stakeholder views on the quantification of this cost and intend to undertake further work. The short fall in required revenue to be recovered by the Government over the 2010 State Water determination was $4.9 million.[67]

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65 IPART Transcript of public workshop – Narrabri, 15 June 2012.

66 Cockburn Valley Water Users, IPART Transcript of public workshop – Narrabri, 15 June 2012 p 12.

67 IPART, *Review of bulk water charges for State Water Corporation from 1 July 2010 to 30 June 2014 – Final Report*, June 2010, p 188.

9.4.2 Option 2 – progressively increasing the average Peel Valley bill by 5% per annum in real terms over future determinations with the remainder of the costs covered by a CSO.

In this option, State Water's submission to the ACCC would propose a cap on the average valley bill increase of 5% per annum in real terms, together with information about the payment of a Community Service Obligation for Peel Valley services.

This option recognises that the Peel Valley's prices will be at 90% cost recovery by 2013/14 and that by gradually increasing prices, full cost recovery may be achievable over the long term. Also, the augmentation of Chaffey Dam[68] has the potential to significantly improve the reliability of supply for irrigation by reducing the range of variation (from very high and very low water allocations).[69] This could positively impact the irrigation industry.

By limiting average bill increases, we are balancing the concerns of stakeholders with the need of State Water to recover its costs.

The significance of this average bill cap and the size of the CSO depends on State Water's expenditure profile for the Peel. The 5% may be considered a reasonable compromise if State Water's expenditures continue to rise in the future. We seek stakeholder views on the quantification of the impacts of price increases and the likely cost payable by NSW Treasury.

9.4.3 Option 3 – target lower bound pricing with the remainder of the costs recovered by an explicit CSO

In past reviews, IPART and other price regulators have adopted the ultimate objective of full cost recovery for reasons of economic efficiency. However, the Council of Australian Government (COAG) endorsed National Water Initiative Pricing Principles do contemplate the setting of lower bound rural water prices in some circumstances. These prices do not seek recovery of the return on capital. To ensure full transparency, in practice this would mean that State Water's submission to the ACCC would propose lower bound pricing and that explicit and transparent arrangement between State Water and NSW Treasury were implemented. These arrangements would identify the value of the Community Service Obligation payment. For example, the value of the return on capital for the Peel could be identified in the annual Statement of Corporate Intent provided to the Parliament. Alternatively, to further enhance transparency, State Water and NSW Treasury could enter into arrangements for State Water to pay the return on capital of Peel Valley services to NSW Treasury and then to have it refunded as CSO.

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68 This project is being funded by the Australian Government, NSW Government and Tamworth Regional Council (www.statewater.com.au) and thus will not be included in users' prices.

69 State Water, Chaffey Dam Augmentation, Business Case.

We will undertake further analysis of the implications of applying lower bound pricing to the Peel Valley and the quantification of the likely cost payable by NSW Treasury. Under the 2010 State Water Determination if prices were set to achieve lower bound cost recovery then prices would remain about their current levels.

9.5 Assessment of options

Table 9.1 summarises our analysis of the options against the criteria. The effectiveness of each of the options in addressing customer impacts will depend on a range of factors. For example, our recommendations on price structures to deal with cash flows may provide some assistance for customers in the Peel Valley.

Table 9.1 Assessment of proposed options against criteria

Criteria	Option 1	Option 2	Option 3
Effectiveness in addressing customer impacts	Positive impact	Positive impact	Positive impact
Financial impact on State Water	No or low impact	No or low impact	No or low impact
Financial impact on NSW Budget	Negative impact – higher relative to the other 2 options	Negative impact	Negative impact -
Consistent with ACCC rules	Yes	Yes	Yes
Consistency with NWI pricing principles	Yes	Yes	Yes
Economic efficiency	Low	Medium	Medium
Ease of administration	High	Medium	High
Transparency	Medium	Medium	Potentially low

The effectiveness of addressing customer impacts is likely to be highest in options 1 and 3, as prices are likely to remain relatively constant under both of these options. Option 2 still allows for real increases in prices to allow the continued transition to full cost recovery, so could negatively impact on customers if prices are already considered too high.

Under each of the options, the impact on State Water will be minimal, as long as the Government agrees to pay the difference as a CSO or its equivalent. If government contribution increases compared to the status quo, there will be a negative impact on the State budget. As noted previously, under each of these options, the government contribution is clear and transparent and thus is consistent with the ACCC principles. Similarly, the NWI pricing principles specify that valleys should only be at full cost recovery where practicable. Therefore, if full cost recovery in the Peel Valley is not considered practicable, then a government contribution is consistent with these principles. However, users in other valleys may argue that this option is not transparent or equitable as it applies differential pricing policies between the valleys.

There are arguments against subsidies as users do not contribute to the full efficient costs for the services they are provided. However, on equity grounds there may be wider socio-economic factors for providing this assistance to this valley, which would otherwise not exist.

In considering the recommended options, the Government has the discretion to decide what its contribution will be.

We seek feedback from stakeholders on the following questions:

23 Is there a case for ongoing subsidy of the Peel Valley users?

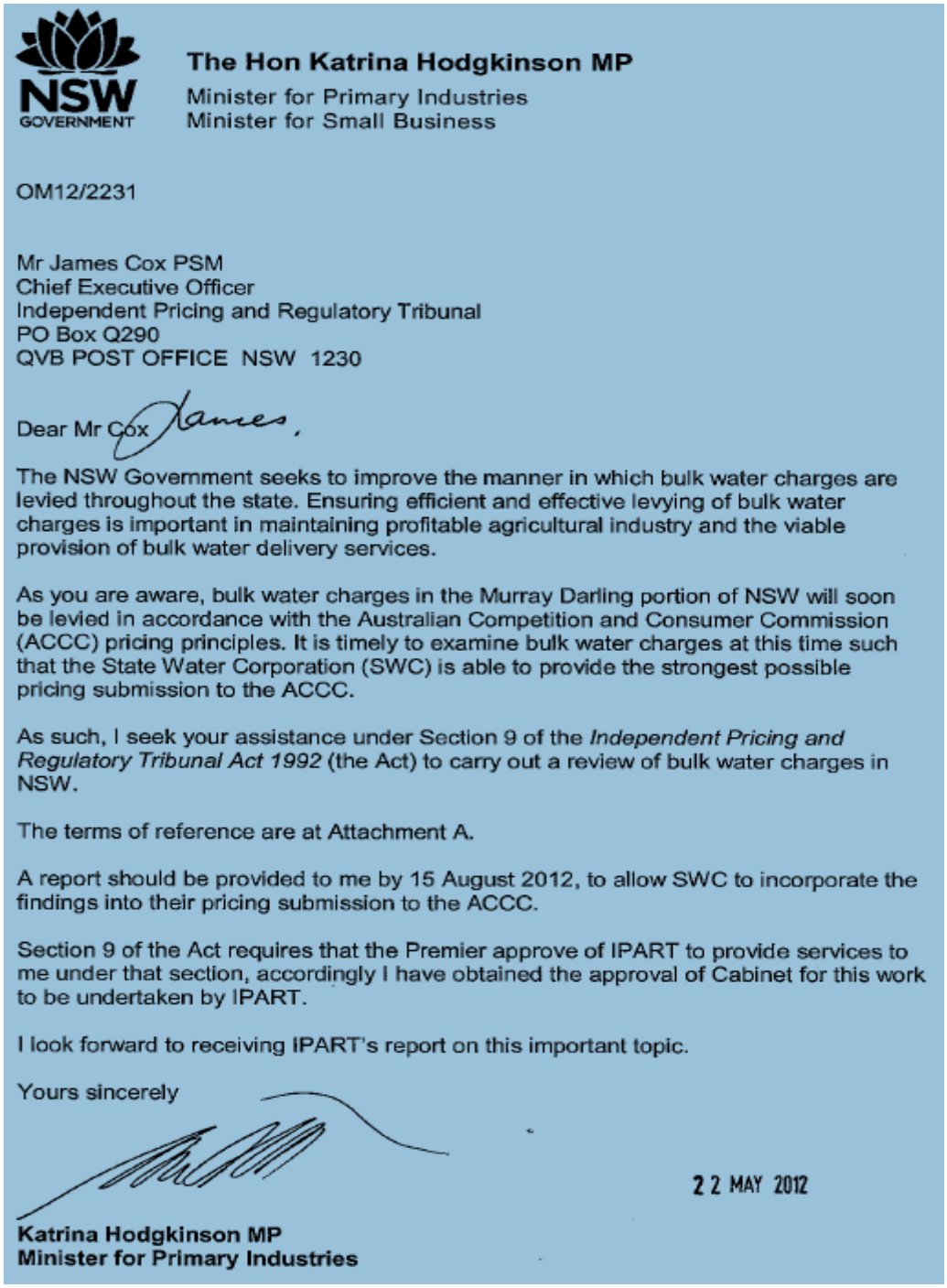
24 What are your views on the options presented for recovering user share of costs in the Peel Valley? Do you agree with our preferred option?

25 Are there alternative options for determining the government subsidy of the Peel Valley to reflect the under recovery of costs in this valley?

26 Are there other issues that we should consider regarding the under recovery of the users' share of costs in the Peel Valley?

Appendices

A Terms of Reference



The Hon Katrina Hodgkinson MP
Minister for Primary Industries
Minister for Small Business

OM12/2231

Mr James Cox PSM
Chief Executive Officer
Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB POST OFFICE NSW 1230

Dear Mr Cox James,

The NSW Government seeks to improve the manner in which bulk water charges are levied throughout the state. Ensuring efficient and effective levying of bulk water charges is important in maintaining profitable agricultural industry and the viable provision of bulk water delivery services.

As you are aware, bulk water charges in the Murray Darling portion of NSW will soon be levied in accordance with the Australian Competition and Consumer Commission (ACCC) pricing principles. It is timely to examine bulk water charges at this time such that the State Water Corporation (SWC) is able to provide the strongest possible pricing submission to the ACCC.

As such, I seek your assistance under Section 9 of the *Independent Pricing and Regulatory Tribunal Act 1992* (the Act) to carry out a review of bulk water charges in NSW.

The terms of reference are at Attachment A.

A report should be provided to me by 15 August 2012, to allow SWC to incorporate the findings into their pricing submission to the ACCC.

Section 9 of the Act requires that the Premier approve of IPART to provide services to me under that section, accordingly I have obtained the approval of Cabinet for this work to be undertaken by IPART.

I look forward to receiving IPART's report on this important topic.

Yours sincerely

22 MAY 2012

Katrina Hodgkinson MP
Minister for Primary Industries

Attachment A

Consistent with the NSW Government's Commission of Audit into Public Sector Management to review the current state fiscal situation and to establish a framework for future reform, the Independent Pricing and Regulatory Tribunal (IPART) is to conduct a review, and provide a final report to the Minister for Primary Industries by 15 August 2012 on the following:

1. Examine ways that the billing of bulk water charges might be better matched to business cash flows, for example may examine:
    - Varying the timing of water bills and payment terms in relation to farm cash flow
    - Varying the ratio of fixed to variable charges
    - Options for differential fixed charges (based on seasonal conditions)
    - Options for differential variable (e.g. stepped or volume based) charges
    - Use of modern telemetered meters.

2. Potential methods of determining the Government cost share for ACCC determined bulk water charges in NSW, which may include a role for IPART.

3. The potential impacts to customers, State Water Corporation, and the NSW Office of Water of future pricing arrangements, and make recommendations that will assist the NSW Government to maintain viable and economically sustainable provision of services to customers.

IPART should produce an initial issues paper to facilitate consultation, hold at least one public hearing, and conduct targeted consultation as necessary and appropriate, including at least one workshop in each the north and the south of the NSW portion of the Murray-Darling Basin.

All advice and recommendations should consider:

- Impacts on customers', SWC and Office of Water cash flows, revenue streams, and forward business planning
- Potential impacts on the NSW financial position
- Statutory or policy barriers to the implementation of any recommendations
- The NSW Government's Commission of Audit into public sector management

B Hardship policy and government assistance for farmers

B.1 Hardship policy

State Water fulfils the billing function for its own customers as well as issuing invoices to NOW's licence holders on NOW's behalf. State Water bills all regulated river customers (its own and NOW's) quarterly (October, January, April and August), in arrears. State Water bills NOW's unregulated river and groundwater customers annually in arrears[70]. All accounts are payable in full, within 30 days of the date of issue[71].

If an account is not paid by the due date, interest will be charged on the outstanding amount. If a customer does not pay his/her bill, State Water may suspend the customer's licence and this will affect the customer's ability to order and take water[72].

Interest is charged on overdue bills in accordance with the current rate of 8.75%, which has been set by the Supreme Court of NSW. Interest will be charged even if a customer has negotiated a payment plan with State Water. Customers may request for interest to be waived[73].

For State Water's hardship policy, which applies equally to NOW customers, see Box B.1.

70 As per NOW website. See: http://www.water.nsw.gov.au/Water-management/water-management-charges/default.aspx
71 As per State Water website. See http://www.statewater.com.au/Customer+service/Billing+and+accounts
72 As per State Water website. See http://www.statewater.com.au/Customer+service/Billing+and+accounts
73 As per State Water website. See http://www.statewater.com.au/Customer+service/Billing+and+accounts

Box B.1 State Water's Hardship Policy[a]

State Water can negotiate a payment plan for your account if you are experiencing genuine hardship. This will reduce the risk of your licence being suspended for non-payment.

To be eligible for a deferred payment plan longer than three months, you must satisfy one or more of the following conditions:

- You are receiving direct benefits from the Commonwealth Exceptional Circumstances Scheme.
- You are receiving benefits under a State-operated drought or other natural disaster relief scheme.
- You are suffering conditions arising from a drought of record in your valley/area, and have no carryover water or access to other water.
- You are experiencing conditions that create a direct and significant impact on your ability to pay water charges.

Your application must be supported by one or more of the following:

- Documentary evidence from Centrelink or the Rural Assistance Authority that demonstrates financial hardship.
- Evidence that farm income has been reduced by at least 70% due to the abnormal conditions being experienced.
- A Statutory Declaration of off-farm income and investment levels, with evidence that annual off-farm income is less than $20,000 per annum.
- Evidence that you have attempted to trade any available water on the temporary or permanent market, eg copies of water transfer applications.

a As per State Water website. See http://www.statewater.com.au/Customer+service/Billing+and+accounts

B.2 Government assistance

Both State and Commonwealth Governments have offered financial and other assistance to drought-stricken farmers. Many of these have been one-off or fixed-term relief programs or schemes which have been terminated (See Box B.2). Others, such as Exceptional Circumstances (EC)[74], are ongoing programs, triggered by drought declarations.

In 2008, the Commonwealth Government announced a review of drought policy, including a request for a report from the Productivity Commission (PC). The PC, in its Government Drought Support report[75], reviewed the drought relief assistance measures described here. It recommended abolishing many of the forms of assistance. Many of these recommendations have been implemented.

74 http://www.daff.gov.au/agriculture-food/drought/ec/

75 Productivity Commission, Government Drought Support Report, No 46, 27 February 2009, http://www.pc.gov.au/__data/assets/pdf_file/0010/86275/drought-support.pdf

The PC also recommended that income support payments be maintained, but to abolish the system which restricted benefits to those living in a defined EC area.[76] This recommendation has not yet been implemented.

The Commonwealth Government's review into drought policy is still in progress.[77]

Non-financial assistance is also provided during drought, for example, financial and social counselling advice[78],[79] and mediation services.

Box B.2 Discontinued drought relief measures

Waived charges: In the most recent drought, the NSW Government waived fixed water charges if a valley received zero water allocation for 2 consecutive years[a].

Rate rebates: The Victorian[b] and Queensland[c] governments have offered one-off or short term rebates for municipal rates and water rates to drought-stricken communities.

EC Interest Rate Subsidy: This provided 50% to 80% relief for interest payable on loans up to a fixed total cap. Closed after June 2012 as it was found to be 'ineffective and could result in farm businesses being less responsive to drought conditions'.[d]

EC Exit Grant: The Exceptional Circumstances Exit Grant was targeted at low–income and low–asset farm owners who had a significant long–term personal and financial attachment to their property and chose to leave farming. The program has been closed since 10 August 2011[e].

Murray-Darling Basin Irrigation Management Grants: Available for implementing water management strategies in response to temporarily reduced water allocations. Program concluded in 2009/10[f].

a Media release from the Premier of NSW 14 December 2009, *Make NSW Number One Again*, Coalition pre-election policy, September 2010.
b Media releases from the Premier of Victoria, 13 October 2008 and 22 October 2009.
c See QRAA Media Release, 10 Sept 2008. See also: http://www.qraa.qld.gov.au/images/documents/20080103163805Rate%20Rebate%20Fact%20Sheet%20121207%20vers%205.pdf.
d http://www.daff.gov.au/agriculture-food/drought/assistance/business-support
e http://www.daff.gov.au/agriculture-food/drought/assistance/exit-grants
f Media release by Minister for Agriculture, Fisheries and Forestry, 8 May 2009 http://www.maff.gov.au/media_office/media_releases/Burke-media-releases/2009/may_2009/irrigators_given_more_time_to_implement_water_saving_grant

76 Productivity Commission, Government Drought Support Report, No 46, 27 February 2009, Chapter 6 Key points, p 123.
77 See also Media Release from the Hon Joe Ludwig 27 April 2012, accessible at: http://www.daff.gov.au/ludwig/media_office/media_releases/media_releases/2012/april/Australia-to-be-drought-free
78 http://www.raa.nsw.gov.au/rfc
79 http://www.daff.gov.au/agriculture-food/drought/assistance/counselling

Exceptional Circumstances Relief Payment (Household Income Support)

This support is delivered by Centrelink on behalf of the Department of Agriculture, Fisheries and Forestry. It is a payment, generally at the same rate as Newstart Allowance (employment benefit), and is available to anyone in an EC declared area. Other conditions, such as Australian residency and an receipt of other allowances or pensions also apply. Under certain circumstances, it is available to small business owners.[80]

Interim Income Support

Interim Income Support is equivalent to the Newstart Allowance, but available for up to 6 months while an application for an EC area declaration is being made. Under certain circumstances, it is available to small business owners.[81]

Farm Management Deposits

Farm Management Deposits (FMD) allow farmers to deposit money in bank accounts and receive tax benefits if kept for at least 12 months. Tax is not payable on the income earned until the financial year it is withdrawn, when primary producers may benefit from a lower marginal tax rate. The FMD Scheme encourages individual farmers to set aside pre-tax income in good years for use in low-income years.[82]

Tax Relief

The Taxation Office provides assistance to people who find it difficult to pay their tax debts due to the impact of the drought on their income. Assistance is available to farmers and other taxpayers, whose income is derived from drought affected areas.

There are 2 forms of assistance available:

- more time to pay tax debts without interest charges, or
- payment by instalment without interest charges.

In special circumstances, the Taxation Commissioner may release individuals from payment of income tax, fringe benefits taxes and some other taxes where it is shown that payment would cause serious hardship[83].

80 http://www.centrelink.gov.au/internet/internet.nsf/payments/ecrp.htm
81 http://www.centrelink.gov.au/internet/internet.nsf/payments/interim_income.htm
82 http://www.daff.gov.au/agriculture-food/drought/assistance/fmd
83 http://www.ato.gov.au/businesses/content.aspx?doc=/content/43900.htm

C History of the development of cost shares

This appendix provides a brief history of our development of the cost sharing ratios and the key concepts used in our approach.

C.1 The 2001 Bulk Water Price Determination

In our 2001 Bulk Water Price Review, we engaged ACIL Consulting[84] to review State Water's costs associated with their water resource management activities and to provide a framework for allocating these costs between users and the Government. ACIL developed a conceptual framework for allocating costs that was based on the 'impactor pays' principle, and which excluded 'legacy costs'. In general, we adopted the principles that underpinned this approach.

Specifically, in our 2001 Determination, we moved from a 'beneficiary pays' approach to an 'impactor pays' (see Box C.1 for a description of the difference between the 'impactor pays' and 'beneficiary pays' approach). Our earlier cost share ratios reflected a mixture of the 'impactor pays' and 'beneficiary pays' approaches.[85]

Box C.1 Beneficiary pays versus impactor pays

- 'Beneficiary pays' – charges would be paid by users on the basis of them benefitting from the service.
- 'Impactor pays' – allocates costs to those ultimately responsible for creating the costs, or the need to incur the costs.

84 ACIL Consulting, *Review of Water resource Management Expenditure in the NSW Department of Land and Water Conservation and State Water Business*, A Report to Independent Pricing and Regulatory Tribunal, July 2001.

85 IPART, *Bulk Water prices for 1998/99 and 99/00, Final Report* , July 1998.

C.1.1 ACIL Consulting

In recommending the application of the 'impactor pays' principle, ACIL defined 2 key concepts[86]:

- **Legacy costs** – principally current and future costs attributable to past activities. Current and future water users should not be required to meet the expenditure caused by the activities of past users.
- **Impactor pays** – non-legacy costs were allocated to current stakeholders in proportion to the contribution their current and future actions have on the need to incur these expenditures.

Under ACIL's approach, all legacy costs would be fully allocated to Government and all forward looking costs would be allocated according to the 'impactor pays' principle, noting that the 'impactor' for some costs would be a combination of both the Government and extractive users.

Under the framework, State Water's total costs were broken down according to the key 'products' or activities they were associated with (eg, dam safety compliance and water quality monitoring). Within each of these activities, costs that related to past users were regarded as legacy costs and were allocated fully to the Government. Future expenditure that related to current or future users was allocated according to which party (users or the community) created the costs or the need to incur the costs (impactor pays)[87].

C.1.2 Our decision

We considered in detail ACIL's recommendations, as well as submissions received by stakeholders in response to our draft report and came to the following decisions[88]:

- It is more appropriate to draw a line in the sand at a particular date and to consider only expenditure required to meet standards established at or before that date as forming the legacy costs. We drew a line in the sand at July 1997. Legacy costs incurred before July 1997 were fully borne by the Government.
- The 'impactor pays' principle should be applied to allocate bulk water costs, however it was noted that a significant level of judgement is required in this cost allocation process.

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86 ACIL Consulting, *Review of Water resource Management Expenditure in the NSW Department of Land and Water Conservation and State Water Business*, A Report to Independent Pricing and Regulatory Tribunal, July 2001, p xiii.

87 See Appendix D for the ratios.

88 IPART, *Department of Land and Water Conservation Bulk Water Prices from 1 October 2001*, October 2001, pp 31-32.

An area that generated a high level of stakeholder concern was the treatment of compliance capital costs. These included capital costs associated with dam safety standards, meeting relevant public safety and occupational health and safety standards and complying with contemporary standards to mitigate the environmental impacts of stream interruption (eg, fish ladders to enable native fish passage, multi-level water off-takes to reduce cold water pollution and release valves in dams sufficient to enable high volume environmental flows).

For each of these activities we considered that the expenditure arises because of the community's expectation that the needs of the environment will be met at the same time as extractive users. We also recognised that there was a significant legacy component for these activities and that a 50% cost share was considered an appropriate balance for the competing interests of different stakeholders (see Appendix E for the cost shares).

C.2 The 2006 Bulk Water Price Determination

In our 2006 Determination for State Water, we used the principles for allocating costs between users and the Government established in the 2001 Determination. We engaged the Centre for International Economics (CIE)[89] to review the agencies' proposals and to provide advice on appropriate ratios for cost allocation. We considered stakeholders' views in response to our draft report in making our decisions on the cost sharing ratios. While we maintained our general approach to cost shares, we reviewed and made some changes to specific allocations[90]:

- Reduced the user share for capital projects related to flood mitigation from 100% user share to 90%, recognising that expenditure is primarily to maintain flood mitigation assets, however, users also derive some benefit from the flood mitigation works.
- Increased user share of costs for hydrometric monitoring from 70% to 90%, reflecting that these activities do play some role in flood mitigation, rather than a 100% user share that we adopted in our draft determination.

See Appendix F for detailed explanation of the cost sharing ratios.

89 CIE, *Review of cost sharing ratios – Analysis in support of 2006 Bulk Water Price Review*, March 2006.

90 IPART, *Bulk Water prices for State Water Corporation and Water Administration Ministerial Corporation from 1 October 2006 to 30 June* 2010, September 2006, pp 39-40.

D ACIL Cost shares

Table D.1 Implied user share, aggregating up from the sub-product level – different allocation rules (%)

		Current			2001/02 to 2003/04			
Code	**Product Name**	**IPART 1998/99**	**Proposed DLWC[a]**	**Legacy Share**	**Impacter 0% legacy**	**Impacter 25% legacy**	**Beneficiary 0% legacy**	**Beneficiary 50% legacy**
PA1	Surface Water Database	50%	50%	7%	65%	67%	37%	41%
PA2	Groundwater Database	70%	70%	0%	100%	100%	100%	100%
PA3	Other Water Databases	0%	0%	0%	0%	0%	0%	0%
PA4	Water Information Product	0%	0%	25%	50%	56%	19%	31%
PB1	Surface Water Allocation strategies	50%	50%	0%	100%	100%	0%	0%
PB2	Rural Water Licences	100%	100%	0%	100%	100%	90%	90%
PB3	Groundwater Allocation Strategies	70%	70%	0%	100%	100%	70%	70%
PB4	Groundwater Licences	100%	100%	0%	100%	100%	90%	90%
PC1	Rural Water Supply Strategies	90%	90%	0%	100%	100%	80%	80%
PC2	Rural Water Operations	90%	90%	0%	100%	100%	90%	90%
PC3	Flood Operations	50%	50%	91%	6%	29%	0%	46%
PC4	Rural Water Infrastructure	90%	90%	16%	80%	84%	76%	84%
PD1	River Quality/Flow Reforms	0%	50%	18%	39%	43%	0%	9%
PD2	Blue Green Algae Strategies	50%	50%	1%	89%	89%	0%	1%
PD3	River Salinity Strategies	50%	50%	50%	10%	22%	0%	25%
PD4	Bacterial, Chemical and Other Strategies	0%	0%	0%	100%	100%	0%	0%
PD5	Groundwater Strategies	70%	70%	0%	100%	100%	100%	100%
PD6	Wetland Strategies	0%	0%	50%	50%	62%	0%	25%
PD7	Water Industry Strategies	0%	0%	0%	0%	0%	50%	50%
PE1	Rivers and Groundwater Income	0%	100%	0%	100%	100%	100%	100%
TOTAL		**NA**	**68%**	**22%**	**64%**	**70%**	**49%**	**60%**

a Department of Land and Water Conservation (DLWC), predecessor of State Water Corporation – The total in this column is an amount calculated by allocating DLWC proposed shares to the revised costs, it is not a DLWC proposed share,

Source: IPART, *Department of Land and Water Conservation Bulk Water Prices from 1 October 2001*, October 2001, p 89.

E 2001 Bulk Water Determination cost shares

Table E.1 Changes to sub-product allocations

Sub Product Code	Sub Product Long Name	ACIL Proposed Allocation User - Government		Revised Allocation User - Government		Comment
PC330	Dam Compliance, Environment	33%	67%	50%	50%	A significant legacy component, but need for expenditure arises from continuing presence of structures. Removal would be an alternative option in some cases but for ongoing extraction requirement. Tribunal therefore considers equal share appropriate and consistent with the impactor pays principle.
PC331	Dam Compliance, OHS & Public Safety	0%	100%	50%	50%	OHS costs are borne by businesses generally rather than Government. Includes some public safety costs not necessarily attributable to extractive users and some legacy component, Tribunal considers it appropriate to pass through to users a significant share.
PC332	Regulated River Compliance, Environment	33%	67%	50%	50%	As with other environmental compliance sub-products, the Tribunal considers an equal sharing appropriate.
PC333	Regulated River Compliance, OHS and Public Safety	0%	100%	50%	50%	As with other OHS and public safety costs the Tribunal considers an equal sharing appropriate.
PC334	Unregulated River Compliance, OHS and Public Safety	0%	100%	50%	50%	As with other OHS and public safety costs the Tribunal considers an equal sharing appropriate.

Sub Product Code	Sub Product Long Name	ACIL Proposed Allocation User - Government		Revised Allocation User - Government		Comment
PC335	Unregulated River Compliance, Environment	33%	67%	50%	50%	As with other environmental compliance sub-products, the Tribunal considers an equal sharing appropriate.

F 2006 Bulk Water Determination cost shares

Table F.1 Tribunal's findings on State Water's user-cost share ratios compared to the ratios used in the 2001 determination, proposed by State Water, recommended by CIE and the Tribunal's draft finding (%)

Product	2001 IPART Determination	State Water submission	CIE recommendation	Tribunal's draft finding	Tribunal's finding
Capital expenditure					
Asset management planning (3110)	100	100	70–100	100	100
Plant and equipment (3160)	100	100	70–100	100	100
Dam safety compliance capital projects –pre 1997 (3520)	0	0	0	0	0
Dam safety compliance capital projects –post 1997 (3525)	50	50	0–50[a]	50	50
MPM capital projects (3530)	100	100	70–100	100	90
Structure enhancement capital projects (3540)	100	100	100[a]	100	100
OH&S compliance system (4210)	50	100	50	50	50
Fishpassage works (6310)	50	50	0	50	50
Cold water impacts mitigation works (6320)	50	50	50	50	50
Salt interception schemes (6340)	10	10	10[b]	10	10
Fish River Supply Scheme	Na	100	100	100	100

Product	2001 IPART Determination	State Water submission	CIE recommendation	Tribunal's draft finding	Tribunal's finding
Operating expenditure					
Customer support (1120)	100	100	100	100	100
Hydrometric monitoring (2120)	70	100	70–100	100	90
Water quality monitoring (2130)	50	100	50	50	50
River operations (2150)	100	100	70–100	100	100
Dam safety compliance O&M (3130)	50	100	50	50	50
Preventative maintenance (3140)	100	100	70–100	100	100
Billing & receipts (5220)	100	100	100	100	100
Insurance (5250)	100	100	50	100	100
Metering (2180)	100	100	100	100	100
Salt interception schemes (6140)	10	10	10[b]	10	10
Fish River Supply Scheme	Na	100	100	100	100

a Depends on whether users or the community demand the upgrade. Government (on behalf of the community) would pay the additional incremental costs associated with metering community demands.

b CIE retains the recommended 10% allocation assuming that it reflects legacy costs.